

A Bridge Home: The Use of the Internet by Transnational Communities of Immigrants

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Abstract

For decades transnational communities of immigrants have used various forms of communication to maintain ties with their places of origin. The Internet constitutes an alternative medium through which the sense of community (SOC) can be reinforced and maintained across time and space. Transnational communities of immigrants are creating and enhancing virtual spaces for (re)creating and maintaining a SOC across national borders. This paper reviews research from different disciplines to understand how the Internet is shaping the ability of dispersed national groups to create, preserve and extend their SOC in virtual spaces. The theory of SOC applied to virtual communities provides the frame of reference in which this phenomenon is analysed. Based on our analysis of the literature we argue that the unique characteristics of communities of immigrants—such as shared histories, experiences, common country of origin, and offline interaction—shape the nature and dynamics of their interactions online.

1. Introduction

The use of the Internet as infrastructure for community interaction has caught the attention of researchers for more than a decade. Previous research reveals a special interest in the study of how computer-based technologies provide the setting for the traditional characteristics of physical communities to emerge online (e.g. sense of community feelings) [9, 26, 28]. In online communities face-to-face (F2F) communication and social relationships among participants do not always take place before the formation of the

virtual community. However, research shows that online communities that combine characteristics of F2F and virtual communication can be more sustainable [1, 8, 13]. *Hybrid virtual communities* (a recent term referring to groups that overlap their offline and online communication) have been proposed as a surfacing phenomenon that deserves careful analysis [13].

Transnational communities of immigrants (TCIs) constitute an example of traditional physical communities that have recently started to use the Internet for community interaction. The term Transnational Community of Immigrants (TCI) has been defined in different ways [23]; for the purposes of this study we will refer to a TCI as a dispersed group of individuals from the same nation who maintain a sense of togetherness across geographical borders [30]. Although migrants can be geographically dispersed around the globe, it is also common to find ethnic enclaves of migrants (or migrants from the same country, region or town) in urban areas (e.g. Korea-towns, Chinatowns, little-Indias, Latin quarters, etc.) [20]. Because F2F interaction is possible in TCIs, we will refer to Virtual Transnational Community of Immigrants (VTCI) as a *hybrid community of interest* where participants use off-line and online channels of communication to nurture their social ties and their interests concerning life abroad, and their home country or geographical region) [13, 14].

This paper shows that existent research in Online Communities and Transnational Studies provides enough evidence to argue that TCIs experience community-like feelings and behaviours in online settings paralleling those of physical communities. Moreover, we contend that the unique characteristics that these communities display offline are reproduced online and shape their virtual SOC [10, 17, 30].

In this paper we draw from past theoretical and empirical research to investigate whether the Internet provides the context in which the unique characteristics of TCIs converge to facilitate the interaction of participants in a VTCI and shape the resulting virtual SOC. The theory of SOC applied to virtual communities [9] provides the framework to analyse the online interactions of TCIs. This paper is organized as follows: First, we describe the characteristics of immigrant communities and the different uses of Information and Communication Technologies (ICTs) made by these groups. Second, we use the theory of SOC to analyse the interaction of people in VTCIs. Finally, we provide conclusions and recommendations for future research; we also discuss alternative theoretical frameworks that could be used to investigate this phenomenon.

2. Transnational Communities of Immigrants and ICTs

McMillan and Chavis (1986) defined sense of community (SOC) as the “feeling that members have of belonging, a feeling that members matter to one another and to the group, and shares faith that members’ needs will be met through their commitment together” (p. 9). In TCIs, emotional attachment to the place of origin is central for the construction and maintenance of a SOC [30, 31]. The production of a SOC is based on the “social relations that link together the societies of origin and [the new] settlement” [23] (p.18). Being far from home increases the need of community formation [20]. According to Sonn (2002) emotional attachment is based on *shared histories, experiences, and common country of origin*. Community settings (e.g. social and cultural events, sporting clubs, churches) in the host country provide the context for shared histories and experiences to converge [31]. Community values and practices are transported from one context (home country) to the other (host country) [30]. For instance, Smith (1998) studied how Mexican immigrants in Chicago sustain their SOC through the extension of their traditions in the United States. The community distributed videotapes of a pageant contest held in Chicago among the members of the community in the United States and in their hometowns. This event (the pageant contest) is an extension of a similar tradition in their hometown in Zacatecas, Mexico.

Historically, information and communication technologies (ICTs) have played a

central role in the maintenance of an emotional connection to the home country. [10, 20, 30]. “[T]echnology [has] made possible for migrants and their children to have simultaneous participation in their communities of destination and origin” [30] (p.214). Previous research shows how technologies such as telegraph, telephone, fax, and radio have been used to maintain cultural, political and social links to the home country [10]. An illustration of this is the case of a Mixtec community (an indigenous group from Southern Mexico) in California. This community maintains connections to their hometown in the state of Oaxaca through “Línea Abierta”, a bilingual radio show transmitted in the United States [6]. Similarly, the community of Mexican immigrants in Brooklyn, NY use conference calls to discuss the progress of development projects in their hometown with Municipal authorities [30].

More recently, the Internet has started to change the ways in which these groups interact by providing an integrated *bridge home* [1] that overcomes time and distance barriers faced by these dispersed communities at a minimal cost. Sophisticated uses of the Internet include the use of videoconferencing to communicate with the community of origin [5]. The characteristics of the Internet (combining text, image, audio and video) not only satisfy the communication needs of the community but also, as we show in the following section, are useful for the (re)creation, expansion, and maintenance of a SOC across distance. In some cases existing TCIs are using the Internet as a supplementary instrument for community interaction [29]. However, the Internet has also been used as a platform for the creation of the community itself has also been reported (e.g. India Network [25] and the Coalition of Haitians for the Advancement of Haiti [1]). Technology does not create a community, however, it is only the communication means that enables community members to reach others [12].

The interaction of TCIs online has been studied from different disciplinary perspectives. We conducted a literature review to see what these disciplines can bring to the understanding of the *sense of virtual community* (SOVC). Table 1 shows a summary of existent studies about VTCIs. Research in VTCIs suggests that: First, VTCIs sites display different levels of sophistication in the use of Internet-based technologies ranging from mailing lists [25] to more complex sites that integrate various types of technology—such as chat rooms, newsgroups, and bulletin boards [29].

It is evident that there has been an evolution in the uses of technology made by these communities.

Second, virtual communities sites are rich in content [20]. In these sites, it is common to find information about events going on in the community, participants' stories and anecdotal information, forums where opinions and ideas about community interests are exchanged and, more recently, sections dedicated to the organization and monitoring of development projects in the host country and the community of origin [29]. These electronic environments resemble a "kind of public square that gather participants from across the diaspora [and from the community of origin] for community communication" [1] (p.210).

Third, grassroots participation and significant manifestations of social capital are common in the formation and maintenance of the online community. For instance, the construction of virtual communities is commonly initiated by leaders of the community [29] or by educated members [25]. In addition, members of the community volunteer to maintain the technological infrastructure of the community running [25].

Fourth, ICTs are fundamental to maintain social connections with the community of origin [1, 20, 25, 29]. However, the literature makes clear that SOC when immigrant groups interact online is based on the community of origin. For example, it is a common practice across these groups to create an online community in order to re-establish contact with other members of the diaspora they knew before the geographical displacement took place [20].

Fifth, VTCIs that are based on grounded relationships (offline relationships) are more sustainable [1]. Moreover, hybrid communities such as VTCIs that combine both F2F and computer-mediated communication "would be able to bond better and share values more effectively than communities that rely upon only one or the other mode of communication" [12].

In sum, although TCIs have used different ICTs to maintain their ties, the interactive characteristics of the Internet seem to be helping these communities to reproduce community-like feelings and behaviours online. However, if we want to fully understand how these groups manifest a SOVC we need to rely on theories that have been tested and validated previously (e.g. [19]). This is the purpose of the following section.

Table 1. Summary of Research in VTCIs

| Authors | Study Description |
|--------------|--|
| Rao (1998) | Case study about the development of an electronic mailing list (news and discussion digest) of Indians around the world ("India Network"). It describes the technological, financial and human challenges faced in the creation of the community. The community was created by an Indian researcher in Bowling Green State University (BGSU) in Ohio, USA. In addition to BGSU, other universities in the USA volunteer to host the technological infrastructure of the community, which is maintained by students in these universities. The researcher suggests that India Network resembles a <i>mini India</i> where people from different states meet to share information about different regions in India. Conclusions are drawn from anecdotal rather than empirical evidence |
| Mitra (2000) | Content analysis of messages posted in a bulletin board by Indians in the United States, Europe and India. Community members reproduce traditional aspects of the community in their discussion online. The bulletin board has helped participants to establish a network with other members of the community. This study provides an interesting analysis of the factors that produce a sense of community (also referred to as a <i>sense of commonality</i> in this study that also refers to SOC). The most important contribution of this study is the classification of messages content as <i>general postings</i> (informational) and <i>national critical discourse</i> (debates about religion, culture, national identity, and politics). However, this study shows some methodological deficiencies in the selection of messages for analysis [1]. |
| Smith (2002) | Exploratory analysis of the uses of the Internet by communities of Mexican immigrants in the U.S. This study describes how groups of immigrants from different regions in Mexico create virtual communities to maintain their ties with other members in the diaspora and with their hometowns. |

| | |
|---------------------|---|
| | <p>Usually, leaders from the community in the US are the initiators of these virtual communities. These online sites show the use of different types of tools for the interaction of the community (bulleting boards, chat rooms, discussion forums). New uses of these sites include planning and monitoring of development projects in the homeland.</p> |
| <p>Adams (2004)</p> | <p>Case study that examines the relevance of offline relationships in the maintenance of online diasporas. The “Haiti Global Village” site and the Coalition of Haitians for the Advancement of Haiti forum (CHAH) are the focus of this research. Findings suggest that pre-existing offline social ties in the community are essential for sustaining a virtual diaspora. Adams describes the case of the CHAH forum, an online community that lacked pre-existing offline social ties, and only lasted for approximately one year. One of the most relevant contributions of this study is the analysis employed to examine the online community. This study emphasizes the relevance of considering the interaction between the offline and online community when studying online diasporas. An analysis of offline and online communication and collaboration was performed (e.g. observation of face-to-face and online meetings, analysis of messages posted in online forums, and, analysis of community radio and newspapers).</p> |

3. Sense of Virtual Community (SOVC)

The difference between a mere settlement and a community is the “sense of community” (SOC) [19]. This difference is highlighted in the definition of community itself. A community is a social entity grouping individuals with “affect-laden relationships” and a “commitment to a set of shared values, mores, meanings, and a shared historical identity” [12] (p. 241). A group of individuals without an emotional connection is merely that and cannot be considered a community. In this sense, the existence of a community is defined by the feelings

experimented by its members. The definition of community above does not imply a geographic boundary. Communities, therefore, do not need to be in the same location [12]. Different types of social entities such as neighborhoods and even families do not necessary imply a community.

Recent studies on virtual communities have adopted McMillan and Chavis’s (1986) definition [9, 27]. To differentiate the SOC that arises from physical communities and virtual communities Blanchard and Markus (2004) name the latter “Sense of Virtual Community” (SOVC). Just as in the physical world not all settlements develop a SOC, not all virtual settlements develop a SOVC [9].

SOVC has been investigated in different contexts. Blanchard and Markus (2004) investigated a virtual community denominated by them as Multiple Sports Newsgroups (MSN). In their study, Blanchard and Markus (2004) demonstrate that a “sense of community” might exist in some virtual communities similar to the sense of community in physical (F2F) communities.

The Theory of SOC [19] identifies four dimensions of SOC: membership, influence, integration and fulfillment, and shared emotional connection. The dimensions of SOVC and the social processes contributing to create this feeling are similar to those arising on physical settings [9]. However, there are some differences that might occur due to computer mediated communication [9].

Based on empirical evidence Blanchard and Markus (2004), adapted McMillan and Chavis’ theory of SOC. Blanchard and Markus compared the dimensions arising from their study to those of the original SOC. They found evidence for three dimensions: membership, integration and fulfillment, and shared emotional connection. Interestingly, Blanchard and Markus did not find evidence of the influence dimension. However, they argue that the mere absence of this dimension in their study does not imply the lack of ‘influence’ on the virtual community. In fact, they suggest that ‘influence’ might have been absent because rules might have been set at the creation of the virtual community and did not need to be reinforced. In addition, Blanchard and Markus found evidence of two additional dimensions: identity and identification, and relationship with specific members.

Moreover, according to Blanchard and Markus (2004) the study of SOVC should be context dependent [9]. In this sense, we argue that

the specific characteristics of VTCIs make them different from other types of virtual communities. Therefore, social processes and SOVC dimensions will show characteristics and dynamics particular to the VTCIs. For instance, in VTCIs the SOVC is extrapolated from the SOC generated in the physical community [8, 13]. Drawing from empirical evidence from Transnational Studies as well as Virtual Community Studies, we identify the factors influencing the dimensions of SOVC and the social processes to develop it.

3.1. SOVC Dimensions

This section describes the dimensions of the sense of virtual community in the context of VTCIs. The first dimension, membership, “is the feeling of belonging or of sharing a sense of personal relatedness” [19] (p. 9). Membership establishes boundaries to identify who belongs to the community and who does not. According to McMillan and Chavis (1986) membership has five attributes. 1) Boundaries identify who is inside and outside the group intimacy. 2) Emotional safety refers to the protection of group intimacy. 3) Sense of belonging is the feeling of being accepted by the group. 4) Personal investment refers to the effort required to become a member of the community. 5) Common symbol system refers to the symbols with a particular meaning for the community. Symbols help to maintain group boundaries.

According to Dahan and Sheffer (2001), members in VTCIs share “a common background and heritage, common set of symbols, sometimes a common language, cultural values and a history of common struggles” (p. 102). Joining the virtual community is seen as a commitment to the original physical community [10]. In this sense, membership to the community is established not by the virtual community itself but for its counterpart in the physical world. In terms of the ‘sense of belonging’, if members have this feeling regarding the physical community, they will feel automatically accepted into the virtual community. On the other hand, it is unlikely that participants in the physical community who do not feel accepted by the group would try to participate in the virtual community. Also, only local people who have migrated (or are thinking of migrating) and people with family members who have migrated will usually be interested in joining the virtual community. The VTCI will address particular topics only of interest to this type of community.

In that sense, we can say that membership in a TCI is a self-selection process.

It is important to note, however, that sharing a nationality does not by itself create a transnational community [31], and a nation by itself is not a large community [11, 12, 31]. A community needs to develop a level of intimacy [12]. The larger the number of members, the lower the level of intimacy [12]. Moreover, rivalry and differences in the home country might be replicated in the transnational community [31]. According to Sonn (2002), Chileans who migrated to Australia had different political allegiances in their home country. They also had different immigration and socioeconomic backgrounds. These differences lead to the creation of different Chilean communities in the host country.

The second SOC dimension is ‘influence’. Influence is “a sense of mattering, of making a difference to a group and of the group mattering to its members” [19] (p. 9). Influence is a bi-directional concept where members influence the group as well as the group influences its members. People feel attracted to communities where they feel have an influence [19]. For TCIs, people who have an influence on the physical community would feel attracted to the virtual community. In fact, there is evidence in TCIs that people with a great deal of influence in the physical world create and sponsor the VTCI [29]. For instance, Smith (2002) explains how a Mexican immigrant to the US, known as the “Tomato King”, developed and sponsored a VTCI.

The influence from the group to its members refers to the rules for enforcing the desirable behavior. In virtual communities this influence can range from subtle to active. For instance, when Blanchard and Markus (2004) did not find evidence of feelings of influence, they speculated that the influence process might have been active at the beginning of the virtual community. Later on, joining members might prefer to have a chance to become acquainted with the community’s rules before actively engaging in the community. On the other hand, Robert et al. (2002) found that deviant behavior could be punished by temporarily or permanently banishing the offending member.

Participants joining a VTCI know the rules of the physical community [4]. Therefore, there is no need to state the rules explicitly because members would already be acquainted with them [4]. For example, participants in the Haitian Student Overseas forum maintain the

discussion respectful and open-minded because of the inherent norms in the physical community [1].

The third SOC dimension is 'integration and fulfillment of needs'. These terms are defined by McMillan and Chavis (1986) as the "feeling that members' needs will be met by the resources received through their memberships in the group" (p. 9). Two feelings characterize this dimension: reinforcement and shared values. Reinforcement means that "people are attracted to others whose skills or competence can benefit them in some ways" [19] (p. 8). In VTCIs members can benefit from past experiences from other members who have already adapted to the host culture. This experience is evident even on practical issues. For instance, VTCIs can advise its members on how to send money to their homeland [29].

Shared values refer to the personal values that define and prioritize emotional and intellectual needs [19]. In TCIs, there is a need for the migrants to know about their homeland. Also, for the homeland family, there is a need to know about their migrant family [29]. For instance, Smith (2002) describes how VTCIs show pictures of the progress of public works that migrant have funded in their homeland. The process of defining which works to fund and publicly showing the progress is reached through values shared by community members.

Blanchard and Markus (2004) identify the 'integration and fulfillment' dimension with the exchange of support. This support is manifested through both informational and socio-emotional communications. Blanchard and Markus found that the exchange of support deals mainly with issues which can be exposed publicly. More intimate needs might be addressed privately [9].

The last SOC dimension is 'shared emotional connection'. Shared emotional connection is "the commitment and belief that members have shared and will share history, common places, time together, and similar experiences" [19] (p. 9). Emotional connection grows from two sources: shared history and interaction in shared events. Members have a shared history when they participated directly on historic events or when they identify themselves with the historic events (even though they did not participate directly). Migrants have a share history regardless of the virtual community [31]. People migrate from their homeland to foreign countries to have a better life [31]. Migrants belong to the same culture and maybe even the same city or local area. Therefore, there is no need for the virtual community to develop from scratch

a shared emotional connection. Even generations who were not born in their parents' homeland will identify themselves with migrants [31].

However, a shared history is not enough. The second and more important source of emotional connection is interaction in shared events. The elements of interaction in shared events are: 1) Amount of contact: number of times interacting with the community, 2) Quality of interaction: positive or negative experiences, 3) Shared valent event hypothesis: importance of the event shared, 4) Investment: time, money, or energy dedicated to community activities, 5) Honor and humiliation: attractiveness (or adverseness) of the community based on its honor (or humiliation) mechanisms, and 6) Spiritual bond: social unity.

Evidence of several elements of interaction in shared events has been found in virtual communities. For instance, Blanchard and Markus (2004) found evidence of "emotional attachment". That is, the degree to which a member feels attached to the community. Emotional attachment is the function of the level of activity (McMillan and Chavis' amount of contact) and the perception of personal benefit (McMillan and Chavis' quality of interaction). Blanchard and Markus also found evidence of 'obligation', which maps to McMillan and Chavis' 'investment' element. Obligation is the commitment to actively engage in community activities. Interaction in shared events is also present in VTCIs. Physical TCIs recreate local customs in their host country. For instance, Sonn (2002) describes how the Chilean community in Australia celebrates the Chilean Independence Day. In addition, VTCIs use the Internet to communicate the social events hold by local communities. For example, Mexican communities in the US may hold beauty queens contests [29], or patron saint festivities. The physical community follows the development of the contest or festivities through the information displayed on the VTCI [29]. Also, Mexican migrants in the US fund projects for local development in their hometowns [29]. Migrants can monitor these projects through the VTCI's web site [29].

As mentioned before, Blanchard and Markus (2004) found evidence of two additional dimensions of SOVC: identity and identification, and relationship with specific members. They argue that the identification with the community described by McMillan and Chavis (1986) refers to the feeling of sharing the group identity. That is, a migrant will identify with other migrants. Being

a migrant will be the initial step to belong to the community. However, pure virtual communities lack of F2F interaction, therefore, virtual community members feel the need to develop an individual identification within the group.

Since members in VTCIs hold physical and virtual relationships simultaneously, identity and identification will be different from pure virtual communities. In VTCIs identifications on the virtual community will extrapolate from identifications from the physical community [29]. However, techniques for personal identification within the communities can appear in VTCIs. For instance, Blanchard and Markus (2004) identified several identification techniques such as including signature files or “a witty quote or pun at the end of a post” (p. 74). Since, communications constraints are the same in VTCIs as in any other type of virtual community, it can be expected that members of VTCIs will use similar identification techniques.

Finally, the last SOC dimension is ‘relationship’. Relationship with specific members refers to the development of relationships that swing back and forth from virtual to F2F [9]. In a VTCI the relationships coexists both online and offline. Potential members might know each other from the virtual communities or from F2F relationships [27]. The relationship dimension impacts the ‘trust creation’ process explained below.

3.2. SOVC Processes

SOVC is manifested through social processes and behaviors [9]. Blanchard and Markus (2004) argue that the continued production of social processes leads to a SOVC. That is to say, people initially engage on social processes to achieve a goal. The satisfying feeling generated by the processes encourages further participation in the virtual community. This continued production creates the SOVC that maintains the virtual community. Markus and Blanchard identified three social processes: the exchange of support, creation of identities, and production of trust. These processes also adopt particular characteristics for VTCIs. The following is a discussion on how these social processes function on VTCIs.

The ‘exchanging support’ process refers to the exchange of informational and emotional communications. Blanchard and Markus found that in the virtual community emotional support was given privately either F2F or online. However, other studies have shown that public forums are

used to exchange emotional support [20, 21]. Evidence from VTCIs have found that the Internet is mainly used for exchange of informational communication [20, 29]. That is, the information posted or displayed on the web site mainly refers to topics of common interest to members. It can be expected that emotional information be exchanged privately.

The ‘creation of identities’ process, as the name suggests, refers to the processes employed by members to identify themselves within the community. As mentioned before, in VTCIs members’ identity from the physical community might be extrapolated to the virtual community. That is, “identities are brought to the network (Internet) which help the users to find their network identity by seeking congruencies that existed prior the entry into the virtual space” [20] (p. 63). For instance, Mitra (2000) found that members of the Indian community tend to look for familiar relationships when they access the bulleting board. Moreover, when somebody responds to such call a new connection is created [20].

The ‘production of trust’ process refers to the trustworthiness assessment that members do of other community members. Members can learn about the trustworthiness of others by first hand experience [24]. However, trustworthiness can also be assessed indirectly through references from other members of the community [24].

There are at least two factors that cause people to act in a trustworthy manner in virtual communities. When the network established on the virtual community extends to the physical world members display a trustworthy behavior [9]. For instance, a member on a virtual community explained that he cared about what he posted because his friends (long-term relationships) were members of the community too. Inconvenient posting will not only affect his relationship in the virtual community but also his long-term relationship with his friends [9]. That is to say, online identification will be matched with a person in physical settings. Therefore, people will be careful to post trustworthy information [9]. The second factor is the communication to community members about meetings held offline. For instance, Blanchard and Markus (2004) studied a pure virtual community in its origins. Eventually, some online relationships moved to offline settings. The online reports of offline meetings publicly posted on the newsgroup enhanced the feelings of trust [9]. The close relationship between the physical community and the VTCI

allows greater levels of trust [12]. When there is a dense network of social interaction the potential costs for negative behavior increase [24]. A negative behavior from a member in the virtual community will directly affect his/her reputation in the physical world. Therefore, members are expected to display a trustworthy behavior.

4. Directions for Future Research

Studying communities should include different levels of analysis [15, 34]. The SOC Theory [19] defines a community from the perspective of an individual within the community. The theory, therefore, studies communities at the individual level [15]. As such, factors at different levels of analysis that might influence the SOC have been left out from the theory. For instance, the 'expected length of community residence' (ELCR) might be a moderating factor. Glynn (1981) found that the longer people intend to stay in a community the larger their sense of community. Probably, people who think they will stay for a long period would be more involved in the community: they will invest more (e.g. time, money) and therefore will feel a greater degree of membership and emotional connection. In the opposite way, people who think they will not stay for a long period of time, might not be interested in investing in the community. Rejection from the community would have none or small effects on the rejected member, since he/she will be thinking to leave the community anyway. In a VTCI, even if members decide not to participate in the virtual community anymore they will still be part of the physical community. Therefore, rejection from the community will have serious consequences. It is important for future research to investigate how the ELCR affects the SOVC dimensions and social processes.

Communities can also be studied as a network of relationships based on the theory of social capital [8, 15, 16, 24]. This theory has been successfully used to study physical [15] as well as virtual communities [7, 8]. Moreover, empirical studies have found evidence of the importance of social capital in transnational communities of immigrants [3, 30]. The mobilization of social capital that occurs through these networks is manifested in the political, economic and social influence that transnational communities have in their hometowns and their host society [3, 30]. In terms of political influence, a substantial number of transnational communities are turning to the Internet to express their concerns and opinions

about political matters that concern their community [10, 29]. The economical influence of transnational communities can materialize in different ways (e.g. remittances) and has been increasingly discussed in the literature and the press [2, 3, 30]. Social influence establishes interpersonal ties to assist immigrants in the adaptation process to urban life in the host country [29]. Social resources such as information about shelter, employment opportunities, health care, and social services are accessed through these social networks. Interpersonal ties have also facilitated reintegration upon return to the community of origin [18]. Diverse perspectives can be used for a comprehensive study of transnational communities. Expanding the social capital theory to VTCIs would greatly increase our understanding of this type of community.

Finally, as all research, these studies might present methodological limitations that need to be carefully considered both when interpreting their findings, and in designing future studies. First, some studies report the presence of a SOVC, but lack of a formal approach to examine the presence of SOC in online settings. For instance, Rao (1998) reports the existence of a SOVC in Indian Network, but he does not present empirical evidence to support his claim. Second, the main research methodology employed in the studies reviewed is the case study. Although this approach is appropriate for the study of communities [22, 33], a mixed research approach can also be used to understand the "overlapping facets of a phenomenon" [32] (p. 43) like in the case of offline and online communities. In addition, use of multiple data sources (e.g. off/online interviews, focus groups, offline/online community observation) to strengthen the validity of a case study [35] is rare. Third, to study "how SOVC develops requires longitudinal observations of virtual settlements over time" [9] (p.70). So far, empirical research has dealt mainly with communities at a specific point in time. Longitudinal studies are needed to understand how the SOVC evolves. Fourth, most of the studies show successful virtual communities (an exemption is the work by Adams (2004)). This implies that findings might be biased to optimistically assume that all TCIs can leverage information and communication technologies to create successful VTCIs. Future research should aim to identify causes of failure.

5. Conclusions

Since the SOC can take different forms in different communities, SOVC can also take different forms in different virtual communities [9]. We argue that the specific characteristics of TCIs make their virtual communities different from other types of virtual communities. Drawing from past empirical evidence from Transnational Studies as well as Virtual Community Studies, we evaluated how the characteristics of virtual transnational communities of immigrants (VTCIs) shape the dimensions, and the social processes that lead to the development of a SOVC.

This paper contributes to theory and practice in the study of virtual communities. Theoretical implications include: first, the sense of virtual community in transnational communities of immigrants is similar to the SOC in the physical community. The interaction between a physical community and a virtual community that is geographically dispersed but linked by a common history, allows members to extrapolate the SOC from the physical community to the virtual community.

Second, VTCIs display the dimensions of the SOVC described by Blanchard and Markus (2004). However, these dimensions differ from those observed in pure virtual communities. That is, *feelings of membership* are understood as a natural consequence of the affiliation with the physical community. Members show their commitment to the online community based on their shared cultural values and history. *Feelings of influence* are experienced in two ways: 1) members who have a great deal of influence in the physical community also have an important role in the virtual community; 2) rules in the physical community influence members' online behaviour. Deviant behaviour in these settings has more serious consequences than in pure virtual communities. The *integration and fulfilment of needs* are satisfied by the exchange of emotional support (based on shared experiences). *Shared emotional connections* do not develop from scratch in VTCIs. They are a result of a shared history (e.g. migration process), and interaction in shared events in the physical TCI. *Identification* is extrapolated from the physical community to the virtual community. *Relationship with specific members* coexists both online and offline.

Third, the social processes in VTCIs are also different from those observed in pure virtual communities. In particular, the dual form of the community (physical and virtual) facilitates the

creation of identity and the *production of trust* processes. Members bring their identity from the physical community to the online space. In addition, members assess the trustworthiness of other members through the extended network of members on and offline. In terms of the *exchange of support* process, it can be expected that VTCIs will display more informational than emotional communication. The physical community allows for F2F interaction where emotional communication can be held privately.

Fourth, this paper enriches the literature on virtual communities by drawing theoretical guidance from the fields of transnational and migration studies.

In terms of practice, this paper is relevant because it highlights the dimensions and processes that maintain the SOVC in transnational communities. Understanding that VTCIs have unique characteristics can be helpful to transnational communities of immigrants in using ICTs effectively to foster sense of virtual community. People experiencing a sense of community are more satisfied with and more committed to the community [19].

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