

2006

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Understanding Sociability and Collective Knowledge Construction in Virtual Communities

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Abstract

Virtual communities potentially provide value to both individuals and organisations by way of developing and transferring knowledge between community members. In this paper the dynamics of interaction in virtual communities is explored and drawing from literature across several disciplines, a framework for investigating the relationship between sociability in virtual communities and the transfer and construction of knowledge is developed. A methodology for exploring these relationships based on “netnography” is proposed and a pilot study is presented to demonstrate its application.

Keywords

Virtual communities; sociability; knowledge construction; netnography

INTRODUCTION

Virtual communities have emerged as an important organisational form which can be tapped in to as part of e-Business strategy (Hagel & Singer 1999; Kozinets 1999; Prahalad & Ramaswamy 2000). From a marketing perspective, virtual communities enable consumers to develop brand loyalty (Bleicher et al. 2000) as well as providing a source of market research data regarding consumer perceptions of products (Marino 2001; Catterall & McLaren 2002). Furthermore, from an organisational perspective, when people with common interests come together in virtual communities, information is shared and knowledge is created by community members. This knowledge can then be leveraged in much the same way that the benefits of physical communities of practice contribute to organisations (Koh & Kim 2004).

While virtual communities hold great promise for both commercial and non-commercial enterprises, many attempts to implement them as part of business strategy fail or have only limited, short-term success. For organisations that want to make the most effective use of virtual communities in their e-Business strategy, tapping into the internal dynamics of online interactions requires consideration of the design, integration and management of virtual communities from a variety of perspectives. For designers, implementers and moderators of virtual communities, understanding what goes on inside communities, how a community culture develops, and how knowledge is constructed and exchanged are all important considerations that will contribute to the sustainability of a virtual community (Agre 1998, Preece 2000).

As a relatively new and emerging organisational form, virtual communities as a topic of research has attracted the attention of a wide range of disciplines including sociology, communication studies, education, as well as information systems. Two research themes that continually emerge across disciplines are firstly, research concerned with the development of *sociability* in virtual communities, and secondly, research concerned with the sharing and construction of *knowledge* in virtual communities. Sociability factors bind communities together whereas information and knowledge exchange is frequently considered to be the reason that communities exist. While research into both of these areas continues to develop, there have been few attempts to understand the relationship between the sociability aspects of online communities and how knowledge develops and is transferred within them. It is argued in this paper that in order to develop *sustainable* virtual communities, those responsible for virtual community design, implementation and support need to appreciate the relationship between these two key aspects. In the following section, by drawing on research across several disciplines, a conceptual framework for exploring this relationship is developed. Given the interdisciplinary grounding of the conceptual framework, some methodological techniques for empirical analysis are proposed and a pilot study implementation of the proposed methodology is presented.

BACKGROUND AND OBJECTIVES

Definitions of virtual or online communities vary depending on factors such as size, *raison-detre*, duration of existence, and the underlying software infrastructure (Lee et al 2003, Preece et al 2003). In the literature, there is however general agreement that they involve computer-supported (and usually Internet-based) interactions and relationships in which the participants construct and manage the contents of those interactions (Lee et al. 2003). Howard Rheingold's (1993) much cited definition of virtual communities as "social aggregations that emerge from the net when enough people carry on...public discussions long enough, with sufficient human feeling to form webs of personal relationships in cyberspace", emphasises the importance of the social aspects of virtual communities and carries a community ethos at its core.

Amazon.com and e-Bay are frequently cited as exemplars of commercial virtual communities and they are indeed successful in that they engender a high level of participation from their members. Blanchard and Markus (2004) however, suggest that such models should be more appropriately called "virtual settlements" because members tend not to share a "sense of community" or exchange socio-emotional support. So while commercially controlled communities can be very effective in exchanging commercial and transaction-oriented information, the shared emotional connection of these communities tends to be low. This can subsequently be a barrier to effective knowledge sharing and creation (Ardichvili et al. 2003).

Successful virtual communities bring together interested participants by integrating in some way, the elements of sociable communication and a usable technical infrastructure (Preece 1999). While commercial organisations often have difficulty in achieving a good fit between sociability and usability, there is a plethora of virtual communities in the non-commercial world where people voluntarily come together to discuss their common interests. For example, Baym's (1998) study of the Usenet newsgroup r.a.t.s (devoted to discussions of television soap operas), demonstrated that members creatively exploit the virtual environment to develop new forms of expression and communication in the construction of social meaning. The social environments and ways of interacting that occur in virtual communities act as a supportive, socialised platform for the construction and exchange of knowledge. It is quite possible that organisations intending to develop virtual communities as part of their e-Business strategy can learn a great deal from understanding the social dynamics of virtual communities of interest which emerge around non-commercial interests.

The objective of the research described in this paper is to explore the relationship between social aspects of online communities and to examine how knowledge and information is constructed and exchanged within them. Given the exploratory nature of this research, we can begin by asking questions that can be answered at a descriptive level and then move toward questions that are posed for explanation and interpretation. Therefore, the study will seek to address:

- What sociability factors contribute to successful online virtual communities?
- What social knowledge is transferred or constructed within a virtual community?
- How is sociability created in a virtual community ?
- How is knowledge constructed in a virtual community?
- How does sociability relate to collective knowledge construction?

RESEARCH FRAMEWORK

In order to address the questions outlined above, this section develops a framework to guide the exploration (figure 1). The discussion of the framework draws from an interdisciplinary literature review, and focuses on three key elements – the characteristics of virtual communities, sociability within virtual communities, and the role of information and knowledge in virtual communities.

Community Characteristics

The purpose, or *raison d'être* of virtual communities coalesces around the common interest of participants – whether it is a cancer support group, a scientific collaboration, a photography enthusiasts' forum, or a football fan-site. The interest that connects members in a virtual community defines the content of the knowledge and information that is exchanged and constructed. However, the major reason that some designed virtual communities do not succeed is because frequently designers assume that virtual communities are homogenous and are subsequently based on the principle of "if we build it, they will come". Dube et al. (2005) found however that during the start-up phase of virtual communities of practice, that the environment, relevance of the community's objectives to individual members, and the degree of embeddedness in organisational structure are three structuring characteristics which will impact their success or failure. Baym (1998) argues that the on-line communities differ markedly from one another and that their "style" is shaped by pre-existing structures, external and temporal contexts, system infrastructure group purposes and participant characteristics. In order to examine

the relationship between sociability and knowledge construction in virtual communities, it is therefore important to understand the context and unique characteristics which shape virtual community interactions.

Sociability in Virtual Communities

Central to the success of virtual communities are the social factors associated with a concept of community. Blanchard and Markus (2004) for instance address these factors by developing a framework for analysing the “sense of *virtual* community” that binds the network of participants. Preece (2001) identifies *sociability* as a key factor in virtual community design – a factor that she claims is not well understood but is a fundamental component essentially governed by policies which need to integrate with the interface and software supporting the community interactions. How these policies and technical structures support the community’s shared purpose and social interactions is the challenge to designers of virtual communities. It is the sense of purpose and belonging of community participants have in common - the “grassroots groupmind” in Rheingold’s terminology (Rheingold, 1993) that binds and develops virtual communities.

A side effect of people interacting and developing relationships in virtual communities is the construction of *social capital* (Wellman 1997, Resnick 2000, Blanchard 2004, Huysman 2004). Social capital is a concept that has its origins in the study of sociology and political science but has increasingly been adopted by organisational and management researchers (Huysman & Wulf 2004). Essentially social capital refers to a resource that emerges from the “goodwill” of a community or society (Adler & Kwon 2002). It is a collectively-owned capital that emerges from the network of relationships in which individuals are embedded (Nahapiet & Ghoshal 1998). Generally speaking, social capital refers to “those stocks of social trust, norms (mutual reciprocity), and networks that people can draw on to share knowledge.” (Huysman 2004). In virtual communities, social capital has been observed as being developed and exchanged by community members in terms of socio-emotional support and information sharing (Dretea & Moren-Cross 2005, Blanchard 2004), expertise sharing and knowledge management (Ackerman & Halverson 2004). Social capital is therefore a suitable construct on which to base an exploration of sociability in virtual communities.

In order to operationalise social capital as a construct, the research framework depicted uses Huysman’s (2004) synthesis of the two major reviews of social capital. In developing her combined framework, she drew upon Nahapiet & Ghoshal (1998) and Adler & Kwon (2002) to view the social conditions for knowledge sharing in terms of : the network configuration of participants, shared codes, language and narratives, and trust norms and identification. The elements of this combined framework form the basis of the sociability dimension of the research model depicted in figure 1.

Information and Knowledge in Virtual Communities

Information and knowledge sharing is an essential aspect of virtual communities and to a large extent is at the core of community survival (Butler 2001, Ko & Kim 2004). For the purposes of this research, two aspects of knowledge and information are considered. Firstly is the *type* of information and knowledge that is brought to and emerges from virtual community discussions and the second is the *process of constructing* knowledge.

Online discussion forums enable members to contribute their opinions and share information and experiences with other members and it is the collectivist norms that permeate virtual communities which positively influence members’ willingness to share their knowledge (Van den Hoof et al. 2005). The threads of online discussions can be read as multi-voiced conversations through which collective knowledge is constructed. Individuals contribute their own ideas, opinions and knowledge to online discussions and through these interactions, a collective or social knowledge emerges. Online discussions can therefore be seen as playing a role in the formation of social or collective knowledge. Social types of knowledge can be identified as being either *explicit* and therefore publicly available or collectively *tacit* and embedded in the firm’s routines, norms and culture (Spender 1996). Social forms of knowledge are quite different from the aggregated knowledge of individuals because they reside in the tacit experiences and enactment of the collective (Brown & Duguid 1991). Therefore social collective knowledge can remain relatively hidden from individual actors but is accessible and sustained through their interaction (Spender 1994). This research is concerned with understanding the formation of collective knowledge through the interactions of virtual community members. The research framework will be used to explore the way that collective knowledge becomes embedded in the routines, norms and culture of virtual communities.

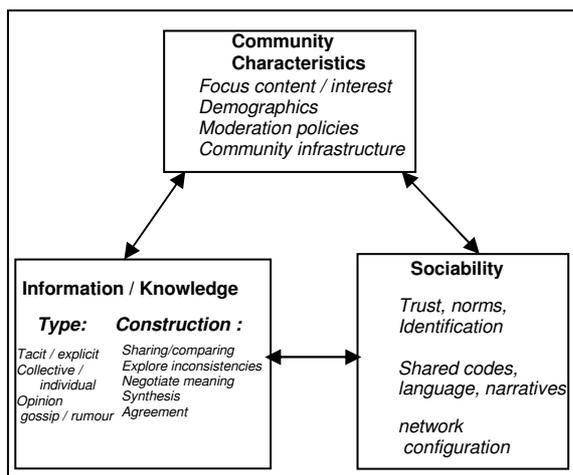


Figure 1 : Research Framework

Discussions in virtual communities of interest are quite often sustained through gossip and rumour rather than based on the exchange of substantiated information. Both however, can contribute to the construction of social knowledge. For instance, gossip can be viewed as a form of inquiry used to elicit information or knowledge (Ayim 1994). Using this perspective, gossip is characterised as informal talk conducted with a small group of participants who know each other fairly well and trust one another not to violate each other's confidence. The role of gossip in acquiring knowledge has been summarised as an informal exercise in hypothesis devising and evidence finding. Rumours, like gossip, are unsubstantiated but they also serve a purpose in collectives in that they reduce uncertainty and "restore a sense of predictive control over ambiguous events or phenomena" (Bordia & DiFonzo 2004:35). In endeavouring to understand the construction of collective knowledge therefore, the research model gives consideration to alternative types of information that are brought to the online discussion.

The second aspect related to information and knowledge that is recognised in the research framework is the process of knowledge construction. How groups learn and construct knowledge in online environments has attracted significant attention in educational research. Typical questions in this field include understanding the degree of knowledge construction that is achieved by a cooperative group (Aviv et al. 2003, Desanctis et al., 2003). While largely aimed at teaching and learning environments, this research stream can potentially provide insight into understanding the nexus between sociability and the development of the collective knowledge within a virtual community. Gunawardena et al. (1997) argue that knowledge construction in asynchronous learning evolves through a series of phases. The first phase is sharing and comparing of information, followed by the discovery and exploration of dissonance or inconsistency among ideas, concepts or statements. The third phase of negotiation of meaning identifies areas of agreement and proposes new co-constructions on topics where conflict exists. The fourth phase is characterised by testing and modifying and modification of proposed synthesis or co-construction. The fifth phase refers to statements of agreement (DeWever et al. 2005). The research framework draws on these phases to guide exploration of the process of knowledge construction.

RESEARCH METHODOLOGY

Using an overarching case study framework enables a holistic view of research constructs within the bounded context of the virtual community itself (Schriebe 2006). Within the case study framework, an ethnographic approach to understanding relationships between sociability and knowledge construction is considered to be appropriate because it is concerned with "thick description" of social phenomena rather than hypothesis testing. Given that the research framework draws together concepts from a variety of disciplinary perspectives of virtual communities, an in-depth examination of the phenomena will facilitate an understanding of these concepts within the context of virtual community interaction.

While an ethnographic approach is seen as an appropriate method for researching and theorising the kinds of community which are possible in cyberspace (Escobar et al. 1993, Hine 2000), conducting ethnography in virtual communities differs from how it might be conducted in the real world. For example, Fox and Roberts (1999) use the term "cyber-ethnography" to refer to research conducted in a virtual community where the communication is entirely through text. Beyond basic research, Kozinets (2002) has developed a set of research procedures based on ethnographic principles which have been applied as market research techniques for understanding virtual communities. This approach is termed "netnography" and while it has been developed for the purposes of market research, as an approach to understanding virtual communities it is becoming an established form of enquiry (Caterall and McLaren 2002; Nelson & Otnes 2005 ; Langer & Beckman 2005). We use Kozinets' recommended procedures in this exploration of sociability and knowledge in virtual communities.

The basic research procedures for conducting netnography as recommended by Kozinets are:

- *Cultural entrée* which involves the researcher identifying the virtual community of interest and familiarising themselves with the characteristics and idiosyncracies of the community in preparation for participation.
- *Data collection and analysis* involves gathering the transcriptions of online discussions together with researcher observations of the community, its members and interactions.
- *Providing trustworthy interpretation* include procedures for ensuring that the data gathered can be considered trustworthy considering that technology mediates conversations and that participants may have deliberately constructed identities to be used in the virtual world.
- *Research ethics* procedures need to be considered because during online interactions there is a blurring of the public and the private

Analytical Techniques

While a netnographic approach is adopted as an overarching framework for this research, some specific analytic techniques are embedded within the netnography which facilitate exploration of different elements of the research model. These specific techniques are drawn from the multi-disciplinary research that informs the research framework. These techniques will be applied as part of the data collection and analysis procedures of the netnography.

Firstly, as suggested in the research framework, an understanding of *sociability* in virtual communities can be developed based on dimensions of social capital. To do so requires attention to be paid to the existing social networks and corresponding ties (a structural analysis); the existing shared language, frames of meaning and stories (a cognitive analysis); and the existing level of trust and reciprocity (relational analysis). Content analysis techniques using a constant comparative approach can be applied to the text interactions of the virtual community in order to perform the cognitive and relational analyses. However, the structural analysis is based on who interacts with whom to provide understanding of the network of relationships which exist within the community. This part of the analysis will therefore employ social network analysis techniques. Secondly, as a starting point for understanding knowledge and knowledge construction in the virtual community under analysis, Gunawardena's (1997) phases of knowledge construction provide the basis for descriptive content analysis.

PILOT NETNOGRAPHIC STUDY

In order to explore the relationship between sociability and knowledge construction in virtual communities, a "netnographic" study of an online community of interest focussed on the issues concerning an Australian Rules Football club is currently in progress. In the following sections, some preliminary analyses from the netnography of "MightyEasts.com" are described and some problems encountered with analysis are identified. Given that this study is ongoing, the following description relates mainly to the first two netnographic phases – namely, cultural entrée and data collection. Note that in terms of research ethics that in consideration of the owners and members of "MightyEasts.com", that the name of the community and its posters have been disguised.

Virtual Community Context

MightyEasts.com is a web-based virtual community which describes itself as an "independent supporter site" dedicated to providing a venue for discussion of issues related to the Easts Football Club (EFC) – one of the sixteen teams in the national Australian Rules Football League (AFL). The official AFL club web sites are hosted and managed in association with Telstra which has a complex multi-million dollar licensing arrangement with the AFL to provide content and a variety of internet services including audio and video streaming. MightyEasts.com on the other hand is hosted, managed and moderated independently of the official AFL sites by a small team of die-hard supporters of Easts FC. While there are well over a hundred web sites of varying degrees of sophistication which maintains content devoted to Australian Rules football, each major club has at least one and as many as four independent supporter sites which can be considered to constitute a virtual community. MightyEasts.com is one of the longest running and most successful independent supporter sites and is generally well respected within the online football community. For example, MightyEasts.com has featured in the daily national newspapers on several occasions as representative of the supporters of the EFC.

Community Characteristics

MightyEasts.com has been operating since 1995 when it was started by an individual Easts supporter and Internet enthusiast "Richie". MightyEasts.com acts as a forum for discussion of current issues surrounding Australian rules football in general and more specifically discussion regarding the EFC. During the football season, a preview of the forthcoming Easts' match is written by Richie and published in the news section of

MightyEasts.com. The match preview articles are written in a lighthearted style and are unashamedly biased toward Easts. A match report, written in the same style is also published following each Easts game. All articles published by the MightyEasts moderators/owners are archived in date order and the previous 50 articles are retrievable. Links to other online media content that is related to the EFC (“Around the Grounds”) are dynamically updated by the GoogleNews search engine.

During games, a synchronous “chat room” is available for MightyEasts.com members to interactively discuss the progress of matches. The chat room is mostly used during games when Easts are playing at an interstate venue – and then usually during breaks between quarters. The heart of the MightyEasts.com community however is the asynchronous discussion forum. Here registered members discuss a variety of issues related to EFC throughout the week by posting short messages - usually no longer than a paragraph- which are organised into threads. MightyEasts.com differs from many online football discussion forums in that posts and threads are heavily moderated by Richie based on principles of no foul language and to keeping discussion focussed on EFC issues (rather than other clubs) and to avoid any legal complications arising from libellous posts.

In the course of a week during the football season, approximately thirty new discussion threads are commenced covering a range of issues. Most threads generate discussion of fifteen to thirty posted responses but a few will attract up to one hundred responses depending on current topical issues. The MightyEasts.com forum has over five hundred registered members but posts are dominated by a core group of about thirty regular posters. However, when a particularly topical or contentious thread develops, occasional posters readily contribute to the discussion and new posters are converted from lurking behaviour (often beginning their posts with a phrase such as “...long time reader, first time poster”).

As would be expected in a forum devoted to the discussion of football, the majority of members appear to be male. However, there are several core members of the forum who identify themselves as female both through their online names as well as explicitly stating this in their posts. Most posters reside in Easts’ home state but several live interstate and overseas. One regular contributor also frequently contacts the discussion forum from an offshore oil platform “somewhere in the South China Sea”. While some forum posters directly or indirectly declare their age, the age of individual members cannot be easily discerned. However, it would appear from comments and reminiscences that the majority of regular posters are in the 18-50 year old age group. Richie, the site owner is thirty-one.

Cultural Entrée

The initial phase of a netnography involves the researchers familiarising themselves with the community and developing a baseline understanding of the community participants. In the online world this essentially means “lurking” which is an important phase in learning about the norms of a community – not unlike the stages involved in entering a new social group in the real world. In this study, the chief investigator has been a registered member of the online forum of “MightyEasts.com” for over two years. Although registered using a pseudonym (“Stan”) during this time, when the researcher recently decided to formally conduct a netnographic study of MightyEasts.com, the forum moderator and regular readers were made aware of his university affiliation and research interests. As an aside, it is actually not uncommon for forum members to declare their interests and indeed recently one regular member published a book on AFL football which contained content initially developed as part of forum discussions. As a member of the forum, Stan (the researcher) could be considered an “occasional poster” in that while he accessed and read the news articles and online discussion forum three to four times a week, he actually posted messages in response to other members only about once a month. Throughout this period, Stan has become an accepted member of the community.

Data Collection

The main source of data in this study is the posts made to the online discussion forum hosted at MightyEasts.com as the discussion threads represent interactions among members. An online interview with “Richie” the owner and moderator of MightyEasts.com provided demographic data. In addition, data describing the online context of MightyEasts.com has been gathered by tracing links between major AFL-related web sites and communities.

Several significant threads have been identified as being critical to the broad research questions and objectives over the course of the study and these are referred to below in reflecting on the relationship between sociability and knowledge construction. Additionally, in order to pilot techniques for more specific analysis of the factors contributing to sociability and knowledge construction, a sample of threads and posts to the community forum over a two week period was taken. Threads in this sample were categorised according to the initial topic of discussion and details of posts to the thread were recorded in a database. The threads and the text of individual posts were saved as text documents for analysis using NVivo software.

Sociability

Sociability factors in the community discussions are explored using a content analysis to examine both the cognitive and relational dimensions of social capital, and a network analysis to examine the structural dimension.

As noted above, for the purposes of this paper a sample of threads posted to the forum were extracted and analysed. In order to examine the network structure of the community, a social network analysis of these threads was conducted. Threads were correlated into an affiliation matrix in which co-presence within a thread indicated a structural tie between posters. This affiliation matrix was subsequently transformed into an adjacency matrix using UCINET software. Full detailing of the network analyses undertaken are beyond the scope of this paper but four analyses – cohesion, centrality, density and clique – provide insight to the network structure of members who post to the community forum. Cohesion analysis helps to understand the substructure architecture of the network (Aviv et al. 2003). Measures of centrality are used to find the central participants in the network, and a density analysis describes the overall linkage between participants. Further to these analyses, a clique analysis is used to identify which posters in the forum are closely linked to others. Analysing the structure of the community in this way orients the researcher's interpretation of posts and threads in the forum.

The structural network analysis described above is based on posters rather than all readers of the forum. This analysis is therefore not wholly indicative of the MightyEasts.com community since it does not take into account those who regularly lurk. However, it is only those members of the community who actively participate in online discussions (and are therefore included in the network analysis) that play a role in the development of sociability and knowledge construction. While identifying prominent members of discussions can begin to develop an understanding of which members act as opinion leaders, in isolation to the content of posts, the importance of these actors can be misleading since these measures do not take into account the quality of postings.

More meaningful interpretations of the role of individual participants in the network structure can be achieved by combining network positions with analyses of the identities that participants take on. A community member's identity is more than the name that they adopt in the online environment. Through the contributions that they make to discussions, individual members assume roles which impact the veracity of their postings. For example, among the prominent actors in MightyEasts.com discussions, "The Bishop" is the respected statistician who usually has the final word in all matters mathematical; "Richie" as forum moderator ruthlessly censors posts which he feels do not add value to discussions; "Holland" invariably takes a negative perspective of the current club administration and coaching staff; "MrMan" is a wordsmith and part-time journalist with an eloquent turn of phrase; "pith" contributes nonsensical yet insightful observations; "bird" is a rival team supporter who is nonetheless accepted as part of the MightyEasts.com community; "Jen" writes songs about the team and has an unabashed crush on one of the star players. In addition to the online identities of MightyEasts.com, the forum is occasionally visited by "real life" media commentators and journalists. It is clear that when reading and responding to posts, attention is paid to who is making the statement.

An indication of sociability and trust in fellow members of the MightyEasts.com community is the formation this year of a syndicate owning shares in greyhounds. Initiated by MightyEasts.com co-owner "PeterP.", a group of thirty community members have furthered their relationship in the real world and have together committed funds to an offline venture. Regular reports of the race track successes of the MightyEasts.com syndicate engenders a sense of community ownership even among those not directly involved with the syndicate.

The discussion thread that is most indicative of the degree of sociability present among members of MightyEasts.com was posted in January 2004 by the brother of a regular contributor, "Fish". Fish's brother registered on MightyEasts.com to inform members that his brother had died and that Fish had specifically asked him to post a farewell message to the many "friends" he had made on MightyEasts.com. Even though this message was posted out of the football season it attracted over 150 replies of condolence. As recently as June 2006, regular posters in a thread discussing what the EFC meant to them personally, mentioned how moved they had been by reading Fish's posthumous message.

From the limited analysis conducted to date, it would appear that cognitive and relational aspects of sociability can be readily identified through content analysis. These inform and are informed by the structural analyses of the network structure of forum posters.

Information and Knowledge Construction

As a first pass at examining information and knowledge in the MightyEasts.com community, a taxonomy of discussion topics was developed to classify the topics of thread discussions. The initial taxonomy was developed as a two level tree which identified five primary level topics of discussion (The Team, The Club, The Media, Opposition Teams, Matches). Each of these primary topics had two or three associated level 2 sub-topics. For example, a thread classified as primarily being a discussion about the team could be subsequently classified as

having a focus on either the players, the coaches or team tactics. For the sample of threads analysed to date, this classification scheme appears to be appropriate but it is expected to evolve as the study continues.

In addition to classifying the topic of thread content, the content of individual posts need to be analysed to identify whether the content is an expression of individual or collective knowledge and whether that knowledge is tacit or explicit. The primary difficulty faced in performing this type of analysis is related to interpreting the context and intention of posts. In keeping with the overall culture of the community, there is much light-hearted banter associated with the sharing and comparing of opinions and information and many threads read like typical conversations that might be held in a hotel front bar. Hence many threads are initiated by “Monday Experts” willing to give their opinion on where the team / player / coach made mistakes in the previous game. Similarly, gossip and rumour as a source of information are often brought to the forum for discussion.

Content analysis allows for an exploration of the tone and style of messages that are posted to the forum and through an iterative analysis of postings, the researcher needs to unpack expressions of collective knowledge. This is not so much a case of the researcher classifying posts as a being tacit or explicit or individual or collective knowledge. Rather the researcher must learn what constitutes an expression of knowledge types by being immersed in the data over time. For example, outside of the football season when player contracts are up for renewal, it is not uncommon for a reference in an individual post to “player X was seen looking at real estate in another state”. At face value, this post could be seen as the start of a rumour that player X is looking to move to another club. However, “looking at real estate” has multiple meanings during trade period, with forum opinion leaders linking it to the tactics of players’ managers trying to gain leverage in negotiating new contracts. The collective knowledge here is related to understanding the process of player contract negotiation rather than simply player movement between clubs.

As an initial approach to analysing the construction of knowledge in the online discussions, 200 posts to thread topics were analysed and coded according to Gunawardena’s scheme of knowledge construction in asynchronous discussions. As might be expected in an online forum of this type, the majority of posts and threads related to phases I (Sharing/comparing information) and II (Explore inconsistencies) of the knowledge construction scheme. This is not inconsistent with other studies that have used Gunawardena et al.’s schema in asynchronous learning communities. On reflection, application of this schema to threads in isolation to one another is unlikely to move beyond phase III (Negotiation of meaning). This is because unlike communities specifically designed for learning, MightyEasts.com is not goal directed and is merely a forum for information exchange and expressing points of view.

While the preliminary analysis of discussion threads was not able to directly identify a phased approach to collective knowledge construction, it is clear that a collective understanding of group norms and routines develops over time and emerges and is reinforced over multiple related threads. Further analysis and comparison of threads and posts is required to investigate how the collective knowledge of the MightyEasts.com virtual community is constructed.

CONCLUSION

It has been proposed in this paper that understanding the dynamics of social interaction and knowledge generation in online communities of interest can inform e-business strategy and a research framework for exploring these dynamics is developed by drawing on a variety of disciplinary backgrounds. Given the exploratory nature of the objectives of this research, an ethnographic approach to the study of virtual communities known as “netnography” has been adapted to incorporate data analysis techniques drawn from the prior research that informs the research framework.

The preliminary MightyEasts.com netnography has examined each of the three main elements of the proposed research framework through content and network analyses of a limited sample of threads posted to the community discussion forum. It is apparent from these preliminary explorations that the framework does provide some guidance in orienting analysis of the relationship between sociability and collective knowledge construction. However, it is clear that the dynamics of the relationship between elements of sociability and collective knowledge cannot be described and understood by treating posts and threads as discrete data. Collective knowledge is constructed over time, across several threads of discussion and therefore tracing how it emerges is not possible by a simple application of Gunawardena’s model. Further conduct of the netnography will need to incorporate ways of tracing the construction of collective knowledge across threads.

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