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## 7. Navigating borders/navigating networks: migration, technology and social capital

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### INTRODUCTION

In the 1990s, entry into the United States from Latin America became more difficult as the US–Mexico border became heavily militarized (Massey, Durand and Malone 2002). From 1986 to 2004, the budgetary increase in surveillance was tenfold, with more officers deployed at the border, and the number of deportations also expanded by a factor of ten (Massey 2005). Despite this, 10.3 million immigrants from Latin America were admitted legally from 1980 to 2006. However, there was also an increase in undocumented immigrants (Huntington 2004; Dobbs 2006). The act of migration is influenced by global media and its representation of foreign land. This representation plays a pivotal role in lives of individuals who are considering migration (King and Wood 2001). Research suggests that the use of information and communication technologies (ICTs) helps migrants get relevant information prior to migration and helps them comprehend the implications and consequences of migrating (Newell, Gomez and Guajardo 2016; Newell and Gomez 2015; Horst 2006). Panagakos and Horst (2006, p. 120) state that, “There is no doubt that new technologies have an impact on how transnational migrants imagine, negotiate and create their social worlds across broad transnational fields.”

Social networks are integral to the process of migration (Fall 1998). People who have migratory experience become a valuable source of social capital to other people who are planning some form of migration, and those with friends with migration experience have a greater incentive to migrate themselves (Massey and Aysa-Lastra 2011). Social media has the potential to transform migration networks (Dekker and Engbersen 2014). The internet has thus given users an opportunity to be active producers as well as consumers of media content. Social media is not only a personal communication tool but a gateway for distributing information. This new generation of ICTs is significant for migrants and non-migrants who are geographically scattered but remain connected through transnational networks (Kissau 2012; Mahler 2001).

The emergence of new technologies has lowered the communication- and travel-related costs of migration and has increased the “richness” of communication content. New technologies have led to the emergence of transnational identities as a new factor in traditional patterns of migration and assimilation into host societies (Bates and Komito 2012). In their migration journeys, migrants have access to wider information services via different mobile technological devices like smartphones, global positioning apps, social media, and instant messaging systems (such as WhatsApp). The “polymedia” affordances of smartphones go beyond calling and texting (Madianou 2014) and provide more autonomy to migrants in certain contexts (e.g., in migration journeys to Europe; Schroeder 2015, as cited in Zijlstra and Liempt 2017). The portability of mobile phones allows migrants to adapt to changing circumstances during the journey (Schaub 2012). Information is often sought via online social networks. Migrants can stay connected to friends and family by exchanging pictures and text messages. Mobile phones may give migrants

the feeling of security that they can always call for help if need arises (Germann Molz and Paris 2015).

However, depending on their circumstances and intended destinations, migrants might not be able or might not be willing to use ICTs. First, socio-economic status, level of education, urban/rural residence, gender and age can cause significant differences in people's ability to use ICTs, including migrants (Benitez 2006; Hamel 2009). Extensive literature indicates that ICTs may empower communities and groups that have been historically underserved, including women (Arun, Heeks and Morgan 2006). Yet, the literature also indicates how the groups with the least resources, including less-educated, lower-class women are not benefitted (Arun et al. 2006). Second, migrants might choose not to use ICTs during their journeys, and especially not mobile phones, as they perceive them as possible tools of surveillance. The perception that turning on a mobile phone will show their location to border agents is quite diffused among migrants at the US–Mexico border (Newell, Gomez and Guajardo 2016; 2017). Additionally, certain border regions, including along the US–Mexico border, do not always have the cellular infrastructure required to support consistent wireless connectivity.

In this chapter, we examine research on the role and use of online social media and other ICTs in the context of migration. We link the use of ICTs (including social media) by undocumented migrants—and the opportunities and risks enabled by these ICTs—to Bourdieu's (1986) definition of social capital. Our past research is particularly focused on undocumented migration into the United States across the country's southern border with Mexico and, to a lesser extent, migrant integration into various communities in the United States. The primary empirical research we reflect on here is drawn from three interrelated lines of research: the first was a study of the migration-related information practices of clandestine migrants in a shelter in Nogales, Sonora, Mexico (Newell, Gomez and Guajardo 2016; Newell, Gomez and Guajardo 2017; Newell and Gomez 2015; Yefimova et al. 2015); the second was a study of the information practices of Latino migrants, many of whom were undocumented, at the US–Mexico border, in Seattle, Washington, and in Cali, Colombia (Gomez and Vannini 2017; Gomez 2016; Gomez and Vannini 2015; Gomez, Gomez and Vannini 2017; Vannini, Gomez and Guajardo 2016); and the third was a study of the information practices of the humanitarian migrant-aid organizations that work to serve and support clandestine and undocumented migrants in and around Nogales, Sonora, and Nogales, Arizona (Gomez, Newell and Vannini 2020; Vannini, Gomez and Newell 2019; Newell, Vannini and Gomez, 2020).

## RELATED WORK

We discuss two areas of related work: the information practices, technology use and social networks of migrants, and the concepts of social capital and how it relates to the migration experience.

### **Information Practices, Technology Use and Migrants' Social Networks**

In some contexts, migration is viewed as a sense of achievement and the migrants are thought of as “national heroes” (Riccio 2006). Migration offers a unique opportunity to reinvent oneself. As Rouse (1995, p. 356) wrote, migration involves “asserting and organizing around either revalorized versions of ascribed identities or new ones that the (im)migrants develop for themselves.” Chen and Choi (2011) found that computer-mediated social support is a precious

supplement to the migrants' offline social support and that a growing number of Chinese migrants in Singapore go online to request and exchange information, counsel, companionship and even tangible assistance. Baron and Gomez (2017) examined how information practices affect the migration process by collecting stories from undocumented Latino migrants in the US. They argue that migration is not a linear process and show how ICTs facilitate the formation of new national–transnational identities, inculcate a sense of “in-betweenness,” and generate understandings of nationhood.

Dekker and Engberson (2014) conducted a study to investigate the how the use of online social media by migrants and non-migrants affects migration and the functioning of migrant networks. Brazilian, Ukrainian and Moroccan migrants were interviewed between January and June 2011 in the Dutch cities of Amsterdam and Rotterdam. Results revealed four main ways in which social media facilitated international migration: (1) promoting solid ties with loved ones, (2) addressing weak ties that are relevant to organizing the process of migration and integration, (3) building latent ties, and (4) offering discrete and unofficial migration information. Hence, social media changed the process of migration and lowered barriers.

Others, like Benítez (2012), analyzed how ICTs change the communication practices of transnational families and influence public policy. Based on survey research in El Salvador, Benítez (2012) found three ways in which ICTs offered new possibilities for communicative practices among immigrants and their relatives: (1) strengthening cultural values, (2) maintaining ties with home, and (3) providing affective support to family. Wilding (2006, p. 132) has argued that ICTs are important for transnational families in “constructing or imagining connected relationship and enabling them to overlook their physical separation by time and space even if only temporarily.”

Migration within a country or beyond borders may entail risks that can be reduced to some extent (Tilly 1990) if international migrants maintain connections with social ties and have information about the conditions of migration (Ros et al. 2007). Schapendonk and Moppes (2007) interviewed migrants in Morocco, Spain and Senegal and found that migrants valued the connection—mediated by mobile phones—to friends and family members during and after migration. Many of their respondents used the internet to prepare for the journey, ranging from transferring money, using internet cafes, or looking for employment. Hence, the use of the internet mitigated risks for the migrants.

As the International Organization for Migration (IOM 2005) has noted, the rise of ICTs and their use for border control and national security now entails serious cost and investment in every country's information technology infrastructure coupled with information-sharing agreements among states. These technologies, in turn, make migration data more available but also produce concerns about privacy and state surveillance.

Smugglers and others may also use social media and spread rumors or misinformation and lure migrants into false deals or create unrealistic expectations (Frouws, Phillips, Hassan and Twigt 2016). In some countries, information campaigns to discourage migration address these issues. In Senegal, for instance, a state-initiated information campaign informed potential migrants of the dangers of crossing the Atlantic Ocean to the Canary Islands. However, trust in media and online information may also impact the effectiveness of such information campaigns. Often, migrants prefer to rely on information obtained through word-of-mouth from trusted sources (Guilmoto and Sandron 2001; Poot 1996).

## **From Social Networks to Social Capital**

Many understand social capital as consisting of strong ties (Granovetter 1973)—in the context of migration, these are based on shared community, friendship, or kinship that connects both migrants and non-migrants (Massey et al. 1998). Perhaps the most straightforward approach to social networks is Granovetter's (1973) theory of the strength of weak ties, which asserts that weak ties are more likely to be bridges to outside networks than strong ties and that information flows through weak ties. Granovetter (1973) elaborates on the quality of connections between people as either strong or weak. Both types of links are crucial as the strong links provide support and are particularly important at the beginning and end of life, while weak links translate into new social and economic opportunities in adult life (Goodman 2003). Granovetter's theory enables us to answer questions like how individual and community social capital is affected by use of social media.

Social capital is a much-contested concept in the social sciences due to a variety of definitions (Castiglione 2008). Scholars have grappled over the concept's ambiguity, as evidenced by often vague explanations of social capital in academic literature (Ahn and Ostrom 2008; see, e.g., Solow 2000; Durlauf 1999; Manski 2000). In this chapter, we utilize Bourdieu's concept of social capital. Reference to Bourdieu's (1986) definition of social capital is quite common. According to Bourdieu (1986), social capital comprises social obligations that can be converted—in certain conditions—into economic capital, and maybe institutionalized, e.g., in the form of titles of nobility. The convertibility of these social, cultural and symbolic resources should have the effect of securing advantage or disadvantage particularly in terms of economics (Bourdieu 1986). Social ties are more meaningful when they result in access to those individuals who have more knowledge and resources (Bourdieu 1986, as cited by Ryan et al. 2008). Inspired by Bourdieu, Cederberg (2012) interviewed Swedish refugees looking into their co-ethnic and non-ethnic networks. The concept of "social capital" is extremely significant for making sense of migrant's experience and position particularly with reference to inequality. Social groups are rarely homogenous and are marked by internal conflicts. Cederberg (2012) emphasized that it is imperative to look at a range of social networks and see the advantages as well as disadvantages they bring to members when studying different processes in the migration process.

Blanchard and Horan (2000) surveyed 342 people in a mid-sized California city that was about to get a "virtual community" (i.e., an online community network). The study was conducted to investigate whether virtual communities could compensate for a decrease in social capital as a consequence of decreased participation in face-to-face communities, and found that there was, indeed, an increase in social capital as people interacted in the new virtual space with neighbors, family, and friends. In an ethnography of a youth-oriented community technology center in Denver, Colorado, Clark (2003) examined how digital divide policy is actually practiced. Making use of Granovetter, she deduced that young people's online activities build their weak ties to a wider network. Using Bourdieu, she concludes that these networks create opportunities for them in form of employment, housing, and other opportunities. The social capital debate (Portes and Landolt 1996; Putnam 2000) has also been extended to include "network capital" (Larsen and Urry 2008). Larsen and Urry (2008, p. 93) explain the concept of network capital as

access to communication technologies, transport, meeting places and the social and technical skills of networking. ... Network capital is the capacity to engender and sustain social relations with individuals who are not necessarily proximate, which generates emotional, financial and

practical benefit. “Network capital” refers to a person’s, or group’s, or society’s facility for “self-directed” corporeal movement and communication at-a-distance.

Migration research in some parts of the world (see, e.g., Garip 2008 [rural villages in Thailand]) suggest that individuals are more likely to migrate if their social capital is greater and more spread out by occupation rather than distance. Resources from weakly tied sources like an acquaintance had a higher effect on migration than from strongly tied sources like family. This result is in stark contrast to international migration from Mexico to the US, where strong ties like family members facilitate the decision to migrate (Davis, Stecklov and Winters 2002; Palloni et al. 2001). Massey and Aysa-Lastra (2011) conducted a study to find out the effects of social capital on international migration and how these effects differ based on contextual factors to estimate models predicting the probability of taking first and later trips to the US from five countries: Peru, Costa Rica, Nicaragua, Mexico and the Dominican Republic.

The results confirmed that social capital had a universal and strong effect on migration, particularly on the first migration trip compared with later trips and interacts with cost of migration. On first trips, the effect of individual social capital (measuring strong ties) in encouraging migration increases with distance while the effect of community social capital (measuring weak ties) decreases with distance. On later trips, the direction of effects for both individual and community social capital is negative for long distances but positive for shorter ones.

Migration can be viewed as a special case of development of social networks (Eve 2010). The role of kinship and friendship networks is highly important in facilitating migration (Haug 2008; Heering, van Der Erf and van Wissen 2004). Bonding social capital is generally associated with technology that allows the migrants to maintain and strengthen strong ties with friends and family back home while bridging social capital is associated with migrants’ use of technologies to “open up new perspectives” (Proulx 2008, p. 158). Bonding social capital and bridging social capital can serve during both the pre- and post-migration phase, and in the post-migration phase, to remain in contact with the source society as well as to integrate into the host society.

## RESEARCH METHODS

The findings presented below come from three interrelated research projects active between 2014 and 2020, as discussed above. Additional details about methods for each of these studies has been published elsewhere. In the first line of research, we conducted semi-structured and informal interviews with 46 migrants and migrant-aid workers at a day shelter for migrants in Nogales, Sonora, Mexico, during multiple fieldwork trips in 2014. Interviews were conducted in either English or Spanish, depending on the language proficiency of our respondents, and all Spanish language interviews were translated into English prior to data analysis. Our respondents fell into the following three categories:

1. individuals who had been recently deported from the United States (generally within a few days of deportation, n=29),
2. migrants from Central America who had just arrived at the border with plans to cross into the United States in a clandestine fashion (n=4), and
3. migrant-aid workers affiliated with local and binational humanitarian organizations and who provide services at the shelter on a regular or recurring basis (n=13) (Newell, Gomez and Guajardo 2016, p. 181).

We generated a coding manual and engaged in multiple rounds of coding, beginning with pre-established codes derived from our interview protocols and expanding our code book through an iterative process of identifying additional concepts that emerged in the data. Additionally, throughout this fieldwork in 2014, we also engaged the methodology of participatory photography, disseminating cameras and instructions to migrants at a day shelter in Nogales, Sonora, and conducting follow-up interviews the following day when they returned (see Yefimova et al. 2015; Gomez and Vannini 2015). After providing the participants with simple digital cameras, we asked them to take pictures of their daily lives in Nogales. The following day, when participants returned to the day shelter, we conducted semi-structured photo-elicitation interviews, using their captured photos as stimuli to guide our conversations. This methodology allowed “us to capture and understand the migrants’ life experiences during some of their most vulnerable times: While receiving food and supplies at a migrant shelter just minutes from the border” (Yefimova et al. 2015, p. 3675).

In the third study, we conducted interviews and engaged in field observation of the work of five volunteer-led migrant-aid organizations active in the area surrounding Tucson and Nogales, Arizona, in the summer of 2018. Our focus was on understanding the information practices of these generally volunteer-led organizations and how they use ICTs within their work. We conducted twenty open-ended, semi-structured interviews with humanitarian volunteers and engaged in participant observation of their work (including ride-alongs on service trips into the desert and to a migrant shelter in Nogales, Sonora). We also attended weekly organizational meetings as well as immigration proceedings in federal court. As in the earlier research, we based our interviews (and subsequent coding) around our initial interview guide, expanding our set of basic questions throughout each interview based on the context, history, and roles of each participant in the organizations with which they were affiliated.

## FINDINGS

Our findings show that migrants have different *uses of* and *feelings towards* ICTs at different stages of migration, reflecting not only their own migration stage, but also how they are intentional decisionmakers and active participants in their own lives (Favell, Brettell, and Hollifield 2008, as cited in Kozachenko 2013).

### **ICTs at the Border: Between Information Seeking and Risk Awareness**

Our data show that, during their migration journeys to and across the US–Mexico border, migrants generally tend to distrust ICTs and prefer to rely on seeking information through word-of-mouth communication, and they place higher trust in such information. While, for example, the use of mobile phones and social media (such as Facebook) were important communication tools, migrants at the border are aware of the increased risks that they are facing—and if migrants were not previously aware of these risks, the staff at the day shelter consistently explained these issues to them through plenary announcements prior to serving meals. Leaking contact information, whether stored in cell phones or on pieces of paper, could lead to extortion and abuse by organized criminal traffickers, and even by the police, especially on the Mexico side of the border. Facebook was seen by at least one of our respondents as a way to secure

contact information, at least decreasing the risk that a physical list might be stolen. One of the volunteers explained:

Here and along the borders of the U.S. and Mexico, the migrant is ... just seen as a dollar sign. [...] So, the migrant who comes here, they have relatives on the other side who are going to help them, so what do they [criminals] do? They extort their family members; they get their phone numbers and try to extort the family. And their families, just to try to protect their relatives, they do whatever they can to send that money. (Volunteer 1)

One of our interviewees had first-hand experience with these kinds of threats:

The other day they caught us, and I thought that it would be the last day of my life. [...] They took us, they took our shoes off, they took all our papers, they asked if we had any phone numbers of our friends, and that we had to give it to them. What I did was I took my wallet very carefully and took out the phone numbers and threw them out and [now] I cannot communicate with any of my family anymore; I only know my cousin's phone number but all the rest I lost, I don't have them anymore. (Migrant 5)

Migrants are also well aware of the increased employment of technology of surveillance by US Customs and Border Protection (CBP) and Immigration and Customs Enforcement (ICE), and they are afraid that using mobile phones will give away their location and facilitate their apprehension by US authorities. Finding trustworthy information, especially regarding practical issues related to border crossing, is one of the biggest challenges they encounter. When possible, they rely on family members or friends to help them find a guide or trustworthy contacts. Statements such as “a neighbor helped me [arrange a smuggler]” (Migrant 1) and, “it's all through friends. You ask here and there [...]. And then you find somebody who knows someone. And they give you a phone number and you talk with someone, and that's the way you do it” (Migrant 2) were common explanations.

Migrant shelters across Mexico (like the one we used as a field site during much of our research), are commonly used by migrants as “information grounds” (Fisher and Naumer 2006)—places to find people who can help or point them to others who can. For example, one respondent explained, “That is why I'm here ... we're in the shelter to see if we can find information about who would be a good guide for us, to try to go back” (Migrant 3). More experienced migrants often share their knowledge with other migrants on the migrant trail in Mexico or in shelters at or near the border.

In this context, where migrants are often aware of the risks in storing information on physical devices, especially mobile phones, and where trust of information sources plays a very relevant role in terms of the kind of information that migrants will decide to believe and use, the use of Facebook seemed particularly relevant. Information shared through and stored into Facebook accounts was, in general, entrusted more than information stored into mobile phones. In a few cases, migrants indicated that social media could also be a good tool to share information about shelters and other safe spaces they could find during the journey:

I could tell friends and migrants to come look for this place, for the shelter. Because when I was in Tijuana when they caught me, they mugged us on the mountains, and they took away my money. And [...] I had to ask, beg around to other people, and I did not know that there was this kind of place just like a shelter. Many people can learn about this. So that I could tell other



people, like other migrants and other friends, to look for these kinds of places, so that they don't suffer like I suffered. Where to sleep, or [to find] clothes or food. (Migrant 6)

However, this use of Facebook raises concerns about the possible risks of mis- or dis-information and of accounts being compromised. First, migrants could erroneously trust or be fearful of information they find, which could influence their decisions on their migration journey. Second, migrants might not be aware of the risks connected to correctly logging off from public computers or that platforms may allow law enforcement access to profile information, and they may not always be knowledgeable about protective, privacy-preserving practices, such as adjusting privacy settings, using encrypted technologies, or managing multiple accounts.

Volunteers working with migrants on both sides of the US–Mexico border also recognize the importance of ICTs in migration journeys, and they try and offer migrants safer ways to access information and communicate with family and friends. Volunteers at shelters provide access to cell phones (and, in some cases, computers), allowing migrants to communicate with friends and family, minimizing migrants' exposure to fraud and extortion.

Communication is important to them, we give them a chance to talk on the phone, on a secure phone. They can call whoever they want, it is important for them to remain in contact. Increasingly, over the years, more migrants have their own phones. Sometimes they don't have any airtime, sometimes they run out of battery, sometimes their phones are compromised and someone can listen in. Our phones give them a secure way to connect. (Volunteer 3)

These phones, owned by volunteers' organizations, are less likely to fall in the hands of smugglers and cartel members. Migrants are instructed to delete the last phone number dialed in pay phones, and to not accept free calls from people on the street. To increase their safety, organizations are also taking precautions, deleting the record of numbers called from their phones. More recently, organizations' smartphones have been set up to automatically delete the last number called.

On the US side of the border, in Arizona, things are different. Volunteers are wary of letting migrants use cell phones, as that might be construed as aiding and abetting unauthorized migration contrary to US law.

We don't give them maps. If we gave them a map, the Border Patrol would get on us right away. [...] We don't let them use our cell phones. They want to call their mother... well, because you don't know who they're going to call, and they'll be calling a coyote or something, so we don't let them use cell phones. We don't get them in cars. All we do is, we provide food and water [...] and clothing, [...] and medical care. (Volunteer 4)

### **Using ICTs When Settling Down: Self-improvement, Ownership and Communication**

When settling down in their new place, migrants show a more complex relationship with ICTs. Their decision to use ICTs is not dictated by the same immediate risks. As their lives become more and more integrated in the life of the city and community in which they settle, their use of ICTs also resembles general use throughout the community. Migrants in the US use ICTs not only to communicate with their family and friends, but also for learning, for working and for self-improvement:

I call my mother... I don't tell her the bad things that happened to me. I just tell them the good things. I buy prepaid cards [...] to call long distance. I call her 4 or 5 times a week. I don't really know how to use the computer or the cell phone. I can just talk, and I like to hear their voice and talk to my family. I really miss my family. The cell phone I have is not a very fancy one. I can take pictures, but I can't send them to my family in Guatemala. I can send them to my nephew in New York and he then sends them to my family. (Migrant 7)

ICTs are used as tools to learn new things, including English, and relax:

I have a laptop, but it doesn't work anymore. Now I use my phone. I have two cell phones. One has a phone line, and this other one is a smartphone, but it does not have any phone line. I put a Bluetooth keyboard on it, and I use it as a tablet. I watch programs in English, I play games, math games, and I watch things on YouTube, I listen to music. (Migrant 8)

They are also used as everyday tools to do their work:

These are my laptop, my cell phone, and my desk phone. This is the place where I work, where I grow every day, where I discover my professional side. These tools push me toward success. [...] These tools have taught a lot of things throughout my job. I am open to learning because I am a human being. (Migrant 9)

Once they settle in the US, migrants' attitudes towards ICTs often exhibit ownership and appropriation of the technologies as tools for self-improvement:

I started to come here [...] to the computer classes. Here they give you the very basics: how to use email, how to open an account, and how to use it. [...] I would like to learn how to repair cell phones or tablets because there's a lot of work I can no longer do because I don't have the strength. But my mind could do other jobs... I dream of doing something like repairing computers. [Migrant 10]

For those who do not have a stable income, libraries become a place of reference to learn, using ICTs and other technologies:

This is the central library, but I also call it "the office" because for a lot of people, that's everyone's office. (Migrant 11)

I always go to the library to use the translator; since I am an aficionado of English. I learn a lot of words and phrases there. I watch videos as well, but they have to have the closed captioning, otherwise I don't like it because I don't understand any of it. If the captioning comes up, and the person is speaking in English, that's what I like. I want to hear the pronunciation. That's why I go to the library. (Migrant 12)

Migrants refer often to the library as a safe space, a shelter, a place where they can learn, stay and be safe:

I go to the library any day I have a chance. If I don't find work [...] I can go and spend all day at the library and improve myself. I can fill in all the knowledge that I'm missing and also it is a safe place to go hang out even if I have nothing to do. (Migrant 13)

I've always wanted to see the aurora borealis, but I've never seen them. And I like to go to the library and learn about all those things. I read the newspapers in the library. The library is really like a shelter for everybody who is on the street. Like a church, they cannot kick you out of there. (Migrant 14)

Libraries are information grounds and communication hubs for migrants in their new communities:

A friend asked me, "Do you want to speak with your family? I will show you how to get onto the computer," and that's how I got to know the library. He begged me, "Let's go to the library!" because I don't like to read books, but one day I agreed and up to now, I'm still going there. I use the computer for the translator, and I see movies with subtitles. And sometimes I speak to my family. (Migrant 15)

Once settled, migrants often see the use of electronic devices as an opportunity, rather than being associated with immediate risk.

Humanitarian organizations working with migrants on the US side of the border are aware of the possible privacy risks associated with sharing information about (especially undocumented) migrants publicly on social media. As recently brought to the attention of the public, ICE and other federal agencies use data and information from disparate databases: state and local governments, private data brokers, but also social networks (Funk 2019). Organizations, then, try to educate migrants about safer use of Facebook and social media (privacy settings, publishing and tagging photos, geo-location, etc.). They also adopt low-tech methods (e.g., visible signs people can wear to indicate they do not want to be photographed) to respect the privacy of people that might not want their photos to appear online.

However, social media platforms are perceived to have different levels of privacy and security risks. Email, iMessage and private Facebook groups were perceived by both migrants and those working with them as being safer than publicly accessible Facebook pages. Also, migrants are necessarily not discouraged to "be open about their story as undocumented individuals, if they should wish to." Young people and students, for example, many have chosen to "come out" as undocumented on public Facebook pages, using them as platforms for activism and peer support. Ultimately, organizations defer the decision to post personal information on social media to migrants themselves:

They have been living with their undocumented status their whole life. They understand the risks better than anyone and don't need me telling them what they should or shouldn't share. If this is something that is important for them to do, for themselves, I'm not going to try to stop them. We don't do any policing here. A few [...] choose to take on a more activist role and are open about their status. That is their decision to make, I am not going to try to stop them. (Staff 1)

This position can be problematic, as it possibly puts migrants at risk of being detained and deported. Importantly, "the failure to protect undocumented migrants' privacy in [humanitarian information activities] tends to exacerbate the migrants' vulnerability, whose legal status already places them at risk" (Vannini, Gomez and Newell 2020, p. 929). However, these practices do assign migrants a higher level of agency and ownership in their own use of ICTs.

## CONCLUSION

ICTs are networking tools and sources of social capital providing opportunities to migrants to cross the border safely and integrate into the host society. This chapter attempts to examine how ICTs foster immigrants' social capital in the Mexico–US border crossing journey and after settling in the United States. It looks at how the use of social media simultaneously benefits and poses risks to the immigrant. The study rests on Bourdieu's concept of social capital that investigates size and type of social networks the migrant can access and draw upon. The migrants displayed different uses and a mix of feelings towards ICTs. At the border, the migrants reported feeling scared of surveillance of their phones and invasion of their privacy. Facebook was more trusted than mobile phones for storage of their information though with the fear that their accounts might be compromised. Some migrant-aid workers provided access to cell phones to enable migrants to obtain accurate information. Before and during the border-crossing journey, the new migrants are constantly looking for experienced migrants' accounts of the journeys. Most new migrants place higher trust in information obtained from family members and close friends, rather than ICTs, during the migration process to help them find a guide or other valuable piece of information. This finding is supported by Massey and Aysa-Lastra's (2011) study in which migrants sought out and trusted prior migrants. When settling down in the US, ICTs were used for self-improvement, for communication and for work, consistent with Benítez's (2012) findings about how ICTs strengthen cultural values among immigrants and their relatives. Some migrants saw ICTs as an opportunity rather than a risk. ICTs provided the means to build social networks and find employment and resources, to integrate into their new society. Hence, ICTs remain an important tool for migrants to build their social capital. Some migrants did not have laptops and phones, and some had to seek support to learn to use these types of electronic devices and to access social networks. Thus, in line with Bourdieu's analysis, it is apparent that these networks can create opportunities in the form of employment, housing or other economic gains.

Mobile technologies and smartphones have the ability to build social capital. However, unequal access to ICTs, skill and experience in using technology and digital media may hinder this process. Differences in education, gender and foreign language skills are all factors that need to be considered when investigating the dynamics of the migration process. More empirical work is needed to better understand who benefits and who loses in this process. It is also worth investigating how migrants assess whether ICT-mediated information is trustworthy. As misinformation, disinformation and fake news are part of our daily informational environment, especially on digital media, it is important to assess the extent to which migration-related information will be affected and affect migrants. Future research should also examine how fake news and misinformation are perceived and whether they lower trust in the use of ICTs in the migration context, and how significant global events, such as the Coronavirus (COVID-19) pandemic may exacerbate these problems and perpetuate or exaggerate inequalities. Fake news and misinformation are becoming rampant, and in times of uncertainty and when lawful paths to international migration become limited, this may have serious negative implications for migrants. Whether ICTs prove a blessing or a bane in such circumstances needs further exploration.

## REFERENCES

- Ahn, T. K., and Ostrom, E. (2009). 'The meaning of Social Capital and its link to Collective Action', in D. Castiglione, R.F. Van Baumeister and M.R. Leary (eds), *Handbook of Social Capital: The Troika of Sociology, Political Science, and Economics*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing, pp. 17–35.
- Arun, S., R. Heeks and S. Morgan (2006), 'Improved livelihoods and empowerment for poor women through IT-sector intervention', in Nancy Hafkin and Sophia Huyer (eds), *Cinderella or Cyberella? Empowering Women in the Knowledge Society*, Bloomfield, CT: Kumarian Press, pp. 141–64.
- Baron, L. F., and R. Gomez (2017), 'Living in the limits: Migration and information practices of undocumented Latino migrants', in *Proceedings of the International Conference on Social Implications of Computers in Developing Countries (ICT4D 2017)*, Cham: Springer, pp. 147–58.
- Bates, J., and L. Komito (2012), 'Migration, community and social media', in G. Boucher, A. Grindsted and T. L. Vicente (eds), *Transnationalism in the Global City*, University of Deusto, pp. 97–112.
- Benitez, J. L. (2006), 'Transnational dimensions of the digital divide among Salvadoran immigrants', *Global Networks*, 6 (2), 181–99.
- Benítez, J. L. (2012), 'Salvadoran transnational families: ICT and communication practices in the network society', *Journal of Ethnic and Migration Studies*, 38 (9), 1439–49.
- Blanchard, A., and T. Horan (2000), 'Virtual communities and social capital', in G. David Garson (ed.), *Social Dimensions of Information Technology: Issues for the New Millennium*, Hershey, PA: Idea Group Publishing, pp. 6–22.
- Bourdieu, P. (1986), 'The forms of capital', in J. G. Richardson (ed.), *Handbook of Theory and Research for the Sociology of Education*, New York, NY: Greenwood Press, pp. 241–58.
- Castiglione, D. (2008), 'Introduction: Conceptual issues in social capital theory', in D. Castiglione, Jan W. V. Deth and G. Wolleb (eds), *The Handbook of Social Capital*, Oxford University Press on Demand, pp. 13–21.
- Cederberg, M. (2012), 'Migrant networks and beyond: Exploring the value of the notion of social capital for making sense of ethnic inequalities', *Acta Sociologica*, 55 (1), 59–72.
- Chen, W., and A. S. K. Choi (2011), 'Internet and social support among Chinese migrants in Singapore', *New Media & Society*, 13 (7), 1067–84.
- Clark, L. S. (2003), 'Challenges of social good in the world of Grand Theft Auto and Barbie: A case study of a community computer center for youth', *New Media & Society*, 5 (1), 95–116.
- Davis, B., G. Stecklov and P. Winters (2002), 'Domestic and international migration from Rural Mexico: Disaggregating the effects of network structure and composition', *Population Studies*, 56 (3), 291–309.
- Dekker, R., and G. Engbersen (2014), 'How social media transform migrant networks and facilitate migration', *Global Networks*, 14 (4), 401–18.
- Dobbs, L. (2006), *War on the Middle Class: How the Government, Big Business, and Special Interest Groups are Waging War on the American Dream and How to Fight Back*. New York, NY: Viking.
- Durlauf, S. N. (1999), *The Case 'against' Social Capital*. Social Systems Research Institute, University of Wisconsin.
- Ericksen, E. and W. Yancey (1977), 'The Locus of Strong Ties', Unpublished manuscript, Department of Sociology, Temple University.
- Eve, M. (2010), 'Integrating via networks: Foreigners and others', *Ethnic and Racial Studies*, 33 (7), 1231–48.
- Fall, A. S. (1998), 'Migrants' long-distance relationships and social networks in Dakar', *Environment and Urbanization*, 10 (1), 135–46.

- Favell, A. (2015), 'Migration Theory rebooted? Asymmetric challenges in a global agenda', in C. B. Brettell and J. F. Hollifield (eds), *Migration Theory: Talking across Disciplines*, London: Routledge, pp. 373–84.
- Fisher, K. E., and C. M. Naumer (2006), 'Information grounds: theoretical basis and empirical findings on information flow in social settings', in A. Spink and C. Cole (eds), *New Directions in Human Information Behavior*, Dordrecht, Netherlands: Springer, pp. 93–111.
- Frouws, B., M. Phillips, A. Hassan and M. Twigt (2016), 'Getting to Europe the WhatsApp way: the use of ICT in contemporary mixed migration flows to Europe', *Regional Mixed Migration Secretariat Briefing Paper*.
- Funk, M. (2019), 'How ICE picks its targets in the surveillance age', *New York Times Magazine*, Oct. 2. At [https:// www .nytimes .com/ 2019/ 10/ 02/ magazine/ ice -surveillance -deportation .html](https://www.nytimes.com/2019/10/02/magazine/ice-surveillance-deportation.html) (accessed on 13 August 2021).
- Garip, F. (2008), 'Social capital and migration: How do similar resources lead to divergent outcomes?' *Demography*, 45 (3), 591–617.
- Germann Molz, J. and C. M. Paris (2015), 'The social affordances of flashpacking: Exploring the mobility nexus of travel and communication', *Mobilities*, 10 (2), 173–92.
- Gomez, L., R. Gomez and S. Vannini (2017), 'The power of Participatory Photography in ICTD programs: Freedom to explore beyond images', in *Proceedings of the 50th Hawaii International Conference on System Sciences*, pp. 2600–609.
- Gomez, R. (2016), 'Vulnerability and information practices among (undocumented) Latino Migrants', *Electronic Journal of Information Systems in Developing Countries (EJISDC)*, 75(1), 1-43.
- Gomez, R. and S. Vannini (2015), *Fotohistorias: Participatory Photography and the Experience of Migration*. Charleston, SC: CreateSpace.
- Gomez, R. and S. Vannini (2017), 'Notions of home and sense of belonging in the context of migration in a journey through participatory photography', *Electronic Journal of Information Systems in Developing Countries (EJISDC)*, 78(1), 1–46.
- Gomez, R., B. C. Newell and S. Vannini (2020), 'Empathic humanitarianism: Understanding the motivations behind humanitarian work with migrants at the US–Mexico border', *Journal on Migration and Human Security*. Early view online at [https:// doi .org/ 10 .1177/ 2331502419900764](https://doi.org/10.1177/2331502419900764).
- Goodman, J. (2003), *Mobile Telephones and Social Capital in Poland: Summary of a Case Study with Vodafone*, Forum for the Future.
- Granovetter, M. S. (1973), 'The strength of weak ties', *American Journal of Sociology*, 78 (6), 1360–80.
- Guilmoto, C. and F. Sandron (2001), 'The internal dynamics of migration networks in developing countries', *Population: An English Selection*, 13 (2), 135–64.
- Hamel, J. Y. (2009). Information and communication technologies and migration: Human Development Research Paper 2009/39, United Nations Development Programme. At [https:// mpra .ub .uni - muenchen .de/ 19175/ 1/ MPRA paper 19175 .pdf](https://mpra.ub.uni-muenchen.de/19175/1/MPRA_paper_19175.pdf) (accessed on 13 September 2021).
- Haug, S. (2008), 'Migration networks and decision making', *Journal of Ethnic and Migration Studies*, 34 (4), 585–605.
- Heering, L., R. V. Erf and L. V. Wissen (2004), 'The role of family networks and migration culture in Moroccan emigration', *Journal of Ethnic and Migration Studies*, 30 (2), 323–37.
- Horst, H. (2006), 'The blessings and burdens of communication: Cell phones in Jamaican transnational social fields', *Global Networks*, 6 (2), 143–59.
- Huntington, S. P. (2004), *Who Are We: The Challenges to America's National Identity*. New York, NY: Simon & Schuster.
- International Organization for Migration [IOM] (2005), 'International migration, development and the information society', Geneva: World Summit on the Information Society. At [http:// www .itu .int](http://www.itu.int) (accessed on 5 January 2020).
- King, R. and N. Wood (2001), *Media and Migration: Constructions of Mobility and Difference*, London: Routledge.

- Kissau, K. (2012), 'Structuring migrants' political activities on the internet: A two-dimensional approach', *Journal of Ethnic and Migration Studies*, 38 (9), 1381–403.
- Kozachenko, I. (2013), 'Horizon Scanning Report: ICT and Migration', *Working Papers of the Communities & Culture Network+*, 2 (October). At [http:// 2plq yp1e0nbi44 cllfr7pbor .wpengine .netdna -cdn .com/ files/ 2013/ 01/ ICT -and -Migration -Kozachenko .pdf](http://2plqyp1e0nbi44c1lfr7pbor.wpengine.netdna-cdn.com/files/2013/01/ICT-and-Migration-Kozachenko.pdf) (accessed on 13 September 2021).
- Larsen, J. and J. Urry (2008), 'Networking in mobile societies', in J. O. Bærenholdt and B. Granas (eds), *Mobility and Place: Enacting Northern European Peripheries*, Aldershot: Ashgate, pp. 89–101.
- Madianou, Mirca (2014), 'Smartphones as polymedia', *Journal of Computer-Mediated Communication*, 19, 667–80.
- Mahler, S. J. (2001), 'Transnational relationships: The struggle to communicate across borders', *Identities*, 7 (4), 583–619.
- Manski, C. F. (2000), 'Economic analysis of social interactions', *Journal of Economic Perspectives*, 14(3), 115–36.
- Massey, D. S. (2005), 'Backfire at the border: Why enforcement without legalization cannot stop illegal immigration', Trade Policy Analyses no. 29, Washington, DC: Centre for Trade Policy Studies, Cato Institute, 13 June.
- Massey, D. S. and M. Aysa-Lastra (2011), 'Social capital and international migration from Latin America', *International Journal of Population Research*, art. 834145, 1–18. [https:// doi .org/ 10 .1155/ 2011/ 834145](https://doi.org/10.1155/2011/834145).
- Massey, D. S., J. Durand and N. J. Malone (2002), *Beyond Smoke and Mirrors: Mexican Immigration in an Era of Economic Integration*, New York, NY: Russell Sage Foundation.
- Massey, D. S., J. Arango, G. Hugo, A. Kouaouci, A. Pellegrino and J. E. Taylor, *Worlds in Motion: International Migration at the End of the Millennium*, Oxford: Oxford University Press.
- Newell, B. C. and R. Gomez (2015), 'Informal networks, phones and Facebook: Information seeking and technology use by undocumented migrants at the U.S.-Mexico border', in *iConference 2015 Proceedings*, 1–11. At [http:// hdl .handle .net/ 2142/ 73434](http://hdl.handle.net/2142/73434) (accessed on 13 September 2021).
- Newell, B. C., R. Gomez and V. Guajardo (2016), 'Information seeking, technology use, and vulnerability among migrants at the United States–Mexico border', *The Information Society*, 32(3), 176–91.
- Newell, B. C., R. Gomez and V. Guajardo (2017), 'Sensors, cameras, and the new “normal” in clandestine migration: How undocumented migrants experience surveillance at the US-Mexico border', *Surveillance & Society*, 15 (1), 21–41.
- Newell, Bryce Clayton, Sara Vannini, and Ricardo Gomez (forthcoming). *The Information Practices and Politics of Migrant-Aid Work in the US–Mexico Borderlands*.
- Palloni, A., D. Massey, M. Ceballos, K. Espinosa and M. Spittel (2001), 'Social capital and international migration: A test using information on family networks', *American Journal of Sociology*, 106, 1262–98.
- Panagakos A. N. and Horst, H. A. (2006), 'Return to Cyberia: Technology and the social worlds of transnational migrants', *Global Networks*, 6 (2), 109–24.
- Poot, J. (1996), 'Information, communication and networks in international migration systems', *The Annals of Regional Science*, 30 (1), 55–73.
- Portes, A. and J. Sensenbrenner (1993), 'Embeddedness and immigration: Notes on the social determinants of economic action', *American Journal of Sociology*, 98(6), 1320–50.
- Proulx, Serge (2008), 'Des nomades connectés: Vivre ensemble à distance', *Hermès, La Revue* 51 (2), 155–60.
- Putnam, R. (2000), *Bowling Alone*, New York, NY: Simon & Schuster.
- Riccio, B. (2006), '"Transmigrants" mais pas "nomads": Transnationalisme mouride en Italie' ("Transmigrants" but not "Nomads". Mouride transnationalism in Italy), *Cahiers d'études Africaines*, 46 (181), 95–114.

- Ros, A., E. Gonzalez, A. Marin and P. Sow (2007), 'Migration and information flows: A new lens for the study of contemporary international migration', Barcelona: Internet Interdisciplinary Institute.
- Rouse, R (1995), 'Questions of identity: Personhood and collectivity in transnational migration to the United States,' *Critique of Anthropology*, 4, 351–80.
- Ryan, L., R. Sales, M. Tilki and B. Siara (2008), 'Social networks, social support and social capital: The experiences of recent Polish migrants in London', *Sociology*, 42 (4), 672–90.
- Schapendonk J, and Van Moppes D (2007), *Migration and Information: Images of Europe, migration encouraging factors and en route information sharing*. Nijmegen: Radboud University Nijmegen.
- Schaub, M. L. (2012), 'Lines across the desert: Mobile phone use and mobility in the context of trans-Saharan migration', *Information Technology for Development*, 18 (2), 126–44.
- Schroeder, S. (2015), 'Refugees in Croatia can't get to the internet, so the internet comes to them', *Mashable*, 21 September. At [https:// mashable .com/ archive/ mobile -free -internet -refugees](https://mashable.com/archive/mobile-free-internet-refugees) (accessed on 8 August 2021).
- Solow, R. M. (2000), 'Notes on social capital and economic performance', in P. Dasgupta and I. Serageldin (eds), *Social Capital: A Multifaceted Perspective* (pp. 3–5). Washington, DC: The World Bank.
- Tilly C. (1990), 'Transplanted networks', in V. Yans-MacLoughlin (ed.), *Immigration Reconsidered*, New York, NY: Oxford University Press, pp. 79–95.
- Vannini, S., R. Gomez and B. C. Newell (2016), "'Mind the Five': Guidelines for data privacy and security in humanitarian work with undocumented migrants and other vulnerable populations', *Journal of the Association for Information Science and Technology* (JASIS&T). Early view online at [https:// doi .org/ 10 .1002/asi .24317](https://doi.org/10.1002/asi.24317).
- Vannini, Sara, Ricardo Gomez and Bryce Clayton Newell (2020). "Mind the five": Guidelines for data privacy and security in humanitarian work with undocumented migrants and other vulnerable populations, *Journal of the Association for Information Science & Technology* 71 (8), 927–38.
- Vannini, Sara, Ricardo Gomez and Veronica Guajardo (2016), 'Security and activism: Using participatory photography to elicit perceptions of information and authority among Hispanic migrants in the U.S.', in *Proceedings of 2016 iConference*, 1–10. doi: 10.9776/16279. At [http:// hdl .handle .net/ 2142/89319](http://hdl.handle.net/2142/89319) (accessed on 13 September 2021).
- Wilding, R. (2006), "'Virtual" intimacies? Families communicating across transnational contexts', *Global Networks*, 6 (2), 125–42.
- Yefimova, K., M. Neils, B. C. Newell and R. Gomez (2015), 'Fotohistorias: Participatory photography as a methodology to elicit the life experiences of migrants', in *Proceedings of the 48th Annual Hawaii International Conference on System Sciences (HICSS)*, 3672–81.
- Zijlstra, J. and Liempt, I. V. (2017), 'Smart (phone) travelling: Understanding the use and impact of mobile technology on irregular migration journeys', *International Journal of Migration and Border Studies*, 3 (2–3), 174–91.