Netnography: A Pocket Guide to Conducting Research in Closed Virtual Communities

Julie Wade
University of South Carolina, Upstate

ABSTRACT
This paper defines closed virtual communities and outlines a brief guide for researchers (academics and students) who wish to engage in ethnographic studies of online communities, commonly known as a netnography. Although netnographies are relatively common in marketing research but represent a useful methodology for information systems research and business research in general. Additionally, this study outlines the major steps involved in a netnography, including entrée into the community, the gathering of data, and the analysis and interpretation of the gathered data. This study concludes with suggested guidelines depending on the sensitive nature of the closed virtual community.

Subject Area: Human Resource Management, Marketing, Information Systems
Article Type: Peer-Reviewed Journal Article

INTRODUCTION
For centuries, a community has been commonly understood as a group of people living near each other, and for more years than not, this definition was widely regarded as wholly accurate. Perhaps, even today, when one hears the word “community,” one might still picture small towns where everyone plays an important role – the mason, the butcher, the shopkeeper, the tailor. In classical literature from *Emma* to *Alas, Babylon,* a prominent theme suggests that communities are important for socializing, creating group norms and roles, and of course, for surviving.

Communities, in the traditional sense, are built as a result of physical or mental proximity (Cohen 2013; McMillan and Chavis 1986). Researchers generally imply community to be defined by geographic boundaries with their members generally living within travelling distance of each other (e.g. Johannisson and Nilsson 1989; Lähdesmäki and Suutari 2012). Some literature expands this definition of community to include a sense of affiliation based on an idea or artifact (Muniz and O'Guinn 2001). For example, the marketing literature describes “consumption communities” where individuals who share at least one unifying characteristic (for instance, love of the Apple brand) physically gather together (Muniz and O'Guinn 2001). Such communities formed around ideas and products may be particularly powerful. Consider the time, cost, and effort invested by many Mac users to take an annual symbolic journal to the central Apple store, which is depicted by some scholars as a “religious experience” (Muniz and O'Guinn 2001). Though often built around a product or a brand (such as Harley Davidson motorcycles), consumption communities house relationships that are as complex and nuanced as the relationships and social structures that exist in traditional communities (Porter and Donthu 2008).

The growth of information communication technologies (ICTs) has forced scholars to disentangle geographic proximity from the definition of communities. ICTs enable virtual communities, where geographical proximity is no longer an issue and non-collocated members rely upon an assortment of techniques, from private messaging to participating in online forums, to communicate, form norms, and establish relationships or affiliations with the group (Hagel III 1999). Virtual communities are enabled by an assortment of platforms, from commercially branded websites (Casaló et al. 2008) hosted by businesses like Coca Cola (e.g. Sicilia and Palazón 2008) to social networking websites like Twitter and Facebook (Kaplan and Haenlein 2010).

Previous papers have established clear definitions of what it means to be a virtual community (Muniz and O'Guinn 2001), how individuals engage with the community (Schau et al. 2009), how trust is formed among community members (Porter and Donthu 2008) and so forth. However, many of these studies use quantitative methods to draw their conclusions and focus primarily on open communities. To really explore questions about how virtual communities are formed and structured, as well as learn about the complex relationships developing and changing between members of such communities, researchers cannot simply rely on survey questionnaires and experimental design; similarly, numbers, models, and algorithms cannot adequately depict the themes that pop up in conversations among members using animated gifs and memes, the power structures that evolve within the community over time, or the intangible benefits, such as feelings of belongingness, members gain from joining the virtual community. Consequently, researchers have turned to analyzing the actual relationships among, and conversations between, virtual communities' members.

Virtual communities vary in the degree to which they make data available to researchers. Many virtual communities, such as Wikipedia.org, do not require individuals to sign up for membership to participate ("open communities"), and due to their open nature, these communities are readily amenable to virtual community research (Kane and Fichman 2009). More difficult to study are communities that do require users to become members, which are referred to as "closed communities" (Comley 2008). These communities are not readily accessible for a variety of reasons, ranging from concerns about the sensitive nature of conversations (e.g., obsession with Twilight or discussing religion) to masking collaboration to support distasteful and/or illegal acts (e.g., white supremacy, terrorism, pedophilia, etc.). Because closed communities are difficult to access, it is difficult to elicit data, let alone apply traditional quantitative techniques, to investigating questions tied to their organization or activities. In fact, to truly understand how any given closed virtual community operates, the researcher must integrate himself or herself within the community of choice, using a research method known as netnography.

Netnography presents an opportunity for realizing deeper understanding of virtual communities (Kozinets 2007; Kozinets et al. 2018; O'Donohoe 2010). Building on insights drawn from "ethnography," a sociological research methodology that focuses upon the "emic," netnographers seek out an "insider's" point of view of a virtual community (O'Donohoe 2010; Costello, et al. 2017). Similar to ethnographers, who often elect to live with their sample population for an extended period of time in an effort to learn and understand the "symbolic meanings" held by the population (Agar 1996), netnographers employ methods whereby they become members of the online population in which they are interested (Kozinets 2007). Through observing the interactions between community members, collecting relevant data (such as forum transcripts) and making interpretations, netnographers strive to surface and answer research questions. Netnography is especially popular in Marketing (e.g. Kozinets 2002), and closed virtual communities are the ideal environment from which a netnography can be

conducted (Kozinets 2010). Table 1 summarizes several netnography-based studies published in recent years.

Table 1. Sample Recent Netnography Research

Study Description	Citation
A netnography study of a university's social media branding initiative and the co-creation of value between the university and social media participants on Facebook.	Fujita et a., 2017
A netnography- based study of users of a social network-based game and the manner in which the game evolved over three years.	García-Álvarez et al., 2017
A review of 321 netnography studies appearing in marketing journals from 1997-2017.	Heinonen and Medberg, 2018
A netnography investigating the manner in which fashion brands engage with users and customers via social media platforms.	Loureiro et al., 2019
A netnography study of wine tourism based on reviews posted to TripAdvisor.	Thanh and Kirova, 2018
A study of addiction among female users of an online gambling game using a mix of netnography and interview data.	Wang, 2018
A study of the experiences of females in online role-playing games a mix of data pulled from netnography and interviews.	Wang et al., 2017
A netnography of the experiences of young female Chinese tourists using blog posts from travelers.	Zhang and Hitchcock, 2017

Though this method holds the potential for yielding understanding of virtual communities, few papers provide specific guidance on how a researcher should go about conducting a netnography. In fact, up to this point, few standards have been established to guide researchers and reviewers alike on principles that underpin a sound netnography. The lack of procedures is a hindrance to the credibility of the method, leaving some researchers to privately speculate that netnography is not as "scholarly" as, say, survey research, and reviewers at a loss for how to evaluate products of netnography-based research.

Bearing this in mind, the objective of this paper is *to outline steps necessary for conducting a netnography in a closed virtual community context.* This paper clearly delineates how researchers can conduct netnography; further, this paper will contribute to information systems research specifically and business research in general by developing a method that future research projects may utilize and benefit from, as well as reemphasize why virtual community research is so important for information systems research.

The paper unfolds as follows. First, this study is positioned in context within the literature, and the theoretical perspective will define virtual communities and describe how they have been studied. Next, the method section will review previous netnography papers and outline the steps researchers must take, using those previous works to illuminate each step in the process. The paper concludes with a summary of the overall method and general implications of the paper.

LITERATURE REVIEW

Virtual communities are "specialized, non-geographically bound communities, based on a structured set of social relationships" (Muniz and O'Guinn 2001 p. 412). These communities form around users' common interests, be they a product, brand, ideology, etc (Hagel III 1999). Virtual communities are growing in popularity because individuals and organizations recognize their potential to create personal value or business value (Porter and Donthu 2008). Companies can create websites and virtual communities, opening up a whole new communication portal for Internet users; similarly, individuals can create their own communities to reach large masses of citizens with the same ideals and beliefs. Members of these virtual communities are no longer bound by the geographical constraints inherent in pre-Internet communities. Meetings generally occur via the Internet as opposed to face to face. Forums and message boards also provide areas for users to meet and express opinions. Another area that is continually gaining interest is social networking websites, such as Facebook and Twitter, where users can easily connect in real-time to geographically dispersed friends, family members, and followers (Kaplan and Haenlein 2010). Virtual communities create value for organizations by letting them more readily communicate and form relationships with customers, improve coordination between community members, and leverage the community knowledge-based in pursuit of organizational innovations (Roberts and Dinger 2016; Roberts and Dinger 2018). Individuals derive value from the relationships they form, information that they acquire, and, in some cases, an enhanced brand or product experience (Schau and Muñiz 2002).

The majority of research that examines virtual communities has taken place in marketing literature, where researchers study the relationships customers form with like-minded peers based on, for example, Apple computers, and Saab automobiles (Muniz and O'Guinn 2001; Schau and Muñiz 2002) and Nutella (Cova and Pace 2006). Marketing scholars often use netnographies to gain useful insights into how customers form relationships with organizations and brands.

In contrast to qualitative approaches employed by Marketing, a smaller body of Information Systems research has employed more quantitative approaches to study virtual communities. Key questions include: How are virtual communities structured? How do users engage with the community itself and with other users? How do communities form? and How is knowledge managed? (Ridings et al. 2002; Schau et al. 2009).For example, Kane and Fichman (2009) demonstrated that volume of contributor activity, type of contributor activity, number of anonymous contributors and top contributor experience were important factors influencing the quality of information contributed to the Wikipedia article about the Virginia Tech. Across two studies, Roberts and Dinger (2016; 2018) demonstrate that the structure of a virtual community impacts the innovational outcomes for the supporting organizations. These studies inform our understanding of how structure and relationships shape the discourse within virtual communities.

While researchers sometimes focus on characteristics that distinguish virtual communities from offline communities, it is important to note that virtual and offline communities share many characteristics, such as a shared consciousness, rituals, traditions, and moral responsibility for

other community members (Muniz and O'Guinn 2001). A shared consciousness means that community members are aware of said community and their membership within it. Also, each member is aware of the overall purpose of the community and his/her role in achieving that purpose. Rituals and traditions represent “vital social processes by which the meaning of the community is reproduced and transmitted within and beyond the community” (Porter and Donthu 2008 p. 26). As a functional mechanism, these rituals and traditions communicate a community’s culture to members of the community and to the outside world. Finally, moral responsibility, at its most basic, suggests that online community members feel a duty to look out for and after each other. For example, while a Saab owner may not feel predisposed to stop for a driver in just any broken down car, they might feel more compelled to stop to help a fellow Saab owner in need (Muniz and O'Guinn 2001). Though virtual communities share these important characteristics with their real-world counterparts, researchers are still learning about the inner-workings of the communities themselves and the assorted members within them.

Despite the recent attention directed to virtual communities, few researchers attempt to study closed Internet communities. A large number of Internet communities allow their communications and transcripts to be viewed by the public; that is, individuals do not have to join the community to read, for example, forum messages between community members. In a closed community, however, users be invited or be approved by community moderators, administrators or other members before they may view or participate (Comley 2008).

In an approval process, closed communities might ask users a series of questions that determine whether they are appropriate “membership material.” When gathering data about public affiliations with online communities, Wade and Thatcher (2016; Wade et al. Forthcoming) sampled a number of Twilight fan forums to assess user engagement with the Twilight brand. To gain access to additional transcripts and information about a particular forum, the author was presented with mandatory opinion-based questions, such as, “Pretend you are a vampire. What color will your eyes be?” These closed communities are particularly difficult to study because they require increased commitment, and sometimes the right personal connections, on the researcher’s part to simply become “part” of the community at large. In Wade’s case, she invested time in learning about Twilight, its characters, its basic plot, the movies, the movie cast and so forth to be conversant with community members and to gain their acceptance.

An especially active type of closed community consists of terrorists, who often use Internet message boards and social networking websites to communicate (Klausen 2015). Terrorism forums and, tangentially, white supremacy forums, are a prime example of a virtual community because they are built around a consensual set of religious and political ideals all shared by community members. The Internet serves to reach out to members who are in a plethora of countries and who might not possess the resources to meet face-to-face. Terrorists also use Internet resources to recruit would-be terrorists who are just starting to express distaste or dissatisfaction with the status quo (Gates and Podder 2015). Further, online message boards are ideal places to post facts and how-to guides teaching new members how to, for example, use a proxy server or construct an explosive device. Terrorist communities have yet to be studied in-depth by researchers, though numerous questions may be asked as to how they form, how they evolve, and so on.

To truly understand the complexity of virtual communities, and in extension, closed online communities, researchers must carefully and appropriately conduct netnographies of the community(s) of choice. Similar to ethnography, researchers who perform a netnographic study join a virtual community and study and record the behaviors of its various members (Kozinets

2007; Kozinets 2010). Netnographies are ideal for investigating phenomena that are difficult to describe and must be examined over time. Hence, to understand the inner workings of a closed virtual community, such as online terrorist forums, researchers may turn to netnography as a means to gain deeper insight.

Before engaging in a netnography study, especially in closed communities that might feature socially or legally sensitive issues, researchers should carefully consider the ethics of their proposed work. Kozinets (2010) suggested key ethical guidelines for researchers engaged in netnographies. First, the researcher should disclose their presence and their intentions in studying the community. Second, subjects should be ensured anonymity and confidentiality. Third, subjects should be given the opportunity to provide feedback on the project, which the researcher should seek to incorporate. However, this ethical advice is for netnographies in general and is potentially oriented towards virtual communities that are more open and less secretive in nature. For netnographies with closed online communities that may feature potentially dangerous or inflammatory subject matter (i.e. terrorism or white supremacy), researchers should work closely with institutional review boards to establish ethical guidelines that preserve the ethical rights of the subjects while also making necessary provisions for the security of the researcher. For example, adaptations may be necessary regarding the disclosure of the researcher's identity and their intentions in studying the community, and the researcher should coordinate with relevant institutional review boards to decide on the appropriate course of action.

Though a handful of papers exist that provide helpful steps for conducting a netnographic study, most of these papers come from a marketing perspective and as such, focus on communities built solely around products, services, and brands (Bowler Jr 2010; Simpson 2006; Wilson and Peterson 2002). To properly infiltrate a closed community around ideas such as Twilight, terrorism or any other sensitive topic typically discussed in private, researchers must carefully consider additional requirements, including ethical and personal safety concerns, that have not previously been discussed. Also, the netnography method remains somewhat under-developed, perhaps due to the increased flexibility the method offers researchers. With this is mind, the following section outlines the steps scholars should take to conduct a netnography of a closed online community.

METHODOLOGY

In the past, "researchers have conducted ethnographies of online cultures and communities that are purely observational, in which the researcher is a specialized type of lurker" (Bowler Jr 2010 p. 1271). Other researchers have advocated using a "more participative approach, where the researcher fully participates as a member of the online community. This latter approach is closer to traditional ethnographic standards of participant observation, prolonged engagement, and deep immersion" (Bowler Jr 2010 p. 1271). With this approach, when conducting a netnography, the researcher immerses themself in an online community, in the vein of a traditional ethnographic study. By truly becoming "part" of the online community, the researcher gains additional insight from which they can interpret their research question about said community.

Though there is no set "standard" methodology for conducting a netnography, most researchers follow three main steps: entrée, data collection, and analysis and interpretation of data (see Figure 1).

In the first step, entrée, the researcher primarily focuses on determining the research

question he/she is interested in and then identifies and enters the sample population that is deemed appropriate for the research question. Data collection involves the researcher directly copying online conversations, texts, video, and so on from the virtual community. Finally, when the researcher analyzes and interprets the data by classifying, coding and contexualizing it, the netnography may be considered complete (Bowler Jr 2010; Kozinets 2010). Each step, however, consists of a series of substeps that will be described in further detail below. The steps are also outlined in the figure below:

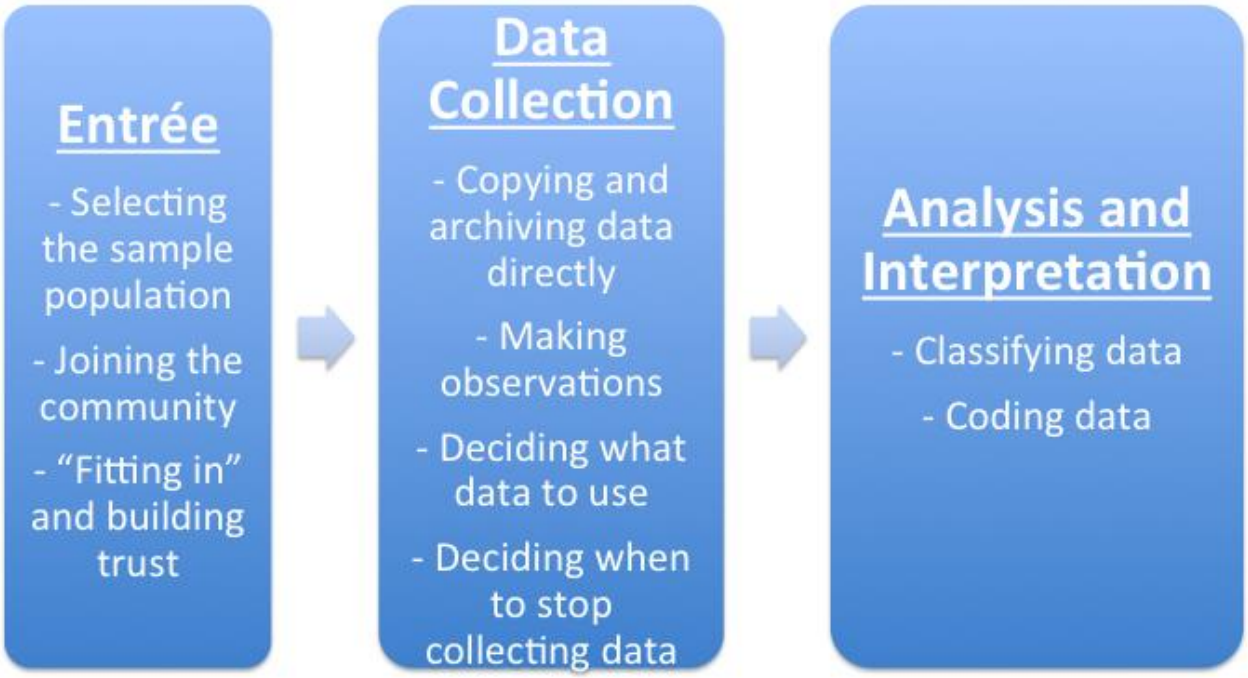

Figure 1. Netnography Process

Entrée

In the entrée phase of a netnography, the researcher must determine what the research question is that they are trying to answer about online communities. Much like any empirical study, the research question grounds the paper and should be turned to whenever the author is making a decision regarding the paper. The research question can come from a variety of areas; it may be theory-driven (for ex: "Can structuration theory be applied to describe how members of a college basketball forum communicate?"), though some qualitative scholars advise that rooting a research question *too* deeply in theory may actually prime how the researcher interprets the data he/she collects, especially when the researcher wants to ideally keep an open mind about the data (Eisenhardt 1989). For the best results, the researcher should ask a broad question that can be elaborated upon when necessary. In Wade and Thatcher's *Twilight* study (2016), the research question was: "How do online *Twilight* community members form public affiliations with the *Twilight* brand?*"*

The research question should also be referred to when selecting the population sample for the study, among other considerations. Kozinets (2010 p. 89) suggests that researchers should also ensure communities are "(a) relevant, they relate to your research focus and question, (b) active, they have recent and regular communication, (c) interactive, they have a flow of communications between participants, (d) substantial, they have a critical mass of communicators and an energetic feel, (e) heterogeneous, they have a number of different

participants, and (f) data-rich, offering more detailed or descriptive data." Researchers can locate appropriate communities for sampling via a Google search, checking relevant websites or magazines, asking group members, and so on. Further, online communities may be manifested in a number of ways, such as online forums, Facebook groups or pages, complete websites, etc.

To conduct a thorough netnography of a closed community, researchers may opt to take another route. In fact, if studying an illicit community, such as hackers or terrorists, researchers are well-advised to "start small," by visiting a website such as YouTube to learn about the community. Online terrorists often utilize YouTube to show propaganda videos, relevant news stories, and important messages for like-minded individuals (Keach 2018). More than that, terrorist leaders can use YouTube to recruit new members to their cause. With this in mind, one method for researchers is to comment on a handful of videos and from there build credibility to receive a forum invitation from community members or request approval for forum admission. This process is much more gradual than simply joining a community, but this example does illustrate that, upon joining any online community, it is imperative that the researcher carefully think through every detail of the process, including whether a particular platform, such as YouTube, should be accessed to properly enter the community, and whether or not the researcher should wait to be invited prior to joining.

Researchers may also consider whether they should "debrief" their community about their research purposes. In many circumstances, the author can supply a simple statement of his/her profession and the basic research question he/she is interested in. Another option, exercised in the Wade *Twilight* study, is to contact the community administrator and gain his/her permission to conduct the study. However, some research questions might require the researcher to purposefully keep community members in the dark, and again, the researcher must carefully evaluate whether the research falls under this category. For instance, when conducting a terrorism study, the researcher should never, under any circumstances, use their real name or location when dealing with closed dangerous communities. Instead, researchers should select an appropriate screen name and carefully craft an online profile for interacting with the community. Generally, the act of crafting a screen name is not as important in a regular netnography study, especially if researcher discloses his/her identity and intentions (Simpson 2006). However, in the terrorism context, disclosing true identities and intentions is not possible and to do so might compromise the researcher's personal safety. The researcher should also, in this research context, mask their IP address via virtual private networks and proxy servers for increased security, as the IP address of their internet connected devices may enable other users to reverse engineer their location.

Upon finally joining the online community, researchers often undergo some sort of "fitting in" process. In the *Twilight* study (Wade and Thatcher 2016), Wade and Thatcher participated in a few message forums, asking questions about the *Twilight* cast and expressing approval of some messages from more active members. At this point, the researcher is orienting themself within the community, understanding how it functions, and associating themself with the different members. Through this careful observation, the researcher might pick up which posters are, for example, most influential or most active (this information will be useful when classifying data in the next phase of the netnography).

In some contexts, "fitting in" to the community is a very time-intensive activity. For example, in a terrorism community context, the researcher should educate him/herself about the community, as well as about the culture and religion of most of its members, so they can assimilate better

within the community. Researchers should also learn their world history, perhaps by brushing up on modern political ideologies and might even opt to learn Arabic to improve their communications with members. Though a terrorism community requires some extra precautions, it should be noted that, in any netnography study, initiating oneself into the community is a very important phase and should not be overlooked.

Data Collection

The second step to conducting a netnography is data collection, where, as the name suggests, the researcher pulls data from its sample population. There are two different types of data: data that the researcher directly copies from the forum, and observations of activities in the forum (Bowler Jr 2010; Simpson 2006).“Data” that researchers collect may be available in a variety of forms. While, for instance, transcripts of message board postings might be simple to collect, classify, and interpret, but depending upon the community, members might also communicate via chatrooms, images, gifs and videos too. Further, some Internet communities have very extensive archives of past member activities and conversations, and the researcher may elect to collect this historical data. Another option is to capture only real-time activities, or a mixture of real-time and historical data.

In the Wade and Thatcher *Twilight* study (2016), many group members created their own “memes.” A meme is a screenshot of a popular movie, character, TV show, etc.; the community member then adds their own caption or saying to the meme. Often, memes are humorous in nature, and members sometimes use them to post private jokes or anecdotes. Through these memes, *Twilight* members often communicated their knowledge of *Twilight.* Further, other community members who “understood” bonded over this, increasing the exclusivity of the community. In terrorism communities, videos are a popular means of conveying political propaganda or emotional appeals for members to react to. User comments to these videos may also be collected and analyzed in a netnography study. When collecting data, the researcher must understand the primary means of communication members use within the community.

Along with copying data directly from the online community, the researcher may also make his/her own observations, contextualizing the data. Making observations in a netngraphy can sometimes be difficult because online conversations offer few social cues, such as facial expressions or vocal inflections, that researchers can directly observe. Many researchers opt for software packages, such as NVivo, to expedite theory-building, content analysis, and data linking (Kozinets 2010). Software packages like NVivo enable researchers to store, organize, manipulate and analyze a mix of qualitative and quantitative data and, accordingly, are critical tools to facilitate identifying interesting findings in data gathered via netnography.

In this step, researchers may find they are walking a tight wire; they need to collect enough data from enough sources that they remain flexible in the interpretation phase, but researchers may reach information overload after collecting too much data. An important question researchers might ask, then, is which data should be kept and which data should be deleted or left out? One suggestion is to base data collection (or omission) on the research question; when the researcher can note that he/she is reaching a point of diminishing return (no new insights can be gained), this step should be completed. A more conservative approach would be to gather more data than considered necessary, in case new and interesting ways of analyzing the data become available at a later point in time.

ANALYSIS AND INTERPRETATION

In the last step of conducting a netnography, the researcher analyzes and interprets the data he/she collected and his/her observations. Here, data is classified and coded to build (or contribute) to a theory (Kozinets 2010). In classifying data, the researcher is organizing everything he/she has gathered so it can be interpreted with more ease. The most common way of classifying data is to group it by its purpose, either "social" or "informative" in nature (Bowler Jr 2010). With "social" data, members are primarily forming or reinforcing their friendships, through telling jokes, sharing personal stories or simply commenting on each other's posts. Some members post items that relay important information instead – for example, *Twlight* members posted new movie trailers, provided information about filming the movie, or instructed other members in how to create their own *Twilight*-themed gifs (Wade and Thatcher 2016). The author should also consider non-human elements of the virtual community, such as technological elements that constrain or support the community (Lugosi and Quinton, 2018), such as artificial intelligence bots that moderate discussion and comments. Researchers can classify data in the way that seems most appropriate.

For terrorism communities, for example, a researcher might additionally classify data that is used for recruiting (gaining new members to the terrorist cause). Some posts may be classified as "calls to action," imploring community members to act. A researcher might also be faced with a post that may be classified as a "threat" to the safety or well-being of others, especially if the poster is highly specific in his/her threat of violence. If this should happen, of course, the researcher should contact appropriate authorities immediately as possible.

After categorizing the data, researchers should then code the categories. This step, coding, is often conducted using the researcher's choice of software packages. Leximancer, for example, is a popular software that analyzes large masses of data and then pulls out the most prevalent "themes" that show up (Smith and Humphreys 2006). Leximancer is a text analysis software tool that enables researchers to visualize themes and correlations within vast amounts of qualitative data. CATPAC is another well-accepted package that creates a dendogram around commonly-used words within a large data stream (Doerfel and Barnett 1996). CATPAC is a neural network-based software tool that analyzes text-based data to identify and visualize key concepts. Some web-based tools also analyze the sentiment used in posts. For instance, radian6 (www.radian6.com) deems user posts as possessing either "positive" or "negative" sentiment. Accordingly, researchers can use these tools to assess virtual community reactions to external events in terms of positive or negative sentiment, such as reactions to press releases from businesses or government organizations. In fact, researchers may benefit from using a number of software packages throughout the entire research process, from gathering data using radian6, to analyzing data with, for example, Twitter's sentiment analysis tool.

After analyzing the data, the researcher may start crafting their paper. This process may be difficult, especially if the author is confronted with an overabundance of data. Also, data and theory can often become intertwined and are difficult to disentangle, especially given some journals place constraints upon the number of pages that may be submitted. A suggestion is to "tell a story" and root the paper in theory, using collected data to illustrate important themes in the paper. The author should also state a research question or objective to give further direction for reading. Tables and charts should also be constructed to illustrate important concepts, processes and/or relationships. The key is for the author to write a paper that is still accessible for the general audience (and reviewers), so visual aids can often organize complicated information in a more comprehensive way. Netnographies are especially useful for theory-

building, particularly in relatively new subject areas (such as virtual community research) and can inspire quantitative studies for testing the theory.

CONCLUSIONS AND LIMITATIONS

This paper set up a series of steps researchers may use to conduct a netnography in a closed virtual community. Virtual communities were defined and previous studies conducted in a virtual community context were described. Next, instructions were provided about the three key phases of a netnography: entrée, data collection, and data analysis and interpretation. Some general conclusions may be drawn from this series of steps. First and foremost, this paper develops this research method, placing it in a virtual community context. Using previous studies and research experiences, a series of steps is clearly outlined so researchers can (a) have an improved knowledge of what netnographies are and how they are conducted, and (b) conduct a sound netnography themselves in the appropriate research context.

Along these lines, this paper also indicates that netnographies require a large amount of thought and care on the researcher's behalf. Researchers must carefully construct their research question to guide the study and use the research question to field additional questions about, for example, how to choose the sample population. Even when writing the final paper, the author still must consider how to best represent their findings and to tie them to theory, when appropriate. The process is not necessarily theory-driven, but it is not atheoretical either; instead, the researcher should likely be theory-informed, allowing for flexibility in the study where it is needed. Each step of the netnography is important and should be treated as such.

Like any research methodology, netnographies are not without limitations. Netnographies are ethnographic studies within internet-based virtual communities and are therefore limited by the nature of the data available. Whereas a traditional, in-person ethnographic study would enable richer interactions including facial expression, gestures, and vocal tone, netnographies are constrained to less rich communication and largely limited to text and images. Furthermore, findings from a netnography may be limited to the virtual community in which it was conducted. As a result, findings from a netnography maybe limited in terms of generalizability based on the online setting in which it was conducted. Accordingly, netnographies may be particularly beneficial as one component of mixed methods studies where findings can be triangulated and broadened using more generalizable, quantitative research methods.

Finally, this paper does suggest that more research should be conducted regarding virtual communities. A variety of questions still remain, including inquiries about, for example, power structures within the community and how virtual communities change over time structurally. Also, many virtual community studies are rooted in a marketing perspective, focusing more on customers' relationships with a brand or product, instead of their relationships with the platform itself or with other community members. Closed communities have also received less attention in the literature than open communities, and future research endeavors might focus primarily on that context. Few information systems and business researchers outside of marketing have utilized the netnography method, so this is another avenue for future research projects, and this netnography outline demonstrates how they should be conducted.

REFERENCES

Agar, M. H. (1996). *The Professional Stranger: An Informal Introduction to Ethnography* (Vol. 2). San Diego, CA: Academic press.

Bowler Jr, G. M. (2010). "Netnography: A method specifically designed to study cultures and communities online," *The Qualitative Report, 15*(5), 1270-1275.

Casaló, L. V., Flavián, C., and Guinalíu, M. (2008). "Promoting consumer's participation in virtual brand communities: A new paradigm in branding strategy," *Journal of Marketing Communications, 14*(1), 19-36.

Cohen, A. P. (2013). *Symbolic Construction of Community*. Routledge.

Comley, P. (2008). "Online research communities: A user guide," *International Journal of Market Research*, *50*(5), 679-694.

Costello, L., McDermott, M. L., & Wallace, R. (2017). Netnography: range of practices, misperceptions, and missed opportunities. *International Journal of Qualitative Methods*, *16*(1), 1-12.

Cova, B., and Pace, S. (2006). "Brand community of convenience products: New forms of customer empowerment–the case “My Nutella the community”," *European Journal of Marketing, 40*(9/10), 1087-1105.

Doerfel, M. L., and Barnett, G. A. (1996). "The use of CATPAC for text analysis," *CAM Journal, 8*(2), 4-7.

Eisenhardt, K. M. (1989). "Building theories from case study research," *Academy of Management Review, 14*(4), 532-550.

Fujita, M., Harrigan, P., and Soutar, G. (2017). “A netnography of a university’s social media brand community: Exploring collaborative co-creation tactics,” *Journal of Global Scholars of Marketing Science*, *27*(2), 148-164.

Gates, S., and Podder, S. (2015). "Social media, recruitment, allegiance and the Islamic State," *Perspectives on Terrorism, 9*(4), 107-116.

García-Álvarez, E., López-Sintas, J., & Samper-Martínez, A. (2017). “The social network gamer’s experience of play: A netnography of Restaurant City on Facebook.” *Games and Culture*, *12*(7-8), 650-670.

Hagel III, J. (1999). "Net gain: Expanding markets through virtual communities," *Journal of Interactive Marketing, 13*(1), 55-65.

Heinonen, K. and Medberg, G. (2018), "Netnography as a tool for understanding customers: implications for service research and practice", *Journal of Services Marketing*, *32*(6), 657-679.

Johannisson, B., and Nilsson, A. (1989). "Community entrepreneurs: Networking for local development," *Entrepreneurship & Regional Development, 1*(1), 3-19.

Kane, G. C., and Fichman, R. G. (2009). "The shoemaker's children: Using wikis for information systems teaching, research, and publication," *MIS Quarterly, 33*(1), 1-17.

Kaplan, A. M., and Haenlein, M. (2010). "Users of the world, unite! The challenges and opportunities of social media," *Business Horizons, 53*(1), 59-68.

Keach, S. (2018). "Youtube removed 8 million extreme videos in just three months – The true scale of terrorism, child abuse and hate speech videos revealed." Retrieved July 7, 2018, from https://www.thesun.co.uk/tech/6122254/youtube-transparency-google-extremism-terrorism-videos-child-abuse/

Klausen, J. (2015). "Tweeting the jihad: Social media networks of western foreign fighters in Syria and Iraq," *Studies in Conflict & Terrorism, 38*(1), 1-22.

Kozinets, R. V. (2002). "The field behind the screen: Using netnography for marketing research in online communities," *Journal of Marketing Research, 39*(1), 61-72.

Kozinets, R. V. (2007). "Netnography," *The Blackwell Encyclopedia of Sociology*.

Kozinets, R. V. (2010). *Netnography: Doing Ethnographic Research Online*. Sage publications.

Kozinets, R. V., Scaraboto, D., & Parmentier, M. A. (2018). “Evolving netnography: How brand auto-netnography, a netnographic sensibility, and more-than-human netnography can transform your research.” *Journal of Marketing Management, 34*(3-4), 231-242.

Lähdesmäki, M., and Suutari, T. (2012). "Keeping at arm’s length or searching for social proximity? Corporate social responsibility as a reciprocal process between small businesses and the local community," *Journal of Business Ethics, 108*(4), 481-493.

Loureiro, S. M. C., Serra, J., and Guerreiro, J. (2019) “How fashion brands engage on social media: A netnography approach,” *Journal of Promotion Management*, *25*(3), 367-378.

Lugosi, P. and Quinton, S. (2018) “More-than-human netnography,” *Journal of Marketing Management*, *34*(3-4), 287-313.

McMillan, D. W., and Chavis, D. M. (1986). "Sense of community: A definition and theory," *Journal of Community Psychology, 14*(1), 6-23.

Muniz, A. M., and O'Guinn, T. C. (2001). "Brand community," *Journal of Consumer Research, 27*(4), 412-432.

O’Donohoe, S. (2010). "Netnography: Doing ethnographic research online."*International Journal of Advertising, 29*(2), 328-330.

Porter, C. E., and Donthu, N. (2008). "Cultivating trust and harvesting value in virtual communities," *Management Science*, *54*(1), 113-128.

Ridings, C. M., Gefen, D., and Arinze, B. (2002). "Some antecedents and effects of trust in virtual communities," *The Journal of Strategic Information Systems, 11*(3-4), 271-295.

Roberts, N., and Dinger, M. (2016). "The impact of virtual customer community interactivity on organizational innovation: An absorptive capacity perspective," *IEEE Transactions on Professional Communication, 59*(2), 110-125.

Roberts, N., and Dinger, M. (2018). "Virtual customer environment design and organizational innovation: An exploration–exploitation perspective," *Journal of Organizational Computing and Electronic Commerce, 28*(1), 58-73.

Schau, H. J., and Muñiz Jr., A. M. (2002) ,"Brand communities and personal identities: Negotiations in cyberspace", in *NA - Advances in Consumer Research, 29*, eds. Susan M. Broniarczyk and Kent Nakamoto, Valdosta, GA : Association for Consumer Research, Pages: 344-349.

Schau, H. J., Muñiz Jr, A. M., and Arnould, E. J. (2009). "How brand community practices create value," *Journal of Marketing, 73*(5), 30-51.

Sicilia, M., and Palazón, M. (2008). "Brand communities on the Internet: A case study of Coca-Cola's spanish virtual community," *Corporate Communications: An International Journal, 13*(3), 255-270.

Simpson, L. S. (2006). "The value in combining netnography with traditional research techniques," *Enhancing Knowledge Development in Marketing.* American Marketing Association. 193-200.

Smith, A. E., and Humphreys, M. S. (2006). "Evaluation of unsupervised semantic mapping of natural language with leximancer concept mapping," *Behavior Research Methods*, *38*(2), 262-279.

Thanh, T. V., & Kirova, V. (2018). "Wine tourism experience: A netnography study." *Journal of Business Research*, *83*, 30-37.

Wade, J. T., and Thatcher, J. B. (2016). ""On Here, I'm Team Jacob:" Exploring Feelings of Belongingness in Virtual Communities,"*Americas Conference for Information Systems (AMCIS),* San Diego, CA.

Wade, J. T., Dinger, M., and Thatcher, J. B. (Forthcoming), "A great escape: The effect of negative public affiliation on belongingness in virtual communities." *Communications of the Association for Information Systems.*

Wang, Y. (2018) "Addiction by design: Using netnography for user experiences in female online gambling game," *International Journal of Human–Computer Interaction*, *34*(8), 774-785.

Wang, Y., Lee, W. and Hsu, T. (2017), "Using netnography for the study of role-playing in female online games: Interpretation of situational context model", *Internet Research*, *27*(4), 905-923.

Wilson, S. M., and Peterson, L. C. (2002). "The Anthropology of Online Communities," *Annual Review of Anthropology, 31*(1), 449-467.

Zhang, Y., and Hitchcock, M. J. (2017) "The Chinese female tourist gaze: a netnography of young women's blogs on Macao," *Current Issues in Tourism*, *20*(3), 315-330.