Computer-mediated information and communication practices of resettled refugees in New Zealand

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1 EXECUTIVE SUMMARY

This report presents the findings of a study on the use of information and communication technology (ICT) by a sample of 53 beneficiaries of the *Computer in Homes – Refugee Programme* in Auckland, Hamilton, Nelson and Palmerston North. Under the assumption that social inclusion of refugees is an information problem, this study analyses how they enact technology-mediated information and communication practices in dealing with the everyday challenges they face in a new information environment. Such practices are categorised into three modes:

- Orienting practices involve monitoring information sources for information about daily events or with which to orient oneself to an unfamiliar environment.
- Instrumental practices involve actively seeking and using information to make sense of a problematic situation, solve a specific problem or perform a particular task.
- Expressive information practices reflect the social and communicative dimensions of everyday information practices, particularly the sharing of information among individuals or in social networks and informal support networks.

As refugees move between multiple and overlapping contexts in their everyday lives, their enactment of these practices contributes to their social inclusion in a contemporary information society as the one that characterises New Zealand. Further, refugees' technology-mediated information and communication practices are variously oriented towards the present, past and future.

2 INTRODUCTION

The *Computer in Homes – Refugee Programme* constitutes an instance of an ICT initiative aiming at improving people's living conditions – i.e., development. In a broader sense, development is about producing personal fulfilment on the individual. This conceptualisation of development has two conceptually and practically interrelated implications. First, it recognises the need for certain social arrangements to be in place for the betterment of the individual. These social arrangements represent what a particular society, in this case the New Zealand society, offers to its members. Second, it recognises that it is the individual who ultimately makes decisions, within the constraints of the existing social arrangements, on the course of action for their betterment.

Understanding how the *Computer in Homes – Refugee Programme* can realise the developmental promise requires recomposing the invisible elements of computer-mediated information. Information and communication practices provide the conceptual tools to understand how ICT is interpreted and used in a particular context.

Figure 1: Computer in Homes – Refugee Programme training session at the Waikato Migrant Resource Centre in Hamilton

3 INFORMATION AND COMMUNICATION PRACTICES

Information and communication practices are not only a response to information needs triggered by problematic situations encountered in everyday life. Information and communication practices are also social undertakings, so that the context and social interactions within which information seeking, use and sharing take place play an important role in orienting and shaping people's behaviours in this regard. In the analysis of how individuals interpret their experience in problematic situations, it is important to understand the time-space-bound context with an emphasis on the role of the receiver of information in the information exchange. Of particular relevance to this study are information and communication practices in which the use of ICT gives individuals of refugee background the opportunity to have control their circumstances.

At a fundamental level, information is an essential tool that helps individuals cope with their lives. In everyday contexts, individuals seek, use and share information in more or less established ways, which are called information practices. These practices include identifying and accessing preferred information sources, evaluating and filtering information, incorporating relevant information in sense-making or knowledge construction, using information to further a particular action, or giving and receiving information.

Three modes of information practices are particularly relevant to this report: orienting, instrumental and expressive. This is an analytical distinction; in practice, the three modes are often intertwined and the boundaries between them blurred. Orienting information practices involve scanning or monitoring information sources for information about everyday events or with which to orient oneself to a new or unfamiliar environment. Such practices can be more or less directed, ranging from active scanning of information sources considered likely to be useful, to non-directed monitoring of information sources, such as reading a daily news report, browsing the Internet, or routinely checking email.

Instrumental information practices involve actively seeking and using information to make sense of a problematic situation, solve a specific problem or perform a particular task. Such practices are likely to be episodic in nature and vary in duration depending on the characteristics of the situation, problem or task. Expressive information practices reflect the social and communicative dimensions of everyday information practices, particularly the sharing of information among individuals or in social networks and informal support networks. The expressive dimension of information practices underscores how information and communication are intimately related. It is the latter what makes possible the exchange of information.

The focus of the findings explained in this report is on information and communication practices mediated by ICT. At its core, ICT allows the storage, processing and transmission of data by executing a set of instructions in the form of algorithms embedded in or accessed by the machine. Their programmable features make ICT tools logically malleable. From a user perspective, the inherent characteristics of ICT tools both constrain and enable opportunities for action. On the one hand, ICT constrains opportunities for action because users have no capacity to change certain properties of computer devices. For instance, using electronic mail functionality requires typing the recipient's email address. On the other hand, ICT

enables opportunities for action because users can perform actions that would not be possible without computer technology. For instance, it is possible to take a digital photograph and share it nearly instantaneously with others located anywhere using mobile computing devices connected to digital networks.

The effects of ICT go beyond technical characteristics of any specific device. Since ICT tools are always embedded in an existing social system, they are shaped by social practices. This social embeddedness of ICT calls for an understanding of the degree of malleability of technology. In this particular case, the relatively low-end computer technology set-up provided to the *Computer in Homes – Refugee Programme* participants has a high degree of malleability that offers multiple potential uses in their everyday lives. The computer technology they were given access to mediates many of the information and communication practices they perform in order to navigate an unfamiliar and challenging information environment, establish themselves in their host country and participate in their new communities. Essentially, ICT creates a new ecology of relations, where information becomes the central element. Computer-generated, -processed, -stored and -communicated information continuously transcends local boundaries producing a multiplier effect. Therefore, the context-embedded factors within which technology-mediated information and communication practices are conducted are continuously being reshaped by context-transcending factors carried by information exchange.

Given the strong temporal dimension to the journeys that the refugees have experienced, their dislocation from familiar contexts and their relocation and transition to a new and unfamiliar environment, it is particularly relevant to understand how their information and communication practices are influenced by their immediate needs in the present, their past experiences and how they imagine future alternative possibilities.

4 BACKGROUND INFORMATION

Participants in this study are individuals of refugee background from different parts of the world that may have different cultural backgrounds and refugee back-stories. However, they all share the experience of having resettled in New Zealand. New Zealand consistently ranks high in terms of human development index (HDI) – it was sixth in the world with an HDI score of 0.919 in 2012 (UNDP, 2013). This situation provides an interesting context in which to examine how technology-mediated information and communication practices contribute to social inclusion while adjusting to a new life. By way of comparison, Table 1 shows the HDI scores of the countries of origin of those refugees who participated in this study: Bhutan[1], Burma, Colombia, Democratic Republic of Congo, Eritrea, Ethiopia, Iraq and Rwanda.

Table 1: Participants' country of origin's human development index

Countries of origin	HDI (2012)
Colombia	0.719
Iraq	0.590
Bhutan	0.538
Burma	0.498
Rwanda	0.434
Ethiopia	0.396
Eritrea	0.351
Democratic Republic of Congo	0.304

The contrasting living conditions between New Zealand and the participants' countries of origin have not gone unnoticed. Participants not only highlighted the material progress they witness in their host country (e.g., roads, hospitals, schools) but also the less tangible aspects of a stable democracy and largely tolerant society, characterised by a high sense of fairness and respect for human rights. "When I came here, I found peace" says one, while a couple stresses, "After we came to New Zealand, we learned the true meaning of human life because we are respected". For most of the participants, their political liberties and opportunities for economic development were seriously curtailed in their countries of origin. For some, leaving their countries was simply a matter of survival.

There is a general feeling of appreciation for the support that the participants receive from government agencies. One participant says, "I am happy for my children; they can go to school [here]", while another remarks: "Here we have the opportunity to study at our age". The sentiment of gratefulness also extends to the charitable organisations and individuals who "give [them] a lot of support". One participant explains, "When I… looked inside my [new] house, it was a surprise… It got everything like, bed, TV, sofa… I cried". With regard to computer technology, all participants express their satisfaction at having their children learning how to use it – e.g., computerised educative games for learning mathematics and English, and

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[1] The refugees from Bhutan, known as Lhotshampas, are of Nepalese extraction. In the 1990s, interethnic conflicts forced the Lhotshampas out of Bhutan, with some 100,000 people ending up in refugee camps in eastern Nepal. They were never recognised as Nepalese citizens.

computer technology in general for completing school homework. They believe that not having access to this technology would make their children's lives harder.

However, no matter the infrastructure and social services that New Zealand has to offer, entering it as a refugee is not a trouble-free experience. All participants had to leave their belongings (if any), dreams, stories, friends and families behind to resettle in a new and unfamiliar environment. While the assistance they receive from government agencies, charitable organisations and individuals is intended to make the resettlement process smooth, their transition into a new country imposes serious challenges. The experience of one participant, who is multilingual and had a past successful career as an Olympic swimmer, illustrates the difficulties refugees face:

> *I had a good job, good money and good life in Sudan [where he stayed for a few years while awaiting the UNCHR decision to relocate him to a definite country]… I got an eight-day notice before traveling to New Zealand with my family… I was confused, afraid… It is about starting all over again". He then became frustrated because he spent "three years doing nothing, just laid on the couch all day… very stressful experience.*
>
> *Girma, an Eritrean refugee*

He attributes his somewhat limited English-speaking ability as the root cause of his lack of opportunities for realising his potential in New Zealand. Certainly, above all, language represents the major barrier for many participants. For instance, while in their countries of origin they used to approach government agencies whenever they needed to, New Zealand largely operates under a system of appointments, which are mainly made on the telephone. This practice, intended to simplify an everyday life activity, imposes a stressful experience on the new arrivals, who lack the confidence to have a conversation in English.

5 METHODOLOGY

The participants in this study represent an intentionally sought sample because of the exceptional circumstances they face as resettled refugees and beneficiaries of the *Computers in Homes* initiative. The purposive sampling strategy was intended to capture the participants' trajectories following the forced displacement. Participants received the computer-training course offered by the *Computer in Homes – Refugee Programme* at different stages: most did it within three years of their arrival, although three did the training six years after entering New Zealand.

In-depth, face-to-face interviews were conducted with the participants between July 2012 and July 2013 in four different locations: Auckland, Hamilton, Nelson and Palmerston North. In total, 53 people participated in 39 interview sessions – including one group interview with three participants and a follow up interview with one participant. The interviews lasted between 20 minutes and 1.5 hours, depending on the richness of the data offered by the participant and the difficulties represented by interviewing people whose first language was other than English. Table 2 shows the locations, number of participants and their country of origin along with the number of interview sessions in brackets.

Table 2: Participants by location and country of origin

| Location	Participants	Country of origin
Auckland	12	Burma (3), Congo (3), Eritrea (2), Ethiopia (2), Iraq (1), Rwanda (1)
Hamilton	3	Burma (2), Colombia (1)
Nelson	21	Burma (11), Bhutan (10)
Palmerston North	17	Burma (9), Palmerston North (8)

The interviews were conversational in nature. Indeed, in at least nine instances, the interaction with the participants was closer to a family conversation since the interviewees' spouses – and sometimes their children – were directly involved in the discussion, and everyone shared their experiences about using computers in a congenial way. The interview sessions were conducted in English, except for one that was conducted entirely in Spanish. Six interview sessions required the assistance of an interpreter for the length of the interview – including the group interview. In five other cases, family members – usually participants' children – helped in translating specific explanations that participants found hard to express in English.

During the interviews, participants were encouraged to talk freely about their experience of settlement in New Zealand, their use of computer technology for addressing information and communication needs and the perceived benefits of ICT use in their new life. An effort to capture the nuances of their statements was made by probing the participants with more questions in order to assess the meaning of their narratives. In addition, the interviews also served to collect some demographic information – i.e., household composition, level of education and current activity. At the time of the fieldwork, most participants were employed in diverse occupations (e.g., store operator, government officer, housekeeper,

interpreter, gardener, checkout operator), while others were studying – mainly English; ten were unemployed.

Interviews were conducted at various locations in order to accommodate participants' preferences. Twenty-four interviews were conducted at the participants' houses, 11 at a local school and two at a community centre. Two interviews took place in public arenas. Figure 2 depicts a welcome message written in different languages on a whiteboard at Victory Primary School in Nelson. Most interviews were audio-recorded. One participant did not agree to be recorded and in five other cases it was deemed that introducing a recorder would hamper the natural flow of the conversation. In these cases, hand-written notes were taken.

Figure 2: Welcome message to the researcher at Victory Primary School
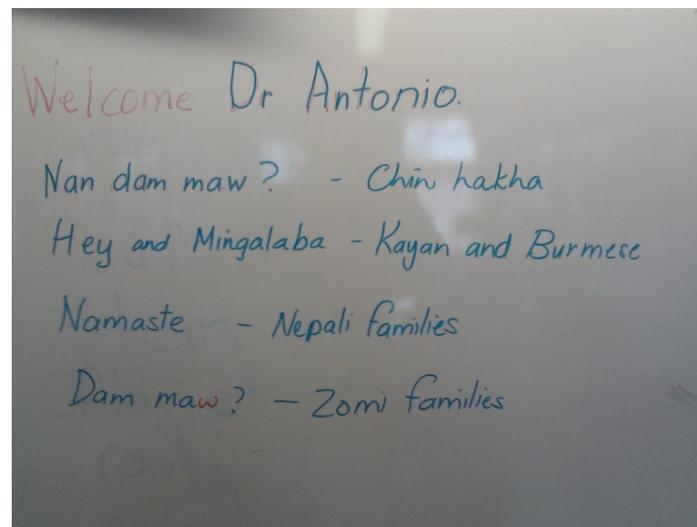
The interview notes and audio-recordings were uploaded into a software package as the data collection progressed. Data collection and data analysis were conducted iteratively. Data were thematically analysed to identify emergent patterns in the participants' interpretation and use of computer technology. After data collection and the initial thematic analysis were completed, the participants' reported technology-mediated information and communication practices were mapped against their temporal orientations.

Special attention was paid to the social context in which the participants' technology-mediated information and communication practices were performed. The participants' previous familiarity with computer technology varied considerably, which can be roughly classified into three levels: no experience at all, some experience and a high degree of expertise. Two participants that were semi-illiterate and had never touched a computer before the training course belong to the first group. Participants that had some experience with computers, largely limited to using email, are part of the second group. The participants with the highest level of computer expertise hold university degrees or had computer training because of their previous job responsibilities.

In general, participants express their overall satisfaction with computer technology. Those who lacked much computer expertise before the training provided by *Computer in Homes* are especially proud of their

newly acquired abilities. In most cases, the computer provided upon completion of the training course occupies a prominent position in the participant's house, for example, it sits on a desk in either the main living room or the dining room. Generally, a newer model has replaced the provided refurbished computer or additional computers have been acquired so that multiple family members can "learn how to use computers" or "explore and learn new things". In those households where the first year of paid broadband had already expired, individual arrangements were made in order to maintain the Internet access.

6 COMPUTER-MEDIATED INFORMATION AND COMMUNICATION PRACTICES

Participants' computer-mediated information and communication practices have been organised around three ones explained in Section 3 of this report: orienting, instrumental and expressive. These information and communication practices are influenced by their immediate needs in the present, their past experiences and how they imagine future alternative possibilities.

6.1 ORIENTING PRACTICES

Orienting technology-mediated information and communication practices entail actions taken to construct cognitive maps intended to cope with uncertain situations.

6.1.1 Managing in the present

Participants use computer technology for a range of orienting practices that assist them in transitioning and dealing with the immediate challenges of settlement in New Zealand. Often this involves establishing ways of monitoring everyday events using various information sources, such as watching Internet-based news, routinely checking email or scanning employment websites for job opportunities. Even though such practices may appear mundane, they reflect the development and deployment of capabilities around computer use that enable fuller participation in contemporary New Zealand society.

Some participants obtain information relevant to their new life in New Zealand by monitoring world news on the Internet in their mother tongue:

> *We basically can use anything in computers, such as… we can know the news from around the world. Even, on the news I learned the Burmese President was in New Zealand… I watch news every morning on the computer, so that I heard from there.*
>
> Kim, a Burmese refugee

For some participants, computer technology has become central to organising, planning and engaging with everyday activities in their new country:

> *I check my computer every night, every evening… It is just like my notebook, my diary… For example, I write how I did today… I talk about what happened… Every appointment, I put there… Or sometimes what things I have to try [the next day]… This is my everything… The computer is my notebook. All documents, I put there… I put everything in there… Sometimes I order Internet shopping… I use [an online bookshop]. Every time, they send me, 'This is a new book', or something like that… And everywhere, I give my email everywhere. That means [businesses], so they have a discount, you know, today-only discount, I get advertisement from them.*
>
> *Yamin, a Burmese refugee*

A commonly observed practice involves using the computer to learn about aspects of New Zealand culture and ways of life as well as how historical events shape current situations in their host country, as the following two cases exemplify:

You can go to Google and then you can see how you must stay here in New Zealand. How the life here in New Zealand, how Kiwis are… Just to show us how you can do the things that can help you, and then your life can be eased.

Cecile, a Congolese refugee

I learn a lot about Māori culture and New Zealand history. About European settlement in New Zealand [and] the way Māoris were living at that time. And tracking from there to this day, how the government system is operating, and how the Māoris are coping with the different situation.

Ganesh, a Bhutanese refugee

6.1.2   Looking to the past

Monitoring events in places that refugees have left behind (i.e., their countries of origin and the places where they stayed before being resettled in New Zealand) is a prevailing technology-mediated information and communication practice. For instance, Cecile reads Congolese-produced news online. Her reasoning describes how the use of ICT for keeping up to date contributes to maintaining emotional closeness to her home country: "We are here but still want to know what is going on in our countries… You miss your country… We pray for peace in our country". Indeed, For example, one Burmese participant of Chin ethnicity is subscribed to an email list because he wants to "know what is happening in my village".

The use of technology-mediated information and communication for monitoring the environment in the participants' home countries contribute to alleviating their burden of forced displacement. Online social network is one of the tools they resort for monitoring the environment, as illustrated in the following example:

Because you can find people you have not seen for a long time… Friends who ran [away]. It is good because you were running [away together], you know all those things… Maybe this person was killed or maybe is still alive… When you type her name on Facebook, you find her, and you say [with a tone that exudes relief], 'Oh, she is still alive!'

Cecile, a Congolese refugee

6.1.3   Envisioning the future

Individuals that have been resettled in New Zealand are trying to identify the patterns that govern events in their host country in order to conceive a life plan under new circumstances. The case of Bijay, a Bhutanese married man in his 30s who lived in a refugee camp in Nepal for 19 years before entering New Zealand in early 2011, is illustrative. He says he reads the news online "in both Nepali and English to learn more English". Not only is Bijay trying to keep up to date with the current affairs in Nepal, which has an iterative element of agency, but he is also making the effort to read the same content in his mother tongue

and the language of his host country in order to improve the latter. This is suggestive of an intention to become more integrated into the New Zealand society.

Ganesh provides another example of monitoring practices oriented to the future. He explains how, by using computer technology, he explores future housing options for his family: "We are trying to find the house that is suitable to us… but have not got one yet". He elaborates that this search is not for the immediate future. He scans the current house market using the Internet to be informed and prepared for when he is ready to buy a house.

Both Bijay's and Ganesh's future-oriented practices reveal how technology-mediated information and communication practices of this nature contribute to the integration of forced resettled people in a new country.

6.2 INSTRUMENTAL PRACTICES
Instrumental technology-mediated information and communication practices are performed with the intention to solve a specific problematic situation.

6.2.1 Managing in the present
The participants of this study use computer technology in a variety of ways to solve immediate problems or perform specific tasks. Often these involve everyday tasks such as making a doctor's appointment, contacting a child's teacher about a school related issue, or finding the address and directions for a service provider. Email is a common solution to everyday communication tasks.

> *Here [in New Zealand], wherever you go, they say, 'Do you have an email address? Give us your email address'*
>
> *Raheem, an Iraqi refugee*

Internet banking, paying bills online, online shopping and filing tax returns online are other examples of instrumental technology-mediated practices that the participants perform on a daily basis. The case of a married Bhutanese couple with a young family is illustrative:

> *[We email] service providers like the community nurse, GP sometimes, banking staff… and others who sometimes ask us to do some help [as interpreters] and we reply them by email… [Also] like Internet banking. And we pay our power bill and other bills online. We do that.*
>
> *Shristi, a Bhutanese refugee*

> *The reason for me… using the computer to write email is if I have to explain to you an issue, you may not be able to understand all my pronounces and all my accent [sic], you know. If I put it down in [an email] I will be able to make you understand what I am going to tell you. So, it is easier… If I have to ring up, say, IRD… it is very, very certain that they do not understand, I do not understand. You know, some Kiwis, they have very, very strong accent, and they will not be able to explain it.*
>
> *Bibek, a Bhutanese refugee (Shristi's husband)*

Some others explain the benefit of the combined use of Internet search engines and email in making their lives easier in an unfamiliar environment:

> *We can just use [the computer] for different purposes. For example, we sometimes get invited… to attend a meeting. We do not know where that place is, so we Google and find out the address and direction, how to reach there. This is a very important part, yeah. And sometimes if I do not know anything, I start Googling and finding all the information, how to do the things. For example, if you want to know the office of some of the agencies… and we email and make appointment.*
>
> *Prem, a Bhutanese refugee*

Other problems may relate more specifically to a refugee's situation, such as trying to interact with others on an everyday basis in an unfamiliar language while transitioning into a new country:

> *When I do not know how to express, how to write it in English, I use the Arabic keyword and translate it with the Google translator into English… My writing is not very good. I try to write a lot. There is a program on this computer, which the government provided to us, that teach you how to write [in English].*
>
> *Raheem, an Iraqi refugee*

Similarly, the use of websites to help students complete their homework from school is another benefit refugees get from computers:

> *When I got some worksheet from school… there is a new website… If I am reading a sheet and I do not understand some words you go type them on that website and they give you a definition. It is just like a dictionary, but they give me like more understanding of things.*
>
> *Armand, a Congolese refugee*

6.2.2 Looking to the past

Equally important are the technology-mediated information and communication practices that address a specific need with intense consequences in the present but heavily anchored in the past. One participant provides a powerful illustration of how her information-seeking endeavours are influenced by the pressing need to find the whereabouts of her loved ones, who disappeared when one of the various belligerent groups in her native Congo raided her house:

> *I ran [away] from my country. I lost my husband… I do not know whether he was killed or not… My parents… Because I had to run, I do not know if they are still alive or… if they have been killed… I [keep] asking and asking.*
>
> *Cecile, a Congolese refugee*

The material comfort (e.g., housing, income) and social support (e.g., education and health services) that New Zealand provides are not enough to assuage her anxiety for her missing ones. In this sense, her use of ICT offers a vehicle that could eventually contribute to bringing her anxiety due to past misfortunes to a closure.

Participants also engage in technology-mediated information and communication practices for addressing everyday problematic situations, which arise in the present but the participants' behaviour is undoubtedly shaped by their past experiences. A common occurrence is actively seeking information on a specific event in the country of origin, as illustrated in the following example:

> *Sometimes something is happening. Like, in Nepal, the last couple of weeks, there has been big flooding… In our community, someone said this is happening in Nepal. So, I go and watch it [on the Internet].*
>
> *Dipendra, a Bhutanese refugee*

Another rather mundane example is the action of using the computer technology to look up ethnic recipes from country of origin on the Internet. This is an instance of how technology-mediated instrumental practices contribute to maintaining cultural identity by facilitating the participants to relate to and connect with their past contexts, while the addressing the demands of quotidian life.

6.2.3 Envisioning the future

Participants do not imagine future scenarios in a vacuum. These future scenarios are invariably grounded in a concrete, somewhat problematic, current social reality; that is, conspicuous everyday challenges that will contribute to resolving an anticipated situation in the future. Such expectations shape the future-oriented instrumental technology-mediated information and communication practices of some participants. For example:

> *I taught my wife how to use computers, set up an email account, use email, go to supermarket websites… [so] we can… become more integrated to the New Zealand society.*
>
> *Raheem, an Iraqi refugee*

Other participants anticipate that developing capabilities in computer use will make them more employable or help them set up their own businesses. Many participants are happy that their children are learning to use the computer technology as they believe this will better prepare them for a future life in New Zealand. For example, one of them emphasises how important the opportunity is for his children to develop familiarity and skills with computer technology:

> *Our children started learning through computers from a young age, so they are able to stay at the same level as people from other parts of the world. They are able to catch up with the latest technology. It is important.*
>
> *Nabin, a Bhutanese refugee*

6.3 EXPRESSIVE PRACTICES

While mindful of their new environment, the trauma of having been forced to leave their countries of origin – in many cases, in a rather abrupt and violent way – spurs the refugees' need to reaffirm who they are. In this sense, they engage in technology-mediated information and communication practices to connect to express their cultural identity.

6.3.1 Managing in the present

Expressive technology-mediated information and communication practices are often exhibit when participants maintain communication with other members of a particular ethno-cultural group in New Zealand. These practices may serve the purpose of informal social communication or be more directed towards maintaining a social or support network. For instance, producing the community newsletter using MS Publisher® and distributing it in hardcopy to community members, while recognising the increasing adaptation of his community to digital communication in New Zealand:

> *I do some community jobs also here, in the community. I am on the committee… of the Bhutanese Society. I prepare documents. I do the newsletter… I make hard copy and post it. We are looking forward to send it through by digital means, by email… because in New Zealand everything is going to be digital!… Community updates… and everything we have done, what we are doing, what committees are doing. And what things are going around, and some work of people, like pieces of writing.*
>
> *Nabin, a Bhutanese refugee*

Religious expression was also an important mechanism for maintaining identity and giving and receiving emotional support. One participant, who is the religious leader for his community uses computer technology to produce and print church newsletters and distributing announcements by email.

6.3.2 Looking to the past

Participants use ICT as a vehicle for expressing their cultural identity and maintaining their ethno-cultural networks and transnational ties. Watching Nepalese or Nigerian movies, Burmese comedy, Rwandan or Ugandan television channels are just examples of the type of ethnic online media content that participants

access on a regular basis. Watching Burmese boxing or singing Kayan[2] karaoke are less common, but equally important, examples of ethnic online media content. In addition to content produced outside their host country, participants also engage in producing digital content for the local ethnic network – e.g., Bhutanese, Burmese and Congolese individuals subscribed to their community email list. These all represent expressive and communicative practices that contribute to maintaining cultural connections. How Habtamu, a semiliterate man in his 60s originally from rural Ethiopia, uses ICT for cultural consumption offers a particularly interesting case. Habtamu uses computer technology exclusively for watching Ethiopian videos in the Amharic language. Because of his inability to recognise the Latin characters that make the English alphabet, Habtamu has to rely on his children to type the URL of certain Ethiopian websites for him. These practices fulfil the need for cultural consumption and/or expression of individuals resettled in an environment whose cultural scene does not necessarily offer what they may need.

Technology-mediated information and communication practices also contribute to maintaining ethno-cultural networks and transnational ties anchored in the past. For example, Dipendra describes how he shares information that he obtains on events in his country of origin with others of his local Bhutanese community: "If it is important, if it is like, you know, the flooding or anything happening, that sort of news, I share the news with my friends, my community: 'This is happening in Nepal'". His wife, Ashmi, explains how such information is shared within the community, "We talk to one person and this one talks to another person, and then another person". This practice arguably contributes to the maintenance of a continued connection with their country of origin and the expression of a shared cultural identity.

The use of video-chat technology (e.g., Skype, Oovoo) is a common practice that reflects the need to maintain transnational ties and an emotional connection with loved ones left behind. The case of a woman, who seems to have been very well integrated into the New Zealand society since her arrival in 2007, after 10 years living as a refugee in a third country, illustrates this situation. Not only does she work for a government agency as an interpreter but she is also the mother of New Zealand baby, fruit of her relationship with her de facto New Zealand partner. She exudes excitement when describing the communication with her parents in Burma:

> *The website [supports video-chat, so…] we can talk and we can chat…*
> *My parents got Internet, they sit there and I sit here, and I watch*
> *them! You know, I watch them! But [I] cannot hear clearly what they*
> *say and they cannot hear me either, so I type and they read and type*
> *back. But I am happy to see them on video!*
>
> *Thi, a Burmese refugee*

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[2] Kayan is the language of the Kayan people, an ethnic minority of Burma.

6.3.3 Envisioning the future

The social dimension of future-oriented technology-mediated information and communication practices is equally important in the resettlement process for the participants, particularly in symbolising the expressive opportunity for social inclusion. An example of such a forward-looking practice is visualising the sharing of information to reinforce cultural or family identity by one participant, who plans to document his and his family's cultural and ethnic roots with the intention to preserve it for his descendants:

> *I would like to write something about my family story… If I were good at computers, I could create a website… Maybe my son can do it… So in the future, my grandson or granddaughter can read about it.*
>
> *Zaw, a Burmese refugee*

7 CONCLUSION

This study explains patterns of technology-mediated information and communication practices – i.e., orienting, instrumental and expressive – used by newly settled refugees in everyday situations in their host country, New Zealand. It reveals how individuals that have been forced to leave their countries of origin can enhance their opportunities to become active participants of the, economic, social, political and cultural life in their host country by enacting different technology-mediated information and communication practices. Certainly, a critical component of social inclusion in an information society is about developing the ability to identify, use and exchange the information needed for being autonomous individuals within the social groups to which we belong. In other words, it is about enhancing individual freedom in an environment where the production and transmission of information plays a central role. By not participating in the production and consumption of informational goods, individuals jeopardise their opportunities to be active participants in their communities.

In an unfamiliar information environment, technology-mediated information and communication practices contribute to the social inclusion of refugees in New Zealand. When the present circumstances are the predominant orientation, individuals resort to ICT in order to minimise the uncertainties of the unfamiliar environment they have to navigate. When past experiences shape technology-mediated information and communication practices, individual actions are focused on reaffirming and upholding their cultural identity. When imagined future scenarios influence technology-mediated information and communication practices, individual engagement with ICT is directed at preparing for forthcoming events. Collectively, these technology-mediated information and communication practices augment the opportunities for the individual to make informed and decisions and achieve the outcomes that they value. In this way, ICT becomes a means that allow individuals to live the lives that they value.

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