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The Impact of Venue Interactivity and Community Engagement on Online and Offline Consumer Behavior

Abstract

In this paper we investigate two key group determinants of participation in online communities, venue interactivity and community engagement, and consider their consequences on online and offline consumer behavior. Online social interactions may occur in many different internet venues. In this empirical study involving 545 participants, we consider seven types of online venues: Email Lists, Website Bulletin Boards, Usenet Newsgroups, Instant Messaging, Web-Based Chat Rooms, Multiplayer Games, and Multi-User Domains (MUD). Interactivity is proposed as the first central variable to distinguish them and it is intended as a condition in which simultaneous and continuous communication takes place between participants. Many measures are studied by comparing statistical differences between members of high- and low-interactivity groups. As second determinant, we describe how different levels of group engagement lead to different participants' online and offline behaviors. Sets of hypotheses are theorized considering the potential similarities and differences between these two groups. The success of the manipulation was determined by running an ANOVA. Our survey-based study, which was conducted across a broad range of virtual communities, highlights many significant and not obvious differences between the groups: high-and low-interactivity venues and high-and low- community engagement. Additionally, many interesting key interactions emerge and are discussed. Paper conclusions include managerial implications and opportunities for future research.

KEY WORDS: effects of internet use, venue interactivity, community engagement, social influence, online groups

Introduction

Marketing researchers have always been more and more involved in many different subjects about internet interaction such as studying, learning, organizing and managing virtual communities based on virtual group of friends, unknown people or both (Bagozzi, Dholakia, & Pearo, 2004; Bagozzi & Dholakia, 2002; Balasubramanian & Mahajan, 2001; Wellman, 1999; Wellman, & Gulia 1999; Wellman, Salaff, Dimitrova, Garton, Gulia, & Haythornthwaite, 1996).

Researchers' efforts are concentrated on both online and offline internet social functions and influences (Flanagin & Metzger, 2001; Spears et al., 2002; Shah, McLeod, & Yoon, 2001). Through the Web, social interaction is encouraged in many different venues such as Email Lists, Website Bulletin Boards, Usenet newsgroups, Instant Messaging, Web-Based Chat Rooms, Multiplayer Games, and Multi-User Domains (MUD) (Bagozzi, Dholakia, & Pearo 2006; Catterall & Maclaran, 2001; for different ways to run online communities see e.g. Williams, & Cothrel, 2000). People socialize online for many different purposes, reasons, or uses, for example to discuss about ideas or generate new ideas, with many different motivations and intentions, to get information, to learn, to work, to be entertained and so on. Many authors are interested in causes and consequences of this social interaction on the Internet (i.e. Bagozzi, Dholakia, & Pearo, 2006; McKenna & Bargh, 1999) and in motivational antecedents, constituents and consequences of virtual community identity (i.e. Dholakia & Bagozzi, 2004; Sassenberg, 2002). Online group interactions influence participants in many ways; researchers are beginning to understand how participants' ideas, judgments, attitudes, and decisions might change interacting in a group online. It could influence their decisions and relationships and, on a regular basis, it could be a high time-consuming activity (McKenna, Green, & Gleason, 2002). Marketing and social scientists are fascinated in understanding how this time consuming group interaction influence other offline activities, such as using other communication media, visiting, talking and going out with family and friends, activities with neighbors and hobby groups, reading fictions and not fiction books, and renting videos and DVDs (e.g., Bagozzi, Dholakia, & Pearo, 2006; Dholakia & Bagozzi, 2004; Kraut et al., 1998; 2002; The UCLA Internet Report, 2003).

The goal of this research is to contribute to the growing curiosity and comprehension concerning online group interactions (e.g., Bagozzi, Dholakia, & Pearo, 2006; Dholakia & Bagozzi, 2004; McKenna & Bargh, 1999; Spears et al., 2002; Kraut et al., 2002; Burnett 2000) in many ways. First, we seek to better understand how involving in online social interactions relates to the member's online and offline social behavior. Second, we point out similarities and differences in participants online and offline social behavior if interactions occur in high or low interactivity venues. Third, we identify similarities and differences in users' online and offline social behavior if there is high engagement with the group or if the engagement is not so high. Our contribution is to the promising literature on the effects of Internet use for group interactions (e.g., Bagozzi, Dholakia, & Pearo, 2006; Dholakia & Bagozzi, 2004; Flanagin & Metzger, 2001; Kraut et al., 2002; Shah et al., 2001; The UCLA Internet Report, 2003) through the study of specific differences between online group participants.

Set of hypotheses were developed adapting a previous model (Figure 1. See appendix) (Bagozzi, Dholakia, Pearo, 2005) derived from earlier theoretical frameworks, a social psychological model (Bagozzi & Lee, 2002), which introduces critical social influence variables that communication researchers (e.g., Postmes, et al., 2000) and social psychologists (e.g., Kelman, 1974; Tajfel, 1981) have identified as important in explaining intentional behaviors; the Theory of Planned Behavior (TPB, Ajzen 1991; see Hunter & Allen, 1992, for an application), and the Model of Goal-directed Behavior (MGB, Perugini & Bagozzi, 2001), both focus on individual-level constructs, to study online social interactions in 7 different venues.

Interactivity of online venues

Online social interactions may occur in many different Internet venues. In our empirical study as suggested by many authors (Bagozzi, Dholakia, & Pearo 2006; Catterall & Maclaran, 2001), we consider seven different types of online venues: Email

Lists, Website Bulletin Boards, Usenet newsgroup, Instant Messaging, Web-Based Chat Rooms, Multiplayer Virtual, Multi-User Domains (MUD).

Interactivity is proposed as the central variable to distinguish them and it is intended as a condition in which simultaneous and continuous communication take place between participants. Successive messages consider both preceding messages and the manner in which previous messages were reactive (Burgoon, et al., 2002; Rafaeli & Sudweeks, 1996).

Many differences in these seven online venues establish the degree of interactivity. First, the synchronicity of communication defined as the capability of a venue to enable a response to be formulated and delivered in real time, and for a real-time dialogue to occur (Burgoon et al., 2002). Instant Messaging, Web-Based Chat-Rooms, Networked Video Games, and MUDs enable synchronous communications; the others such as Email lists, Website Bulletin Boards, and Usenet Newsgroups, only permit asynchronous communication. Other two important attributes of interactivity are contingent communication and mutuality (Burgoon et al., 2000; Burgoon et al., 2002), both characteristics are present in the four venues allowing synchronize communication.

Contingent communication begins when a person sends a signal to another person: these signals are usually both verbal and non-verbal signals (facial expressions, body movements and gestures, tone of voice, timing and intensity of response, etc.). The second person needs to recognize the signal, interpret it correctly, and send back a signal to the first one. The second person' intervention is dependent on previous ones. The non-verbal messages are the most important for contingent communication. It can be implemented using a web cam, for example in Instant Messaging and Web-Based Chat Room. This phenomenon is increasing, in facts in a recent survey (December 2005), "Pew Internet and American Life Project" shows that 19% of online men and 13% of online women use a web cam.

Mutuality is instead used to describe a reciprocal relationship in which users perceive and create a sense of harmonization, connection, union, interdependence, coordination, and understanding each other. The four synchronous communication venues allow higher levels of contingent communications and mutuality.

Second, Lombard (2001) describes three characteristics regarding the possibilities that users have in modifying the environment: the number of inputs the venue accepts, the number of environmental attributes that can be modified by the participant, and the range of responses possible for each of these attributes. Considering these criteria, Email Lists, Bulletin Boards, and Usenet Newsgroups, where participants may only input text, are the least interactive. Within Instant Messaging and Web-Based Chat-Rooms, participants have control over the text input, over the target of their response, its timing (Lombard, 2001; Trevino & Webster, 1992), and, dependently upon their willingness, they can see each other using a web cam, indicating much more interactivity. Within networked video games and MUDs, participants also have control over the representations of their characters and their movements.

According to all the above considerations, the first three venues -- Email lists, Website Bulletin Boards, and Usenet Newsgroups -are classified as low-interactivity venues, while the remaining four - Instant Messaging, Web-Based Chat-Rooms, Networked Video Games, and MUDs - are considered high-interactivity venues. This classification is used to study differences in online social interactions and their consequences. The degree of interactivity significantly and systematically influences both processes and outcomes of communication within the venue (Burgoon et al., 2002).

First set of hypotheses: high- and low-interactivity venues

After developing a theory of consumer participation in virtual communities to explain why consumers participate in them (Dholakia et al., 2004), we assume that community participation should exert influence on its members both in external activities and in online behavior.

For this purpose, we split our dataset in two groups to compare differences and analogies. In the first group, we included low-interactivity venues participants: E-mail List, Web Site Bulletin Board or Usenet Newsgroups users. In the second group

participants belong to high-interactivity venues: Instant Messaging, Web-Based Chat-Rooms, Networked Video Games, or MUDs. We conducted these analyses to verify and to better understand specific effects and differences across low and high interactivity groups. Many measures were studying by comparing statistical differences between members of high- and low-interactivity groups.

We intentions to participate in online social interactions: past behavior and participation behavior

An expected emerging difference in the high- and low-interactivity groups is "we-intentions", defined as a "commitment of an individual to engage in joint action and involves an implicit or explicit agreement between the participants to engage in that joint action" (Tuomela, 1995, p. 9; see Bagozzi & Dholakia, 2002 and Bagozzi, Dholakia & Pearo for detailed discussions). Since the study is about consequences of online social groups' interaction, the focus is a conjoint intention rather than one's self. Intention synchronization is not required; participants might perform their respective intentions at a different point of time, but they should be involved in coordinated activities. We-intentions, also called collective intentions or shared intentions (e.g., Bratman, 1993; 1997; Searle, 1990; Tuomela, 1995, 2000), are distinct from personal intentions, defined as the "person's motivation in the sense of his or her conscious plan to exert effort to carry out a behavior" by him or herself alone (Eagly & Chaiken, 1993, p. 168). Instead, we-intentions are intended as an engagement participation in mutually endeavors with other people and intentions are formed with reference to the group of friends. The shared awareness to "belong" to the group provides the motivation to interact. We expect that the degree of we-intention is different for high- and low-interactivity venues, because of a stronger sense of belongingness typical of high interactivity activities in groups, where participants are more inclined to refer themselves as "us" instead of "I". Based on the above considerations:

Hypothesis 1a: Greater levels of interactivity lead to stronger We-Intentions to interact with on the Internet as a group.

Recent researches showed a strong impact of frequency of past behavior on both intentions and future behavior (Oullette & Wood, 1998), and proposed a partition of the effects of past behavior into frequency and regency effects (Bagozzi & Warshaw, 1990; Bagozzi & Dholakia, 2002). High interactivity venues are expected to show higher levels of online participation since, as discussed above, the degree of involvement is stronger. Our prediction regards both higher level of past and present behavior participation as well as the average duration of each interaction.

Hypothesis 1b: Higher levels of interactivity lead to stronger currently and past online participation behavior both for average number of interactions and average time spent each interaction with the group of friends.

Group norms and mutual behaviors

Another predictable significant difference between high- and low- interactivity venues is for the social influence variable "group norms", intended as a process of internationalization (Kelman, 1974). This internationalization could take place ex-ante or ex-post. Ex-ante when a member enthusiastically explore online venues to find out which group fits personal moral values, principles, interests, goals, dreams, ideas, attitudes, and so on (McKenna at al, 2002). Ex-post when internationalization occurs through ongoing interactions, participants adapt to previous existing or recently formed group norms (e.g., see Postmes, et al., 2000; Spears, et al., 2002 for a review). We expect that a different degree of group norms is present between the two groups and, based on the definition of group norms and levels of interactivity, we hypothesize:

Hypothesis 2a: Higher levels of interactivity lead to stronger group norms.

Assuming stronger group norms for the high interactivity group, as a direct consequence another difference might emerge among members' consensus concerning if, when and how to engage in online social interactions. Group norms should promote mutual behaviors such as mutual agreement, commitment, accommodation, support and liking. Mutual agreement refers to specific details of interaction with on the internet as a group. Mutual commitment to a group-interaction promise. Mutual accommodation to a members' inclination to organize own schedule, time and place preferences in order to facilitate interaction. Mutual support to willingness to help behavior to do whatever it takes to make an interaction possible. Mutual liking to how much each member likes other members and the group as a whole. Based on previous hypotheses and this discussion:

Hypothesis 2b: Higher levels of interactivity lead to stronger mutual behaviors. In particular higher level of:

i. Mutual agreement among each of the members of the group to interact with on the internet as a group and stronger agreement of the whole group.

ii. Mutual commitment of members to interact with on the internet as a group and stronger commitment of the whole group.

iii. Mutual support or help other members to do whatever it takes to facilitate interacting together on the internet as a group and stronger inclination of the whole group to help others.

iv. Mutual liking between participants.

Mutual behaviors may lead to social, cognitive, and affective social identity.

Social identity is a primary component of group attachment, composed by three different but inter-correlated dimensions: cognitive awareness of group members, affective commitment to the group and evaluative significance of group membership (Bergami & Bagozzi, 2000; Ellemers, Kortekaas, & Ouwerkerk, 1999; Hogg & Abrams, 1988).

Cognitive component concerns evaluations about similarities to in-group members and dissimilarities to out-group members (see Bagozzi, Dholakia, Pearo, 2005, for a discussion). When a person is actually part of the group and engages in group activities, group membership may or may not produce overlap between personal identity and group identity.

Affective social identity to the group is the effect of two senses of emotionality: the attachment to the group intended as positive feelings toward the group, and feeling of belongingness to the group (Bagozzi & Lee, 2002).

Evaluative significance of group membership is the result of group-based self-esteem (Bergami & Bagozzi, 2000) or collective self-esteem (Luhtanen & Crocker, 1992). It is formed by: valuable membership and importance of membership (Bagozzi & Lee, 2002). As a result we expect that:

Hypothesis 2c: Higher levels of interactivity lead to stronger: i. Cognitive social identity, ii. Affective social identity

iii. Evaluative social identity.

Anticipated emotions

Anticipated emotions are defined as "pre-factual" (Gleicher et al. 1995, p.284) appraisal, when the individual imagines the emotional consequences of both achieving and not achieving a goal, or enacting and not enacting a behavior (Bagozzi, Dholakia, & Pearo, 2005; Bagozzi, Baumgartener, & Pieters, 1998). We predict a significant difference in anticipated emotions for high- and low-interactivity venues. We expect that stronger forward-looking positive emotions will result when a person is participating in a high interactivity venue, where high interaction may lead to stronger emotional reactions if a successful interaction happens. Specifically, we hypothesize:

Hypothesis 3a: Higher levels of interactivity lead to stronger positive anticipated emotions such as to feel relief, contentment, excited, delighted, happy, glad, satisfied, proud, and self-assured if a person is able to interact with on the internet as a group.

Hypothesis 3b: Higher levels of interactivity lead to stronger negative anticipated emotions such as angry, frustrated, guilty, ashamed, sad, disappointed, depressed, worried, uncomfortable, anxious, agitated, and nervous if a person is unable to interact with on the Internet as a group.

Offline behavioral outcomes of online social interactions

Another interesting opportunity is to seek out how online participations influence other offline activities. We are interested in discover how mass-media use changes after enrolling in social online group interactions. Activities as watching TV, listen to the radio, read print publications as newspapers and magazines, read books, talk at the phone, use of email and web were included in our study. As a general topic, it has been explored by many authors (e.g. Flanagin & Metzger, 2001; Kraut et al., 2002; Shah et al., 2001; The UCLA Internet Report, 2003), and our contribution is devoted to the study of specific functional changes and

consequences of mass media use, especially if a person is involved in a high interactivity venue. By pointing out with an ANOVA analysis differences between high- and low- interactivity venues, we intend to discover how different type of internet involvements might effectively impact group members' offline personal lives.

Hypothesis 4a: Higher levels of interactivity imply a lower use of other communication media such as television, radio, newspapers, magazines, books, telephone.

Hypothesis 4b: Higher levels of interactivity imply a higher use of email and web.

Hypothesis 4c: Higher levels of engagement lead to low activities with family and friends.

Value perception measures: Purposive value-Self discovery value-Maintaining interpersonal interconnectivity-Social enhancement value-Entertainment value

Purposive value is defined as "the value derived from accomplishing some pre-determined instrumental purpose (including giving or receiving information) through virtual community participation" (Bagozzi, Dholakia, & Pearo, 2004, p. 244). Purposive value concerns on connecting one's self to external objects or issues.

Self discovery value entails understanding and deepening relevant attributes, aspects, preferences, and qualities of one's self through social interaction with the group of friend. Self discovery value concerns to intrinsic values.

Maintaining interpersonal interconnectivity is a value perception regarding social benefits derived from establishing relationships and keeping in touch with other people, such as social support, friendship, familiarity, understanding, closeness and intimacy. Social enhancement value involves benefits gained from acceptance, recognition, and approval of other members, and the enhancement of one's social status within the group on account of one's contributions to it (Baumeister, 1998). It is a result from the need of recognition by other group members (Hars & Ou, 2002). Entertainment value is the reward obtained from fun and relaxation through interaction with the group of friends playing, talking, relaxing, gossiping, and passing time when bored.

Hypothesis 5: Higher levels of interactivity lead to stronger use of online group of friend and/or the Internet for satisfying needs such as: 5a. Purposive value, 5b. Self discovery value, 5c. Maintaining interpersonal interconnectivity, 5d. Social enhancement value, 5e. Entertainment value.

Attitudes and Perceived behavioral control

Even if they are usually considered to be a function of individual, in our study for attitudes we refer to "attitudes in social action" and not as "an individual action", since we are considering group interactions (see Bagozzi & Lee, 2002, for further discussion). In this context attitudes refer to present and future willingness to interact together on the Internet with the group of friends and they are measured by 7-point semantic differential scales such as foolish-wise, harmful-beneficial, bad-good, punishing-rewarding. We hypothesize the following:

Hypothesis 6a: Higher levels of interactivity lead to stronger positive attitude toward interacting together on the internet with the group.

Furthermore, interactivity should be a crucial variable to differentiate groups through expected perceived behavior control, since the control over interaction is expected to be higher if group connections and relations are stronger. By default, highly involved group members should consider easier and unproblematic online interaction opportunities with the group of friends. In the theory of planned behavior (TPB), person's perception of behavioral control is how easy or difficult performing a behavior is considered to be (Ajazen, 1991). In our study, we consider interactivity on the internet with the group of friends the target behavior. High interactivities are characterized by stronger desires to interact for both self's desire and group's desire. As a straightforward consequence, perceived behavioral control should be stronger for this group.

Hypothesis 6b: Higher levels of interactivity lead to stronger perceived behavioral control over interacting together on the internet with the group.

Subjective norms

The subjective-norms concept derives from the Theory of Planned Behavior (TPB), where it is theorized as a reflection of others' expectations (Ajzen, 1991). It could be seen as a need of others' support, approval and consent, a concept called "compliance" in Kelman (1974). People search for external and explicit confirmations of permission in own activities such as online group interactions. The expectation of significant others may concern family members, relatives or friends and they might or might be not part of the online group.

Hypothesis 7: Higher levels of interactivity lead to stronger subjective norms.

Second set of hypotheses: High- and Low-Engagement in online venues

Venues online engagement may be defined as a mutual agreement, promise or commitment made in advance among each member of the group to help and share interests, values, and principles in venues' activities through group identification. It is an intrinsic motivation to interact, team up and cooperate with group members. As a fundamental result, group engagement will lead overlap between own self-identity and group-based identity (Algesheimer, Dholakia, & Herrmann, 2005). Furthermore, stronger engagement is likely with greater degrees of conspicuous participation within the community (e.g., Langerak et al. 2003).

An individual show group-online engagement if affective, evaluative and cognitive social identities are strong and if group we-intentions and personal desires to interact are strong. We describe how different levels of group engagement lead to different participants' values and characteristics. To understand virtual community participants' motivations, purposes and intentions, we study similarities and the differences between the following two groups**.** In the first group, we consider people highly engaged in their online group. Instead, in the second group people not engaged. Sets of hypotheses were theorized considering the potential differences and were tested with a survey created for the study. The success of the manipulation was determined by running an ANOVA. A median split was used to separate participants into high and low engagement with the group based on summed measure as explained above, including we-intentions and desires to interact (Mantel & Kardes, 1999).

Mutual behaviors and Cognitive-Affective-Evaluative Social identity

Similarly to the other set of hypotheses, engagement-level through group norms is hypothesized to show significant differences in mutual behaviors. Based on previous discussion, we theorize the following:

Hypothesis 1a: Higher levels of engagement lead to:

i. Mutual agreement among each of the members of the group to interact with on the internet as a group and stronger agreement of the whole group.

ii. Mutual commitment of members to interact with on the internet as a group and stronger commitment of the whole group.

iii. Mutual accommodation to accommodate or adjust to the needs of the others in the group so as to choose a time and place to interact together on the internet and stronger accommodation of the whole group.

iv. Mutual support or help other members to do whatever it takes to facilitate interacting together on the internet as a group and stronger inclination of the whole group to help others.

v. Mutual liking between participants.

As in the first set of hypotheses, mutual behaviors may lead to social, cognitive, and affective social identity. In particular we hypothesize the following:

Hypothesis 1b: Higher levels of engagement lead to stronger: i. Cognitive social identity, ii. Affective social identity, iii. Evaluative social identity.

Past behavior, participation behavior and value perception measures

As discussed for the other set of hypotheses, we expect a significantly difference effect for each level of engagement both for past behavior and participation behavior. Specifically, we hypothesize that:

Hypothesis 2a: Higher levels of engagement lead to stronger online participation both for number of interactions and average time spent each interaction.

We also expect a significantly different use of groups and Internet in general for personal need satisfaction. We hypothesize:

Hypothesis 2b: Higher levels of engagement lead to stronger use of online group and the Internet in general for satisfying needs: Purposive value-Self discovery value-Maintaining interpersonal interconnectivity-Social enhancement value-Entertainment value.

Anticipated emotions

Since we assume the desire to interact is stronger and the regret in case of no interaction could be greater, different levels of engagement may influence positive and negative anticipated emotions:

Hypothesis 3a: Higher levels of engagement lead to stronger positive anticipated emotions such as to feel Relief, Contentment, Excited, Delighted, Happy, Glad, Satisfied, Proud, Self-assured.

Hypothesis 3b. Higher levels of interactivity lead to stronger negative anticipated emotions such as Angry, Frustrated, Guilty, Ashamed, Sad, Disappointed, Depressed, Worried, Uncomfortable, Anxious, Agitated, and Nervous if a person is unable to interact with on the internet as a group.

Attitudes and Perceived behavioral control

Similarly to the first set of hypotheses, we hypothesize the following:

Hypothesis 4a: Higher levels of engagement lead to stronger positive attitude toward interacting together on the internet with the group.

Furthermore, engagement should be a crucial variable to differentiate groups through expected perceived behavior control, since the control over interaction is expected to be higher if group connections and relations are stronger. We assume that:

Hypothesis 4b: Higher levels of engagement lead to stronger perceived behavioral control over interacting together on the internet with the group.

Subjective norms

Also in this set of hypotheses, we assume that:

Hypothesis 5: Higher levels of engagement lead to stronger subjective norms.

Offline behavioral outcomes of online social interactions

As already discussed for the other set of hypotheses, another interesting possibility is to point out how online participations influence other offline activities. We are interested in discovering how mass-media use changes if the level of engagement in online group is high. Activities as watching TV, listen to the radio, read print publications as newspapers and magazines, read books, talk at the phone, use of email and web for not email purpose were included also in this part of the study. By pointing out differences between high and low engagement, we intend to determine how different types of internet involvements might effectively impact group members' offline personal lives. Based on this discussion:

Hypothesis 6a: Higher levels of engagement imply a lower use of other media such as television, radio, newspapers, magazines, books, and telephone.

Hypothesis 6b: Higher levels of engagement imply a higher use of email and web.

Hypothesis 6c: Higher levels of engagement lead to low activities with family and friends.

Method: Participants and Procedure

A total of 545 active virtual community members participated in this research. For "active", we consider currently direct participation on a regular basis in one of the 7 venues. We used the screening condition that respondents had to engage in participation in an internet- based group such as an interactive group or non-interactive group.

Data were collected by conducting an internet-based survey, which was publicized by contacting approximately 75 organizers and administrators of popular online venues for each of the 7 categories. The organizers or administrators informed their membership about the survey, and encouraged them to participate by visiting a website where we had placed the survey. We need to point out that the use of this internet-based survey does not permit us to assess response rates, since we cannot determine how many potential respondents were reached through our website. Thus the nature and extent of response bias are unknown. Nevertheless, as the number of specific instances of groups from each venue and the total sample are large, we think that the convenience sample is relevant for testing hypotheses, although we cannot make any conclusions as to generalizability.

The study was introduced as an "Opinion Survey-Group Interactions on the Internet". First, participants selected the Internet-based group interactions that they most frequently engage in. Second, where they interact the most with the same group of people, such as real-life friends, family members, co-workers, or internet-only friends. In the rest of the survey, they were asked questions pertaining to the one type of group interaction that they chose. We also provided a space to describe the group interaction that they chose in more detail. The most frequently mentioned chat room and mailing was Yahoo, followed by Hotmail (MSN). Participants were then asked to imagine that they were logging on to the Internet to engage in the group that they described where they have a number of friends within that group that they regularly interact with. They were asked to picture briefly in their mind the name and image of each online friend then to write their first name and friends' first names. They might include up to, but not necessarily, 5 group members.

Measures of participation behavior were collected by emailing respondents approximately two weeks later, as described below. As an incentive for participating in the study, two randomly selected participants got the opportunity to donate $250 each to their favorite charity. At time 2, the sample was 465.

Sample Characteristics

Since we realized that only six individuals had responded for the networked video-games venue, these responses were therefore combined with the MUDs sub-sample. Respondents ranged in age from 18 to 79 years, with a mean age of 33.1 years (median = 30, SD=13.43). While 387 (71%) were US residents, the other 29% belonged to a total of 27 other countries. Canada (n = 42, 7.7%), Australia (n = 23, 4.2%), and Germany (n = 21, 3.9%) were the three next largest sub-groups, by nationality, represented in the sample.

These are some examples of the online venues represented in the sample. Among email lists participants, the Michelle Kwan fan-club, the ASCFG-L list for professionals in the specialty cut-flower business, the ACCESS-L list discussing issues pertaining to the Microsoft Access computer software, the Internet Bonsai Club, and the Texas Archaeological Society's mailing list, were all represented. The website bulletin-boards represented in our survey included the Ultimate Rollercoasters web-forum, the Salon table-talk, X-files fan forum, and the Cultural Diffusion Board. Members of the rec.arts.bodyart, rec.art.dance, alt.religion.christian.episcopal, rec.arts.disney-parks, and alt.guitar.amps Usenet newsgroups also all participated in our survey. For high-interactivity venues, the IRC (Internet Relay Chat), AOL Instant Messenger, Microsoft Messenger, Yahoo Messenger, and ICQ were all represented within the real-time online-chat system sub-sample. Members of the Barliman's chat-room at TheOneRing.net, the Park teens lobby, "The Pork" community and chat-rooms at Yahoo.com and Excite.com all participated in the

study within the web-based real-time chat-rooms sub-sample. Finally, the MUDs represented in this sample included Porta Unica, Another World, Mozart, Aurealan Realms, Nexus Kingdom of the Winds, Xyllomer, Alexandria, and Avatar.

First set of hypotheses: results

We consider venue interactivity in-depth and point out similarities and differences between high- and low-interactivity venues. We conducted these analyses to verify and to better understand specific effects and differences across interactivity based groups. We analyzed these measures by comparing statistical differences between members of high- and low-interactivity groups. These analyses were done by running a one way (high, low) interactivity-level ANOVA with the reported change in level of the *We-intentions, Past behavior and participation behavior, Group norms, Mutual agreement, commitment, accommodation, and support, Anticipated Emotions, Offline Behaviors and Value perception measures (Purposive value-Self discovery value-Maintaining interpersonal interconnectivity-Social enhancement value-Entertainment value), Social Norms, Perceived behavioral control, Attitude* as dependent variables. ANOVA analyses were used to compare the low- and high-interactive venues on effects of online social interactions, as well as to uncover offline behavior related differences. As expected from hypothesis 1a, one-way ANOVA results indicate that the high and low interactivity venues participants varied in their "we-intentions" responses (contact the author for results table). We used three different measures to test this hypothesis: strength of self's intention, average of the strength of group members' intentions, whole group's intentions. The average of the strength of group member's intentions is higher for the high interactivity group. This result is supported by strength of self's agreement and for the whole group, since differences in means for high and low interactivity groups are significant. Therefore, Hypothesis 1a is supported.

Hypothesis 1b assumed stronger online participation behavior with the group of friends both for average number of interactions and average time spent each interaction. A significant effect is revealed, users belong to the low-interactivity group self reported they interacted together in a two-week period on the internet with the group 30 times instead the high interactivity group 15 times. Furthermore there is a significant result for past behavior, considering the previous 6 months as time period. Hypothesis 1b is supported because there is also a significant effect for average time spent each interaction .747 for low interactivity group versus .2.242 for high interactivity group. Additionally there is a significant result for total behavior defined as the number of times multiplies by hours each time, 24.87 for low interactivity group and 41.24 for high interactivity group.

According to Hypothesis 2a higher levels of interactivity lead to stronger group norms as the strength to which friends hold the goal to interact each others. This result is reversed by our data. Surprising, Hypothesis 2a is in the opposite expected direction.

An ANOVA of mutual behaviors- agreement, commitment, accommodation, support, and liking- revealed many significant effects for averages of the strengths of group members' mutual behaviors, supporting hypothesis 2b. High- interactivity venues' users promote mutual behaviors: they agree about details of interactions such as if, when and how to interact; they promise each other to be part of the group; members are inclined to organize own schedule, time and place to facilitate interaction and help to do whatever it takes to make an interaction possible. For this group mutual liking is probably a strong motivation to interaction. Consequently, Hypothesis 2b is supported. Hypothesis 2c stated that higher levels of interactivity lead to stronger social identity: Cognitive, Affective, and Evaluative. Hypothesis 2c is only partially supported since results for cognitive social identity are not significant. Instead, results are significant for evaluative and affective social identity.

Hypothesis 3 posited that higher levels of interactivity lead to stronger positive anticipated emotions and stronger negative anticipated emotions. Both positive and negative anticipated emotions show significant results (contact the author for results table). If high-interactivity group members are able to interact together on the internet with the group of friends they feel Relief, Content, Excited and Delighted and if they are unable they feel Depressed, Worried, Uncomfortable, Anxious, Agitated, and Nervous. As a result, Hypothesis 3 is supported.

Hypothesis 4 suggested that higher levels of interactivity imply lower use of media and higher use of email and web (not email). Interactivity-level had a significant effect on using other media. Low-interactivity venues' participants show to use media such as television, radio, newspaper, magazines, telephone much more than high-interactivity group. Days of Tv use, radio use, magazine and email use are all in the same direction (contact the author for results table). Instead web use is in the opposite direction, people belong to high interactivity venues use more the web and less the other media.

In particular, use of TV is higher for low interactivity group; they watch TV at least 5 times per week vs. 4 times for the high-interactivity group. High interactivity group also decrease behavior in visiting family, friends and neighbors, and in doing activities and telephone conversations with them. Surprising, they watch movies in movie theatres more than the other group. The ANOVA analyses support that participation in online social interactions negatively affects the overall use of all mass media considered: television, radio, telephone, magazines, and newspapers, across the entire sample.

Our Hypothesis 5 stated that higher level of interactivity would lead to higher use of online group of friend and/or the Internet to satisfy needs such as purposive value, self discovery value, maintaining interpersonal interconnectivity, social enhancement value and entertainment value. Measures were supported by statistically significant results. For *purposive value*, high interactivity group use more the group and the web to get information, to contribute to a pool of information, to generate ideas, to negotiate or bargain, to learn how to do things, to provide others with information, to get someone to do something for them, and to solve problems than low interactivity group and use more the web to make decisions. For *self-discovery value*, high interactivity group members use more the web and the group to learn about themselves and others and to gain insight into themselves then the other group. For *maintaining interpersonal interconnectivity value* high interactivity group members use more the web and the group to have something to do with others, to stay in touch, to get to know others. For *social enhancement value*, high interactivity group use more group and web to impress and to feel important. For *entertainment value* to satisfy the following needs: to be entertained, to play, to relax, to pass the time away when bored, to feel less lonely. Therefore, hypothesis 5 is supported.

Hypothesis 6a stated that higher levels of interactivity lead to stronger positive attitude toward interacting together on the internet with the group. This result is supported only for the first two measures. Hypothesis 6b affirmed that higher levels of interactivity lead to stronger perceived behavioral control over interacting together on the internet with the group. This result is supported, confirmed hypothesis 6b. The last hypothesis is that higher levels of interactivity lead to stronger subjective norms. This result is supported by our data.

There is a statistically significant result about age (M_L=39, M_H=26; $\underline{F}$ (1, 523) =174, $\underline{p}$<.001) where in the low interactivity group there are older participants and in the high interactivity group members are younger.

Results also show a statistically significant result for gender (M_L=1.51, M_H=1.60; $\underline{F}$ (1, 521) =4.058, $\underline{p}$<.05) where in the low interactivity group there are most females and in the high interactivity group there are most males.

Combining these two results, we get a profiling of high and low interactivity venues participants. Low interactivity participants are most young female, teenagers. Young women are more likely to participate online than young men in E-mail List, Web Site Bulletin Board or Usenet Newsgroups. For example, compared to men, online women are more likely to send and receive email, to use it in a richer and more engaging way such as write to friends and family, sharing news, worries, and advices, sending pictures, forward jokes and funny stories (as explained in Pew internet and American life project, December 2005). Instead, high interactivity members are most males, older than 19 years old. Older men are more likely to participate online than young women in Instant Messaging, Web-Based Chat Rooms, Multiplayer Virtual, Multi-User Domains (MUD).

Second set of hypotheses: results

We consider engagement as independent variable and point out similarities and differences between high- and low-engagement groups. We conducted these analyses to verify and better understand specific effects and differences across different

engagement based groups. We analyzed these measures by comparing statistical differences between members of high- and low-engagement groups. A median split was used to separate participants into high and low engagement group (Mantel & Kardes, 1999).

These analyses were done by running a one way (high, low) interactivity-level ANOVA with the reported change in level of the *Mutual agreement, commitment, accommodation, support, Cognitive-affective-evaluative Social identity, Past behavior and participation behavior, Value perception measures: Purposive value-Self discovery value-Maintaining interpersonal interconnectivity-Social enhancement value-Entertainment value, positive and negative Anticipated emotions, Perceived behavioral control, Attitudes, Subjective norms, offline behaviors* as dependent variables. Analyses were used to compare the low engagement group and high engagement group on effects of online social interactions, as well as to uncover offline behavior related differences. The results generally support the research hypotheses (contact the author for results table).

As expected from Hypothesis 1a, one-way ANOVA results indicate that individuals with different engagement level varied in their mutual behaviors responses. We used three different measures to test this hypothesis: strength of self's behavior, average of the strength of group members' behavior, whole group's behavior. Hypothesis 1a is supported in the expected direction for mutual agreement, accommodation, commitment, support and mutual liking. A higher engagement implies stronger mutual agreement, accommodation, commitment, support and liking. Therefore, Hypothesis 1a is supported. High- engagement users promote mutual behaviors: they agree about details of interactions such as if, when and how to interact; members are inclined to organize their own schedule, time and place to facilitate interaction. For this group mutual liking is probably a strong motivation to interaction.

Hypothesis 1b assumed stronger cognitive, affective and evaluative social identity if higher engagement level. First, results showed that high engagement implies a cognitive awareness of group members. Participants affirmed their self-images overlap very much with the identity of the group of friends when they are part of the group and they engage in group activities. They consider group members very similar to themselves, supporting cognitive social identity. Second, high engagement members are very attached to their group and have strong feeling of belongingness toward the group, confirming affective social identity. Third, they are valuable and important members of the group, supporting evaluative identity. Consequently, Hypothesis 1b is totally supported.

Hypothesis 2a stated high engagement should lead to stronger online participation behavior with the group of friends both for average number of interactions and average time spent each interaction. A significant effect is revealed, users belong to the low-engagement group self reported they interacted together in the previous two weeks on the internet with the group 13 times instead the high interactivity group 32 times as well as on average in a two week period during the previous 6 months. Hypothesis 2a is only partially supported because there is not a significant effect on average time spent each interaction as in the case of high- and low-interactivity set of hypotheses but there is a significant result for total behavior defined as number of times*hours each time, 22 for low-engaged group and 45 for high-engaged.

According to hypothesis 2b, higher levels of engagement lead to stronger use of online group and the internet in general for satisfying needs such as purposive value, self discovery value, maintaining interpersonal interconnectivity, social enhancement value and entertainment value. Many measures were supported by statistically significant results. For purposive value, high-engaged members use more the web to provide others with information than low-engaged group, reversing the result found for the other set of hypotheses. For self-discovery value, high engagement group members use more the web to learn about themselves and others than the other group. For entertainment value, engaged participants use more both the group and Internet to be entertained and to relax. For maintaining interpersonal interconnectivity, engaged group uses more the web to stay in touch with people. Results are also significant for social enhancement value. Hypothesis 2b is totally supported. Additionally, in the informational value measure we included that people use the venue to learn how to do things, to get information, to provide others with information, to contribute to a pool of information. In the informational value measure we consider that people use the venue to generate ideas, to negotiate or bargain, to solve problems, to get someone to do something for them, and to make decisions. Measures included in purposive value were the use of the venue to get information, to generate ideas, to negotiate or bargain, to learn how to do things, to provide others

with information, to get someone to do something for me, to solve problems, to make decisions, to contribute to a pool of information. Measures included in the entertainment value were the use of the venue to be entertained, to play, to relax, to pass the time away when bored, and to feel less lonely. These measures also showed significant results.

Hypothesis 3 posited that high level of engagement lead to stronger positive and negative anticipated emotions. For positive anticipated emotions contentment, delight, happiness, glad, relief, excited, glad, satisfied, proud, self-assured were statistically significant and in the hypothesized direction. For negative anticipated emotion, sadness, disappointing, angry, frustration, guilty, ashamed, sad, disappointed, depressed, worried, uncomfortable, anxious, agitated, nervous were all statistically significant. Therefore, hypothesis 3 is supported both for positive and negative anticipated emotions (contact the author for results table).

Hypothesis 4a suggested that higher levels of engagement lead to stronger positive attitudes toward interacting together on the internet with the group of friends: high-engaged members consider the interaction wise, good, beneficial and rewarding. Therefore, Hypothesis 4a is supported.

Hypothesis 4b suggested that higher engagement should lead to stronger perceived behavioral control over interactive together on the internet with the group of friends. Results showed high-engaged people consider easy and unproblematic to interact if they chose to, and for their groups is easy to interact if they want to, thus supporting hypothesis 4b.

Hypothesis 5 suggested that higher levels of engagement lead to stronger subjective norms. If the engagement is low most people who are important to them would disapprove of them interacting together on the internet with the group of friends, instead if the engagement is high most important people in their lives would approve of them interacting with the group. Additionally if the engagement is low most people who are important in their life think they should not interact together on the Internet with friends providing statistical support to hypothesis 5.

Hypothesis 6 assumed that higher levels of engagement in the online group should lead to lower use of other media and less offline activities. Surprising, high engaged people go out with friends more and they visit with family members more. Again surprising, engagement-level had a positive significant effect on using other media such as listen to the radio. It might be that they listen to the radio when they are actually using the community. Additionally, as expected, they use more email and web. On the other hand, they read magazines and they watch movies in movie theaters less than not engaged people. Therefore, on one side high-engaged members are involved in more offline activities such as go out with friends, and visit with family members. On the other side they use more email and web, supporting hypothesis 6b and partially reserving hypotheses 6a and 6c.

Also in this set, gender related differences emerge but no statistically significance differences in age were found. In the low engagement group, there are most males and in the high engagement group there are most females. (M_L=1.62, M_H=1.49; $\underline{F}$ (1, 521)=4.058, $\underline{p}$<.05), reversing previous results.

Interactions

1. ***The moderating impact of community engagement on the relationship between venues interactivity and use of the venues for informational value***

Of special relevance from a marketing perspective, informational value is one that the participant derives from getting and sharing information in the virtual community, and from knowing what others think, and using this information to make decisions.

As an example, before buying a new car, a consumer may visit different bulletin-boards to learn about the prevailing tenor of opinions regarding the brand's quality (Bickart & Schindler, 2001).

In the informational value measure we include: people use the venue to learn how to do things, to get information, to provide others with information, to contribute to a pool of information.

Results (contact the author for descriptive statistics, tests of between-subjects effects, and the plot) indicate that consumer behavior online is clearly influenced by engagement. The influence of engagement on the use of the venues for informational value would be greater for individuals with high engagement using low interactivity venues. It would be lower for consumer with low engagement using low interactivity venues. As we can see, individuals with low engagement are heavily affected by the level of venues interactivity because their use of the venues for informational purpose is clearly higher when the venues are not interactive in real time. If there is high engagement the use of venues for informational purpose will be higher for low interactivity group and slightly lower for high interactivity venues.

These results have many immediate implications for companies. For example, they have to learn how to use not interactive venues to provide their customers with information since they search for information mostly in not interactive venues.

However, they have to be careful, since for example it is now very common for consumers to receive hundreds of e-mails per day. A person may spend hours each day just answering e-mails. It seems that the ease and lower cost of communicating electronically has led to more messages being transmitted, many of which are SPAM. The growth of SPAM bothers people and also increases the amount of time needed to manage emails. With millions of messages, many with multimedia components, needing to be held on personal servers the hardware resources needed have also increased.

Companies have to learn how to contact consumers in low interactivity venues without SPAM, since nowadays there are many SPAM filters and pop-up blockers. The risk is to spend time and money without providing any information to consumers or, even worse, without even contacting them at all.

From our results, consumer search for information in low interactivity venues, thus it is very important the company has search engine optimization tools to get more traffic in their website and to gain visibility.

Peter Daboll, president and chief executive of ComScore Media Metrix, said one notable recent traffic trend is increased popularity of sites helping people find local information: "Things having to do with local search are really gaining momentum". Greg Sterling, an independent analyst, said local Internet services lagged behind their national counterparts for years but are finally coming on strong because they are much better today and people are more aware of their utility. "This is stuff people need and want in their everyday lives," Sterling said, "and to the extent they can find it online, they are starting to use these tools."[1]

Furthermore, a new important tool available for marketers to understand what customers are searching for and the popularity of their brand is Google trends[2]. They can use these data to improve their business and to change their way to contact customers. They could also mimic competitors if they perform better.

Companies also have to find a way to provide information to old people with easy to use tools and applications to facilitate information spreading[3] . Again, since consumer search for information in low interactivity venues, it is crucial for companies to rank high with the major search engines; effective search engine optimizations are now enormous. Companies have to provide consumers with information they want and they are searching for: they require the most relevant and up-to-date information to match the search term that was used and quickly find relevant websites by searching for a word or a phrase. Information is useless to consumers if it does not relate to the search term, or if they are old. Users expect the most up-to-date and fresh information that is useful to them.

First, a strategic implication of our results is that companies should update their website everyday adding some materials. This will help them to get noticed by the search engines. Second, if they are going to sell any type of product or service online, companies have to optimize their website for the search engines, in order to boost traffic and sales. Third, if they want to have the greatest deals in the entire world, they have to be conscious that over 90% of their business will likely come directly from search

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[1] http://www.washingtonpost.com/wp-dyn/content/article/2006/04/03/AR2006040301692.html
[2] http://www.nytimes.com/2006/07/05/business/05leonhardt.html?ex=1152244800&en=379ad605f5d24c76&ei=5087%0A
[3] http://networks.silicon.com/webwatch/0,39024667,39160110,00.htm

engine results that people get when they search for information in low interactivity venues. Therefore, better understanding the fundamental elements of search engine optimization is vital for an online business' success. Forth, companies should consider different techniques to increase page rank. For example, the most effective method is to provide high quality content consistently. Many websites fail to provide content that consumers find interesting. Companies which provide website content that are interesting, well-written and regularly updated create highly engaged users. As can be seen from our result, if the level of engagement is higher, consumers are more likely to return to the website in the coming days for informational value. A consequence is that companies should avoid having a boring, lifeless site. Fifth, companies should include keywords and phrases within their content. In fact, to be sure that they are properly targeting their market, keywords and phrases they have on the website have to be the keywords and phrases that their website is actually optimized for. The more keywords companies use in their content, the more likely it is that online consumers will find the website when they do some research with those words. When visitors come to the home page, they should easily find the name of the company, what it does, and what products or services it provides. Sixth, companies should also have to develop a linking strategy as a part of their techniques to provide people with information they need. Links provide free advertising, and it gives the impression that their site is imperative because of its affiliated links. For each link that companies have pointing back to them, that is another chance for their potential customer to find them. The more inbound links that they have pointing to their site, the higher they will be ranked in the search engines. Seventh, companies have to develop a content trick. People who get to search from the internet are looking for information. The more information companies provide for them and the more helpful it is, the more likely companies will make the sale. A successful way to build up online content is writing articles, arranging properly their content for example by adding a new page to the website to allow room for extra articles to be added and an to build up an archive of articles which will maintain to draw online consumers. Eighth, since consumers like to provide information and to contribute to a pool of information, such as product reviews and so on, companies should create a space in the website for consumers' discussion such as a message board. Ninth, people often search at the search engines for brand shows and events they are going to attend. By including separate web pages about each trade show or brand fests the company is going to attend or exhibit at, there is a good chance that people searching for that show or event in the search engines will see the page on the corporate website mentioning the fact that the company is attending. This mechanism can lead to company and brand consciousness and perception as well as potential sales and new potential customers. If someone is searching for the trade show or brand event, then they are interested in that particular industry or brand or product category; so those types of website guests are extremely targeted and valuable. Summarizing, companies should provide high-quality, keyword rich content and link website to and from a deliberate family of other sites. These will help improve site's popularity and coerce increased business through their online business.

2. ***The moderating impact of community engagement on the relationship between venues interactivity and use of venues for instrumental value***

We included instrumental value, that a participant derives from accomplishing specific tasks, such as solving a problem, generating an idea, influencing others regarding an issue or product, validating a decision already reached, or buying a product, through online social interactions (e.g., Hars & Ou, 2002; McKenna & Bargh, 1999). These objectives are all instrumental because they are usually defined prior to participation and facilitate achievement of specific end-state goals (Bagozzi & Dholakia, 1999).

In the instrumental value measure, we consider that people use the venue to generate ideas, to negotiate or bargain, to solve problems, to get someone to do something for them, and to make decisions.

Results (contact the author for descriptive statistics, tests of between-subjects effects, and the plot) indicate that online consumer behavior is clearly influenced by engagement also in this case. The influence of engagement on the use of the venues for instrumental value would be definitely greater for individuals with high engagement using high interactivity venues. It would be lower for consumer with low engagement using high interactivity venues. Individuals with low engagement are affected by the level

of venues interactivity, because their use of the venues for instrumental purpose is higher when the venues are not interactive in real time.

Instead, individuals with high engagement are affected by the level of venues interactivity, because their use of the venues for instrumental purpose is higher when the venues are interactive in real time. If there is high engagement the use of venues for instrumental purpose will be higher for high interactivity group and much lower for low interactivity venues.

Consumer behavior for instrumental purposes in the use of venues is highly influenced by the level of engagement. Such influence is especially important for consumer with high engagement and high interactivity.

The internet allows interaction in real time, which is online true interactivity, this is crucial since many business activities consist of interactions. A marketing implication is that interactivity enhances the fortune of customer relationships and creates new paradigms of product design and customer service (for example, the customer can customize the product/service and the supplier can learn from the customer). Moreover, venues are open, global network communities that everyone can easily get connected with. The increased connectivity enables new communication and coordination mechanisms both across organizations and customers as well as within groups of customers, while as the number of connections increases the value of the venues grows exponentially.

Another interesting marketing implication is that companies should try to increase with different tools their costumers engagement in the community since higher level of engagement increase a lot the use of the venues to make decisions (e.g. purchase decisions) and to solve problems (e.g.. product technical problem, purchase logistic problems and so on).

If a consumer wants to solve problem (for example a technical problem) using the online venues, he or she needs a supportive technician available to help.

On the other side, high engagement and interactivity in real time may imply not only that consumers use the online community to help, but also that they are available and cooperative to share their knowledge with others. To improve venues efficiency, online community managers should generate and employ some mechanisms to force people to reciprocate or to motivate people to share. An interesting solution for companies is the use of blogs, in particular now that brand blogs and brand portals are storming the web. This is a good way to generate ideas, solve problems, and to make decisions. The current trend is to set up a special brand portal that grants space to bloggers to enrich the website with “logs” of their thoughts and emotions, often resulting in conversations between dozens of different people. Typically, it takes very little time for bloggers to form groups of common interests. Venues interactivity and a focus on communities due to consumer engagement, is changing the way people view and know websites. For example, Sunsilk, Nokia and Axe are just some of the brands that are trying to create online communities. Each brand has a subject that helps reinforce the community.

Companies should consider that while old interaction techniques could get over easily, an online experience can last longer and help cultivate a better bond with the customer, if they are able to provide them with the instrumental value they want. For example, for brands addressing specialized needs, internet makes exceptional sense. Take ItchGuard, an itch-relief cream. Its website, created by Tribal DDB India, has been an award-winner. It centers round the ailment that the ointment soothes, the itch, and it is done in a manner that would not be possible offline. Company role is to ensure that brands have a unique presence online. Indeed, online campaigns work best where offline media are inadequate.

3. ***The moderating impact of community engagement on the relationship between venues interactivity and use of venues for purposive value***

Although informational and instrumental values tend to be viewed as distinct by communication researchers (e.g., Flanagin & Metzger, 2001), it is perhaps more appropriate to view them as constituents of a single purposive value construct from a marketing perspective, which we define as the value derived from accomplishing some pre-determined instrumental purpose (including giving or receiving information) through virtual community participation.

Considering the sum of all the previous measures results are still significant (contact the author for descriptive statistics, tests of between-subjects effects, and the plot), showing the moderating impact of community engagement on the relationship between venues interactivity and use of venues for purposive value, defined as the value derived from accomplishing some pre-determined instrumental purpose through virtual community participation. In particular, measures included in this case are the use of the venue to get information, to generate ideas, to negotiate or bargain, to learn how to do things, to provide others with information, to get someone to do something for them, to solve problems, to make decisions, to contribute to a pool of information.

If consumers have high engagement, they heavily use the venues for purposive value both in high and low interactivity venues. In this case, the use of venues for purposive values does not depend on the level of interactivity. Instead, when the level of engagement is low, the use of venues for purposive values does depend a lot on the level of interactivity. In particular, when venues allow for interactivity in real time the use of the venues for purposive value is very low.

Previous interactions and discussions are validated by this result. If companies are able to increase the level of consumers' engagement in the community, they can get many good feedbacks from their customers. They can also get many reviews and suggestions about how to improve their product or services and they can help potential consumers to purchase companies' products. Furthermore, companies might be able to provide their advertising to a larger number of people through not interactivity venues if the engagement is low.

For participants of interactivity venues in real time with high engagement, purposive value is a key driver of participation. From a managerial perspective, such purposive motives can be characterized as complementary to each others. For instance, in measuring informational value, one item that we used was to get information, whereas another was to provide information to others. It can be argued that an information-seeker will find the online community helpful, practical, and supportive only if he or she can find another participant with the complementary motive of providing that information. As a result, an important task of online community managers may be defined in terms of matching of participants' complementary motives effectively and maintaining a balance, so that the purposive goals of most participants are achieved.

It is also essential to point out the importance of "we-intentions" for purposive value, since people reported to use the venue to make decisions. In fact we intentions may lead to joint behaviors. We-intentions are more appropriate than "I intentions" in online communities and should be measured instead by marketers for predictive or inferential purposes.

Online groups, once formed, are very influential in shaping and changing the consumer's opinions, preferences, and following actions. Rather than focusing on the product or service, per se, these findings suggest that marketers should focus on providing the right conditions for consumers to come together and meet often enough for such groups to form, and then naturally exert their influence on participating consumers.

A related topic is to convince the leading members to adopt a special product in order to create a new "fashion". Marketers should focus on identifying leading consumer community members, because if they are able to influence them, the market impact will be much higher. Leading consumers may collaborate not only in idea generation and product design, but also in marketing communication effort itself. This is because interactivity in the Web gives consumers much greater control of the message.

Another marketing implication is that since consumers may trust more other consumers than company managers or community organizers, it becomes very important to get their collaboration. As an example, a new trends online are bookmark services such as http://bluedot.us/friends/dots or http://del.icio.us/ to see what friends find interesting on the Web. Blue Dot is a free service that helps consumers find, save, and share web content with friends and family. For a list http://www.listible.com/list/social-bookmarking-sites. Bookmarks have become a tool for users sharing similar interests to locate new websites that they might not have otherwise heard of, or to store their bookmarks in such a way that they are not tied to one specific computer.

4. The moderating impact of community engagement on the relationship between venues interactivity and entertainment value

The last value we included is entertainment value, derived from fun and relaxation through playing or otherwise interacting with others in the virtual community (McKenna & Bargh, 1999). Studies have shown that many participants engage in online social interactions for entertainment through exploring different fictional identities (McKenna & Bargh, 1999), encountering and solving virtual challenges (Balasubramanian & Mahajan, 2001), etc. We consider the social influence variables in our model next.

Measures included in this case are the use of the venue to be entertained, to play, to relax, to pass the time away when bored, and to feel less lonely.

Effects provided by our results (contact the author for descriptive statistics, tests of between-subjects effects, and the plot) imply that virtual community organizers will need to thoughtfully decide on which tools and functionalities to provide in their venues if they want to be successful. In fact, in high-interactivity venues, consumers find applications of purpose to be valuable (tools, application, and content that enable them to achieve their entertainment goals successfully). Examples of such applications include: emoticons, avatars, winks, moods, games, videos, messengers, tool bar, greetings, downloads, news, FAQs lists, organization of past responses from community members in transparent and easily accessible hierarchies, query-tools to match information-seekers to information providers, and so on. Other features to increase interactivity include: blogging, message boards, live chat, dating, personal web pages, groups, events calendar and much more.

Additionally, if the site is free, many networks are a great way for people to stay in touch and share information such as convention dates and locations, group meetings, or an awesome way to just have fun chatting or exchanging pictures with other people from all over the world. Many website enables members to bookmark, introduce and even ignore other online members via a user-friendly member panel. Companies should have something new for their visitors on a daily basis to tie them to the network or their brand.

A chat interface for example brings the users together in a real time chat room allowing instant communication between users. Additionally, the events calendar is one of the best features of many sites allowing any user to post an event to the public calendar viewable by any member on the page.

It is crucial for companies to notice the lack of social resources for some categories of people if they want to develop a new business, because they can bring more people with same interests together by taking advantage of the full potential of the internet.

This has important implications for the types of commercial Web sites that are designed to attract new consumers. For example, the fun experience facilitates consumers learning about how to use the Web and become comfortable with it over time. The engagement of new web users is a new frontier.

In reality, it often happens that consumers complain that a site is slow and does not meet expectations. Complaints might include minutes-long loading times, broken stats pages, disappearing HTML, publishing problems, browser incompatibilities, and so on. Companies should identify the problems, work hard and quickly resolve the issues, since people search for websites where they can be entertained, play, and relax.

5. The moderating impact of community engagement on the relationship between venues interactivity and group norms, cognitive social identity, affective social identity, and evaluative social identity

Group norms and social identity are two key social influence variables that impact virtual community participation. We find the level of engagement to be a moderator, influencing not only the reasons why members participate, but also the strengths of their impact on group norms and social identity.

Results (contact the author for descriptive statistics, tests of between-subjects effects, and the plot) indicate that the influence of engagement on group norms would be definitely greater for individuals with high engagement no matter the level of venues interactivity. It would be lower for consumer with low engagement using low interactivity venues. As we can see,

individuals with low engagement are affected by the level of venues interactivity, because group norms are higher when the venues are interactive in real time.

Individuals with high engagement are not affected by the level of venues interactivity. When the level of engagement is low the strength to which a respondent holds a goal does depend a lot on the level of interactivity. In particular, when venues allow for interactivity in real time this strength is higher.

An interesting marketing guideline is that companies, if they want their consumer to hold the goal they want (such as to buy their product, be loyal to the company and so on), they have to start using high interactivity venues as well and contacting their costumers through high interactivity venues. This can be done creating brand communities in their website, and using different functions as chat rooms, message boards, and newsletters to contact their customers.
Furthermore, it has been shown that stronger group norms lead to a stronger social identity regarding the virtual community (Dholakia et al, 2004).

Social identity, in contrast to personal identity, is an integral part of group membership and confers a collective sense of who one is. Social identity consists of three highly related, yet distinct, dimensions: awareness of group membership, affective commitment to the group, and evaluative significance of group membership.

Awareness of group membership is a cognitive sense of oneself as an instance of a social category. Such thoughts concern judgments about similarities to in-group members and dissimilarities to out-group members. Surprisingly, cognitive social identity for a highly engaged member decrease if there is interaction in real time. On the contrary, cognitive social identity without engagement increase if there is interaction in real time. These results reinforce the previous idea about online groups, which once formed, are very influential in shaping and changing the member's opinions, preferences, and following actions.

Affective commitment to a group is manifested in two senses of emotionality. One is feeling attachment to the group. Another is experiencing a feeling of belongingness to the group. Even though interactivity in real time does not influence affective social identity when there is a high level of engagement, instead it does when the level of engagement is low. In particular, it increases when there is interaction in real time. These results again reinforce the previous idea about online groups, which are very influential for consumers. Furthermore, it reinforces the idea about the use of other tools to increase the level of interactivity and entertainment. If consumers enjoy participating, they will be more willing to cooperate, assist other members, share knowledge and information, and ask suggestions to other members, such as purchase decision questions.

Evaluative significance of group membership is expressed in two related forms: a sense that one is an important member of the group and that one is a valuable member of the group. Again this result proves that interactivity is very importance, both with high engagement and without. In addition, it adds a very important feature. If a person considers him/herself important this may imply this person is a leader in the group. For marketers is very important to identify who the leaders in a group are. If they are able to contact and influence them, they will be able to contact and influence other members and so on. This result is significant, since it proves the internet has changed overall patterns of business communications. This is particular important, because it should be avoid the development of homogenized content that would appeal to a mass audience, since it has negative implications for niche audience. Leaders should be targeted with their needs in order to get a global, widespread response.

6. The moderating impact of gender (1=female, 2=male) on the relationship between venues interactivity and engagement

Highly engaged members are mostly females, in particular for real time interactions. Instead, if there is interaction in real time and people are males there is usually low engagement. Females are more engaged if there is interaction in real time, instead males are more engaged if there is not interaction in real time. Low levels of interactions and gender do not affect much the level of engagement. It is just slightly lower for males than females. Nevertheless, the huge difference in the level of engagement is between male and female, if there is interaction in real time. In this case, the level of engagement is definitely lower for males.

This is a crucial difference for manager to learn how to deal with female and male, in particular if they would like to use high interactivity venues as a tool to contact their customers. An interesting future research could be to study if males' online brand community members are less loyal compared to female, members as well of the same community.

There are some implications of our findings. Men are more engaged with their internet use in not-interactivity groups than women are. Men are more likely than women to participate in low interactivity groups in a vast selection of special interest groups such as fan clubs, product enthusiast people, community groups, brand communities, technological issues, games, and so on. They are online more frequently, because they probably have high-speed connection at home. Pew internet and American life project (2005) results show that men and women are equally likely to access the internet from home (89% of men and 87% of women) but men are more likely than women to have high speed connection at home (52% of men and 48% of women). Men use group and web to get information- such as get news, check the weather, get sport information, do new job related-search, use online reputation systems- play lottery or gamble, share files, buy products, search for an hobby, solve problems, make decisions and so on. Men search for information on a more extensive diversity of subjects and issues online than women do. Pew internet and American life project (2005) confirms these results and show men use search engines to get political information and news as well.

In Pew internet and American life project (December, 2005), they affirm men use the internet more than women as a destination for recreation. Our results sustain this finding. However, even though men are more willing to be part of a high interactivity venue and Instant Messaging, Web-Base Chat Rooms, Multiplayer Virtual, and Multi-User Domains (MUD), and these venues are mostly used for entertainment and recreation, they are less engaged in the community. They play games, share files, listen to audio clips and watch video clips, as women do, but they also practice their hobbies, participate in sport fantasy leagues, downloading files, remixing files and so on. The key difference is that women are more engaged when they do such activities.

Furthermore, shopping online differences between males and females begin as early as the teen years[4] (2006).

7. The moderating impact of community engagement on the relationship between venues interactivity and participation behavior (time in hours per session)

Results (contact the author for descriptive statistics, tests of between-subjects effects, and the plot) indicate that consumer participation behavior online, defined as time in hours per session, is clearly influenced by engagement and venue interactivity.

As expected, the influence of engagement on consumer participation would be greater for individuals with high engagement using high interactivity venues. Nevertheless, unexpected, it would be lower for consumer with high engagement using low interactivity venues.

Individuals with high engagement are heavily affected by the level of venues interactivity, because their venues participation is clearly higher when the venues are interactive in real time. With low engagement, the use of venues will be higher for high interactivity group and slightly lower for low interactivity venues.

These results have immediate implications for companies.

Online communities can help people form dynamic, self-motivated, and productive relationships. Unfortunately, this potential is not always satisfied: many online communities fail, and organizers are not able to understand why. Butler (2001) found 50% of social, hobby, and work mailing lists have no traffic over a 122 day period and even in communities that do survive: in a majority of active mailing lists, fewer than 50% of subscribers posted even a single message in a 4-month period. Even in successful communities, questions can go unasked or unanswered.

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[4] http://home.businesswire.com/portal/site/google/index.jsp?ndmViewId=news_view&newsId=20060816005135&newsLang=en

General discussion

The goal of this research was to contribute to the growing curiosity and comprehension concerning online group interactions in developing countries. First, we were able to better understand how involving in online social interactions relates to the member's online and offline social behavior. Second, we pointed out similarities and differences in participant's online and offline social behavior if interactions occur in high or low interactivity venues. Third, we identify similarities and differences in user's online and offline social behavior, if there is high engagement with the group or if the engagement is not so high. Through the study of specific differences between online group participants, our contribution was to the promising literature on the effects of internet use for group interactions (e.g., Bagozzi, Dholakia, & Pearo, 2005; Dholakia & Bagozzi, 2004; Flanagin & Metzger, 2001; Kraut et al., 2002; Shah et al., 2001; The UCLA Internet Report, 2003).

Forth, many interesting key interactions emerged and were discussed.

As discussed above, many positive effects emerge from group engagement and group interactivity. Our findings have theoretical and practical value. Contrarily to expectations, group engagement and high interactivity are a positive factor in everyday life. Our empirical survey based-study, conducted across seven different venues, found overall support for our proposed sets of hypotheses.

The first contribution was to study how online social interaction influence online and offline members' behavior.

While participation in online social groups has always been considered a time-consuming activity, our results have proved that is not always the case. People highly engaged in online group and participating in high- interactivity venues seems to have time to enjoy their lives in offline activities. Results show many significant differences in members' behavior online and offline.

Another contribution is that significantly gender differences allow us to obtain a user profiling to better understand participants' online characteristics.

As another important outcome of this research, many interesting differences between high- and low- interactivity groups and high- and low- engagement groups were uncovered. The following different effects were found in both set of results: mutual behaviors, such as mutual accommodation, support, commitment, agreement and liking, positive and negative anticipated emotions, past and current participation behavior, use of communication media, use of Email and Web, we-intentions, social identity, purposive value, self-discovery value, maintaining interpersonal interconnectivity, social enhancement value, entertainment value, subjective norms, positive attitude, perceived behavioral control.

Additionally, many interesting key interactions emerged, were discussed, and showed that the monitoring and management of online communities is best viewed as an ongoing task by their organizers.

In conclusion, other marketing researchers showed optimism expressed by studying online communities (e.g., Balasubramanian and Mahajan 2001), and suggested that these online communities are only likely to grow in importance, magnitude, influence, power, and the range of activities for which they are used, as consumers become more comfortable, at ease, and adapted with these environments. Online communities deserve persistent and increasing attention from both practitioners and marketing researchers.

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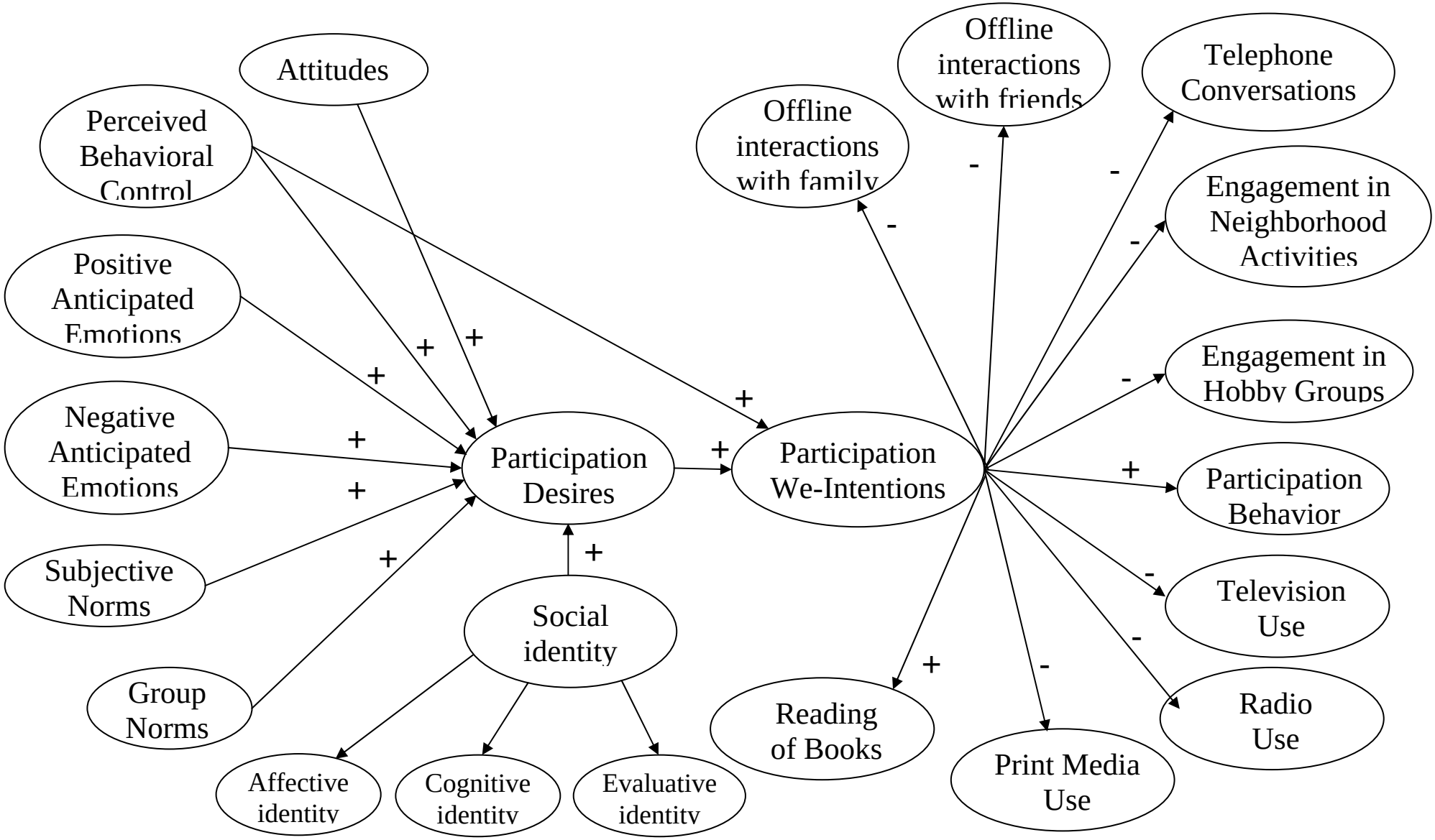
Figure 1.


Attitudes
Perceived Behavioral Control
Positive Anticipated Emotions
Negative Anticipated Emotions
Subjective Norms
Group Norms
Participation Desires
Social identity
Affective identity
Cognitive identity
Evaluative identity
Participation We-Intentions
Offline interactions with friends
Offline interactions with family
Telephone Conversations
Engagement in Neighborhood Activities
Engagement in Hobby Groups
Participation Behavior
Television Use
Radio Use
Print Media Use
Reading of Books
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