

EXPLORING PEACETECH PLATFORMS AND THEIR CONNECTION TO END USER EMPATHY

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Abstract

The use of technology for peacebuilding is not a novel phenomenon, yet the adoption of new technologies has not been as rapid as their development and integration in our daily lives. At the same time, there has been more and more research indicating that empathy is a key component of peace and increased empathy can lead to building longer lasting and sustainable peace. Moreover, there is proof that different technological platforms can be used to foster empathy. Combining the three areas of interest, this thesis aims to shed light on the current state of technology use for peacebuilding and whether peace technologies, or peacotech, can be used to enhance empathy.

This study was conducted as an exploratory, qualitative research to understand the use of peacotech better. Data for the research was collected through semi-structured interviews with peace practitioners who represented different areas of expertise within the peacebuilding field. The data analysis was conducted as an iterative process, where the interviews were first transcribed and then the key findings were inductively identified and categorized. Finally, the key findings were discussed in relation to previous research and literature on the topics at hand to build bridges between the past and present moment.

The findings indicate that still today, regardless of the ongoing technological development, the use of technology for peacebuilding is rather limited. Yet, technology possesses a lot of potential for peacebuilding, which based on the data should be released by further integration of technological platforms in the work of peace practitioners. Furthermore, empathy was considered a key component of peace and a base for trust and common understanding, which can be enhanced using technology. Storytelling was raised as an essential tool for enhancing empathy as stories enable us to experience the world through someone else's eyes. The most prominent technologies for fostering empathy included social media platforms and immersive technologies, such as virtual reality (VR).

Keywords Peacotech, peace technology, empathy, empathetic technologies, peacebuilding, peace



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Tiivistelmä

Teknologioita on jo pidemmän aikaa käytetty tukena rauhanrakentamisessa, vaikka niiden käytön yleisyys ei ole vaikuttanut pysyvän teknologisen kehityksen tai teknologioiden käytön arkipäiväistymisen perässä. Samaan aikaan empatian merkitys rauhanrakentamisen osana on kasvanut, sillä lisääntyvän empatian uskotaan johtavan kestävämmän rauhan rakentumiseen. Lisäksi, kuten viimeaikainen tutkimustieto osoittaa, empatiaa voidaan kasvattaa teknologioiden välityksellä. Tämän pro gradu -tutkielman tarkoitus onkin yhdistää nämä kolme aluetta ja auttaa ymmärtämään miten teknologioita käytetään rauhanrakentamisessa tänä päivänä ja voiko niitä käyttää empatian kasvattamiseen tässä kontekstissa.

Tämän pro gradu -työn empiirinen osuus toteutettiin eksploraatiivisena, laadullisena tutkimuksena, jonka tarkoituksena oli valaista teknologioiden käyttöä rauhanrakentamisessa. Data tähän työhön kerättiin haastatteluin rauhanrakentamisen parissa työskentelevien ammattilaisten kanssa. Kerätty tieto analysoitiin iteratiivisena prosessina, joka alkoi haastatteluiden muuttamisella tekstiksi ja jatkui aineiston luokittelulla sekä sen yhteen vetämisellä. Lopuksi tutkimustuloksia peilattiin aikaisempaa tutkimukseen ja kirjallisuuteen keskeisistä aiheista.

Tutkimuksen tulokset osoittavat, että edelleen tänä päivänä teknologioiden käyttö rauhan prosessien tukena on vähäistä. Toisaalta teknologioiden käytön koettiin mahdollistavan parempien ja kestävämpien rauhan prosessien syntymisen, mikäli sopivien teknologisten alustojen käyttöä lisättäisiin rauhanrakentajien työssä. Lisäksi empatiaa pidettiin keskeisenä rauhan komponenttina, sillä sen koettiin mahdollistavan luottamuksen ja yhteisymmärryksen syntymisen. Tarinankerronta nostettiin esiin olennaisena tekijänä empatian kasvattamisessa, sillä tarinoiden kautta voimme hetkellisesti astua toisen ihmisen saappaisiin. Teknologisia alustoja, joiden koettiin toimivan parhaiten tarinoiden välittämiseen ja levittämiseen ja siten empatian kehittämiseen, olivat sosiaalinen media sekä immersiiiviset teknologiat, kuten virtuaalitodellisuus.

Avainsanat rauhanteknologia, empatia, teknologia, rauhan rakentaminen



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1 Introduction

As global megatrends entail, societies will continue to grow more diverse and more polarized. Environmental stress, migration, increasing inequalities, and the rise of anti-establishment parties are driving societies towards change that has already led to increased tensions and conflicts. At the same time technologies are becoming more and more embedded in our daily lives. Furthermore, technological development is penetrating several industries, leading to higher level of digitization globally. Digitization and particularly the increasing development and use of artificial intelligence (AI) are also considered to help solve societal challenges, climate change, healthcare issues, and humanitarian crises. (Bughin and Woetzel, 2019)

Our lives being intertwined with technologies from simple tools to larger systems is something that also statistics indicate. According to ITU (2019), in 2019 already 97 % of the world population lived within a reach of mobile cellular signal and 93 % within a reach of a mobile broadband service. Yet, these network connections were used only by 53.6 % of the world population, the situation being globally unequal: In developed countries 86.6 % of the population were online while in the least developed countries only 19.1 % of the population accessed the internet in 2019, Africa remaining far behind other regions. One major reason preventing the use of technology is lacking information and communication technology (ICT) skills. Furthermore, proportionally, men are more often using the internet and accessing mobile devices than women. (ITU, 2019)

While the world is getting more connected due to the increased use of ICTs, conflicts are being internationalized as well. In general, the number of armed conflicts has decreased since the Cold War, although a new peak was experienced in 2016 with 53 ongoing conflicts, going down to 49 in 2017. This number is expected to stay in between 35 and 45 until the year 2022, although luckily the number of casualties is predicted to continue its decline. Unlike previously, a new trend has emerged and many of these conflicts are internationalized. In 2017, there were 48 ongoing intrastate conflicts where in 19 of them external states contributed troops to support at least one conflicting party. The increasing internationalization of conflicts is considered worrisome because then conflicts tend to turn out more violent, more difficult to solve, and longer lasting. Currently, most of these conflicts are in the African continent and Middle East. (Dupuy and Rustad, 2018)



Based on the data presented above, it is clear that there is need for active peacebuilding globally. Not only because of ongoing armed conflicts, but also due to the ongoing development of societies. Environmental issues and ongoing armed conflicts are both increasing migration, which on the other hand affects economies, politics, and social structures of targeted countries. This may lead to increasing inequalities, raise of extremist groups, and thus polarization of societies, which all are considered to initiate conflicts (World Bank and United Nations, 2018).

The only way to avoid and fight against conflicts is active peacebuilding, which according to the World Bank and United Nations (2018) is closely linked to inclusive and sustainable development. As United Nations puts it in their Agenda 2030, “we are determined to foster peaceful, just and inclusive societies which are free from fear and violence. There can be no sustainable development without peace and no peace without sustainable development,” (United Nations, 2015:6). For example, addressing exclusion and inequalities are considered cornerstones of such development, which should be initiated by each nation, but supported by the global community.

On the other hand, new, emerging technologies can be used as tools to foster inclusive and sustainable development and solve global challenges such as exclusion and inequalities. With the increasing access to networks and availability of connected devices globally, the potential that technology provides for peacebuilding is growing regardless of the lower use rates e.g. in the African continent. Therefore, technology can be used to promote peace and non-violence if designed for that purpose. This kind of technology is called peace technology, or peacetech to put it short.

The idea that technology can be designed to support peace and non-violence stems from the thought that from one perspective technology is never neutral. The non-neutrality of technology refers to the idea that technology is always developed and used with a specific motive in mind and thus the technology at hand best serves the cause it was designed for (Martin, 2008). Although any technology could become peacetech, the most successful peace technologies are such that were designed to support non-violence since the beginning.

Moreover, digitization is now reaching more and more industries and transforming how people work. Among others, peacebuilding is such a sector that is in the middle of this transformation process. Although the sector is very traditional and hence the change is slow, peace practitioners are using more technologies daily in their work. For this reason, it is interesting to explore the development of the sector and how technologies are currently



used in the work of peace builders. At the same time, the notion of empathy, or the ability to imagine or experience others' feelings and emotions, is getting more foothold in peace research. In previous research (e.g. Hoffman, 2008), empathy is regarded as a skill that can be trained. Therefore, although it is a complex phenomenon and a subjective experience, there are indications that different technologies can be used to foster it in societies.

In this thesis, I am exploring the use of technologies in the peace sector and the connection between the usage and end user empathy. I am curious to find out whether peacotech platforms can be used to foster empathy and if so, what kind of platforms work best for that purpose. The data for this thesis was gathered through a number of semi-structured interviews with peace practitioners globally. As an exploratory research, I did not have a specific hypothesis to prove, but the data collected through the interviews helped to understand the topic while bridging the content from previous literature with the present moment.

Overall, the research and its results were predictable, although interestingly there were two topics that emerged unexpectedly: the role of inner peace for peacebuilding and the effects of the ongoing COVID-19 pandemic on the development and use of peacotech. Although the focus of the discourse on peace is often on a social construct between two or more conflict parties, which is also the case for most parts of this thesis, it seems essential to keep it in mind that in the end, peace begins from within. After all, also empathy is a construct that can flourish when one is in harmony with oneself.

“Although attempting to bring about world peace through the internal transformation of individuals is difficult, it is the only way . . . Peace must first be developed within an individual. And I believe that love, compassion, and altruism are the fundamental basis for peace. Once these qualities are developed within an individual, he or she is then able to create an atmosphere of peace and harmony. This atmosphere can be expanded and extended from the individual to his family, from the family to the community and eventually to the whole world.”

(Dalai Lama, in Thich Nhat Hanh 1991: vii)

Before jumping into the literature review and more profound explanations of the different concepts that are discussed in this thesis, I will lay the foundations for the study in this first chapter. First, the context and scope of the study will be presented, followed by objectives and contributions. Then I will briefly introduce the methodology and last, I will present the overall structure of the thesis.



1.1 Context and Scope of the Study

On a broad level, the purpose of this study is to continue the research on the use of technology for peacebuilding. Although the use of technology for peacebuilding as a phenomenon is not novel, the development and adoption of peacetechnology has been rather slow. More specifically, I aim to gain a deeper understanding on the use of technological platforms for peacebuilding, while exploring the relationship of their usage and end user empathy. Empirically, I explore the experiences of peace practitioners on peacetechnology and their perceptions on the possible relationship with end user empathy.

For this thesis, I define peace, peacebuilding, and peace technology quite broadly. Peace is defined following Galtung's (1969, 1990) definition of positive peace, which refers not only to the absence of all violence – direct, structural, and cultural, but also on the presence of justice for all. In this thesis, some emphasis is also put on inner peace, which is considered an essential component of peace. The term peacebuilding encompasses the processes that are implemented to prevent, solve, and recover from conflict, as well as actions that are taken to foster peace in our daily lives. To continue, peacetechnology refers to the strategic use of technology for peacebuilding. Most of such technologies are ICTs of which many are considered technological platforms. In this thesis, I am particularly interested in exploring technological platforms as many widely used technologies today, which possess enormous potential for peacebuilding, are platforms. These concepts are presented in depth in the literature review in chapter 2.

1.2 Objectives and Contribution

The aim of the study is to build a deeper understanding on the use of technologies for peacebuilding today and to draw connections between the use of platforms technologies for peace and end user empathy. Although there is previous research on three related topics, peacetechnology, empathy for peace, and empathetic technologies, only little overlapping research exists. Furthermore, previous research on the two latter topics is limited. Therefore, this study aims to continue the research on peacetechnology by combining it with research on empathy for peace and empathetic technologies.

As an exploratory, qualitative research, this study aims to shed light on the phenomenon at hand and give an answer to the question whether technology can be used to foster empathy in the peacebuilding context or not. Empathy being one cornerstone of



peacebuilding and the base for trust and common understanding, understanding its relationship with the use of technologies in an increasingly technological world seems necessary. Another question this thesis aims to give a response to is what kind of technologies could then be used to foster empathy in the peacebuilding context. As the content of this thesis closely relates to the work of peace practitioners, this research can benefit them by opening the eyes on technological opportunities and encourage them to adopt more technological platforms in their work. On the other hand, the research also reveals certain challenges related to the use of technology for peacebuilding, which should not be overlooked. Moreover, this thesis may help realize the importance of empathy for peacebuilding and push peace practitioners to consider it as an essential building block of a successful peace process.

Furthermore, this research can benefit technology developers who are developing technologies for peace to understand characteristics of successful peacetechnology and potential challenges related to the development. In addition, this thesis may help technology developers in general to open their eyes on the potential societal impact their platforms have, as any technology can be used to affect the surrounding society positively or negatively.

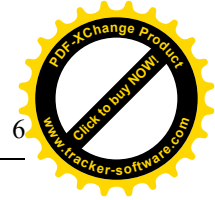
Research Problem

The main research problem this study aims to solve is whether technological platforms can be used to foster empathy in the peacebuilding context.

Research Questions

To find an answer to the research problem above, a number of research questions are addressed in this research including (although not limited to) the following:

- 1) What is the current state of using technology for peacebuilding?
- 2) What attributes and features do successful peace technologies possess?
- 3) What is the role of empathy for peacebuilding?
- 4) What is the relationship between technology and empathy in the peacebuilding context?



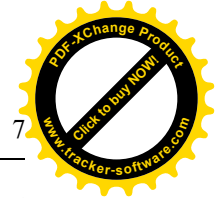
1.3 Methodology

The research is an exploratory study consisting of two parts. First comes an in-depth literature review with the aim to clarify the different concepts and key points of previous research. Second, the empirical part is presented with the focus on the use of technology for peacebuilding today. The goal of the empirical part is to shed light on the question whether there are technological platforms that can be used to foster empathy in the peacebuilding context. The data for the empirical part was collected through semi-structured interviews with people working in the peace sector. After the interviews, the data was analyzed and coded inductively and then categorized thematically based on the key findings that are presented in chapter 4. This methodology was selected as it was considered to best support in understanding a phenomenon on which previous literature is limited. Furthermore, qualitative research enables the researcher to dive deeper into the topic at hand without formulating any hypothesis to prove, which was the case with this thesis.

1.4 Structure of the thesis

The thesis is structured as follows: first, the overall content and structure of this thesis are presented in this “Introduction” -chapter. Second comes the literature review where I dive into the main concepts, define them, and look at some existing case examples of different technologies used for peacebuilding or to foster empathy. The literature review in chapter 2 begins with the definitions of peace and peacebuilding, which are the umbrella concepts of this thesis. This is followed by an in-depth look at peace technology, which is the main topic of this thesis, including multiple examples. Last, the focus is on empathy, previous research on empathy for peace and empathetic technologies.

The empirical part begins in chapter 3 – “Research Method”. In this chapter, the interview study as a methodology and its practicalities are explained in more detail. This is followed by chapter 4 – “Findings” – where the main findings of the study are presented in terms of the main themes that were inductively identified from the interviews. These themes include peacebuilding as a concept, the use of technology for peacebuilding, its future potential and associated challenges, the relationships between emotions, empathy, peacebuilding, and technology, and the effects of the COVID-19 pandemic on the peacetech scene. The thesis wraps up the main findings in chapter 5 – “Discussion” –



where the key findings are reflected in relation to previous research. Last, in the chapter 6 – “Conclusions” – implications, limitations, and proposals for future research are presented before a short summary of the whole thesis.



2 Literature Review

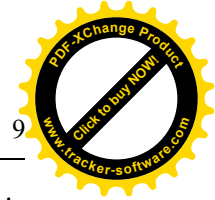
This literature review focuses on the key concepts and the broader context of this thesis. The goal of this literature review is to build a solid base for the thesis and discussion on the use of technology for peacebuilding and its intersection with end user empathy. First, I will define the concepts of peace and peacebuilding, which are the cornerstones of this study. Then I will present previous research on peace technology and a definition for technological platforms. Last, I will take a look at empathy, empathy for peace, and empathetic technologies. Overall, the aim is to expand understanding on the use of technologies for peace, their potential, and possibilities to foster end user empathy. Real-life examples are given to strengthen the link between theory and practice throughout the literature review.

2.1 Defining Peace

To be able to sufficiently define all concepts related to the research topic, it is necessary to start by diving deeper into the concept of peace. Different approaches on how to define peace exist, although there are some that are referred to more often than others. It seems that by far the most popular approaches to peace have been developed by Johan Galtung (1967; 1969; 1990), who can also be referred to as the father of modern peace research.

In his early work, Galtung states that “peace seems to be an “umbrella concept”, a general expression of human desires, of that which is good, that which is ultimately to be pursued”, (Galtung, 1967:6). He states that happiness is also such a term that refers to the act of a man to reach goals, although happiness is something that one aims for on a more individual level, while peace is more collective, more global. Galtung also highlights that peace should not be given narrow definitions, such as “absence of organized group violence” (Galtung, 1967:6), but rather something that glorifies means, policies, and occasions.

He then gives three references for how peace could be defined: stability or equilibrium, negative peace, and positive peace (Galtung, 1967). Stability or equilibrium refer to both internal peace of an individual and stability of the surrounding society. Negative peace is defined as the absence of physical violence and positive peace as the presence of all the positive things in a global community, including for example



collaboration and integration between different groups of people. The first definition is later overlooked, while the latter two are developed further.

In his article “Violence, Peace, and Peace Research” (Galtung, 1969), Galtung sheds more light on his approaches on peace by elaborating on the concepts of negative and positive peace. To begin with, he lists three, relevant principles to keep in mind while talking about peace:

- “1. The term 'peace' shall be used for social goals at least verbally agreed to by many, if not necessarily by most.
2. These social goals may be complex and difficult, but not impossible, to attain.
3. The statement peace is absence of violence shall be retained as valid.”

(Galtung, 1969:167)

Often, defining peace as absence of violence is considered too narrow, but as Galtung (1969) points out, when violence is defined broadly, the third principle can be retained as valid. Therefore, violence should be regarded as any violation of an individual’s right to good life. It can be personal or structural, it can be physical or psychological, it can be intended or unintended. The term “violence” can even include the idea of potential violence, which expands the definition to include the thread of violence.

If violence is defined as something multisided, consisting of both personal and structural violence, also peace needs to be defined in a similar manner when referring to peace as “absence of violence” (Galtung, 1969). Derived from this idea, Galtung defines negative peace as the absence of personal, or direct, violence and positive peace as the absence of structural, or indirect, violence. Positive peace can also be formulated as social justice. The distinction between negative and positive peace becomes clearer when diving into the outcomes of the different types of peace. The absence of personal violence is not considered to lead to a positive condition whereas social justice is. Both concepts are further developed in Galtung’s later work.

A little over 20 years later, Galtung (1990) added the concept of cultural violence to complement the definitions of violence and thus peace. Cultural violence, according to him, is defined as “those aspects of culture, the symbolic sphere of our existence - exemplified by religion and ideology, language and art, empirical science and formal science (logic, mathematics) - that can be used to justify or legitimize direct or structural violence”, (Galtung, 1990:291). Direct violence is then presented as an event, structural



violence as a process, and cultural violence as an invariant, or a permanence, that changes form only in the slow process of cultural transformation. This invariant can make violent events and processes look or feel right, even if they were harmful for the people. These different approaches to peace are presented in table 1.

Table 1: Peace According to Johan Galtung

	Direct peace (harming, hurting)	Structural peace (harming, hurting)	Cultural peace (justifying harm/hurt)
Negative Peace	[1] absence of = ceasefire; or a desert, cemetery	[2] absence of = no exploitation; or no structure = <i>atomie</i>	[3] absence of = no justification; or no culture = <i>anomie</i>
Positive Peace	[4] presence of = cooperation	[5] presence of = equity, equality	[6] presence of = culture of peace, and dialogue
Peace	negative + positive	negative + positive	negative + positive

Resource: Galtung, J. (Ed.). (2007). *Peace by peaceful conflict transformation – the TRANSCEND approach*. New York: Routledge.

While Galtung’s definitions remain the most cited ones, other definitions of peace exist as well. Many of them refer to the absence of violence or highlight presence of harmony within and in between people. Although Galtung’s definition of positive peace does include a notion of harmony, it is not in the center of the approach. For example, Anderson (2004:103) defines peace in the following manner: “Peace is a condition in which individuals, families, groups, communities, and/or nations experience low levels of violence and engage in mutually harmonious relationships.” This definition highlights the interpersonal aspect of peace. In addition, it indicates that as peace is a condition, it could be measured objectively while also acknowledging it being a state that may change.

As a more comprehensive definition for peace, one could rely on Miller’s (2005) definition. Derived from Galtung’s work (Cultural Violence, 1990), Miller refers to peace as:

“A political condition that ensures justice and social stability through formal and informal institutions, practices, and norms. Several conditions must be met for peace to be reached and maintained:



Balance of political power among the various groups within a society, region, or, most ambitiously, the world.

Legitimacy for decision makers and implementers of decisions in the eyes of their respective group, as well as those of external parties, duly supported through transparency and accountability.

Recognized and valued interdependent relationships among groups fostering long-term cooperation during periods of agreement, disagreement, normality, and crisis.

Reliable and trusted institutions for resolving conflict.

Sense of equality and respect, in sentiment and in practice, within and without groups and in accordance with international standards.

Mutual understanding of rights, interests, intents, and flexibility despite incompatibilities.

Notoriously elusive, peace connotes more than a mere absence of war or hostilities; an absence of conflict is impossible. In addition, the state of peace should be distinguished from techniques that simply avoid conflicts or employ violent or coercive approaches to engage in, manage, or resolve them.

Deriving from the Latin *pax*, peace in the Western world is generally considered a contractual relationship that implies mutual recognition and agreement. Understandings of peace throughout the world often disclose a much deeper comprehension of peace in relation to the human condition, which also includes inner peace. The comprehensive understanding of peace outlined above extends beyond what are referred to as positive conceptions of peace but acts in accordance with them as well. This contrasts with negative conceptions of peace, which are described most commonly as the mere absence of war or violent conflict.”

(Miller, 2005:55-56)

This definition by Miller (2005) includes multiple points to which I am referring to later on in this thesis – such aspects of peace and peacebuilding, which can be positively impacted by the use of technology. In addition, this definition states that peace is something that could and maybe even should be global, which increases the importance of technology for peace as increased use of technology has been one of the root causes of globalization. Moreover, the notion of inner peace is clearly included in this definition, which is something to look at especially when it comes to empathy for peace. In this thesis, peace is therefore regarded as a combination of positive peace and harmony, which encompasses the notion of inner peace.

2.2 Peacebuilding

Now that the concept of “peace” is defined, peacebuilding as an approach to peace can be presented. Although there are multiple approaches to peace, I decided to put peacebuilding



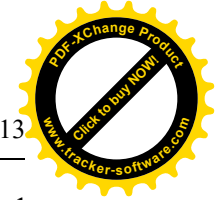
in the center of this thesis, because it seems that peacebuilding has become an umbrella term for different interventions to prevent, stop, and recover from conflict (Jabri, 2013). Therefore, peace technology is often defined referring to technologies used specifically for peacebuilding. Nevertheless, there are other approaches to peace presented in previous literature, which in some cases overlap with each other. Next, we look at these differing approaches to both peace and peacebuilding.

In earlier peace research, Johan Galtung (1976) introduces and defines different approaches to peace including peacekeeping, peacemaking, and peacebuilding. According to him, peacekeeping refers to maintaining the absence of violence, peacemaking to the act of eliminating violence or conflict, and peacebuilding to the identification and reinforcing of the structures of peace. Regardless of the existence of these different approaches to peace, it seems that today all three approaches can be somewhat combined under the term “peacebuilding”, which has a hegemonic status in the peace discourse (Jabri, 2013).

Another way to look at peace is through the different steps of a peace process. Galtung’s (2000) TRANSCEND model and his nine steps of a conflict transformation process (2007) are great examples of this. The goal of the model is not only to end direct violence, but also to transform structural and cultural violence by identifying and tapping into the attitudes, behaviors, and root-causes of a conflict. In addition, the model underlines the importance of self-reflection by the conflicting parties and plants non-violence, creativity, and empathy as the cornerstones of the process.

As such, peacebuilding is the sixth of the nine steps and it is associated with depolarization and humanization, which are considered second order consequences of a conflict (Galtung, 2007). Polarization, which is what peacebuilding aims to fight against, is defined as social distance between individuals or societies. Humanization refers to the action of seeing the self and the other as something more normal. Peacebuilding is hence regarded as something that “moves people not only into new action, but also new speech and new thoughts. A primary condition is an open, not closed, mind with expanding inner space, and then the will and ability to take the risk of thinking, speaking and acting upon it”, (Galtung, 2007:29). On the other hand, a “peace builder” refers to someone working on all nine steps of the model, analyzing the conflict and its consequences, and finding ways to build sustainable peace.

If put short, peacebuilding could as well be defined as “actions aimed at creating, strengthening, and solidifying peace” (Autessere, 2014:21). This definition encompasses the aspect of structure building and looks at peacebuilding from a wider perspective. In



addition, the expression “creating peace” embedded in the definition could be considered to overlap with Galtung’s (1967) earlier idea of peacemaking, which refers to the act of eliminating violence. Another, a broader definition of peacebuilding, which overlaps with Galtung’s earlier notion of peacekeeping and several steps of the TRANSCEND model, is offered by United Nations (2010):

“Peacebuilding involves a range of measures targeted to reduce the risk of lapsing or relapsing into conflict by strengthening national capacities at all levels for conflict management, and to lay the foundations for sustainable peace and development. Peacebuilding strategies must be coherent and tailored to the specific needs of the country concerned, based on national ownership, and should comprise a carefully prioritized, sequenced, and therefore relatively narrow set of activities aimed at achieving the above objectives.”

(United Nations, 2010:5)

According to United Nations (2010), peacebuilding aims at establishing security, strengthening confidence in political processes and governance, and reinforcing national capacities. In addition, peacebuilding may consist of securing basic services for the citizens and economic empowerment, which relate to the idea of social justice. Moreover, United Nations highlights that often times peacebuilding activities take place after conflict, although it can be that some activities start already during conflict, which have traditionally been labeled under the terms peacemaking or peacekeeping. Moreover, United Nations emphasizes contextualization of peacebuilding activities in their definition, which refers to the thought that every conflict is different and therefore require actions that are designed for that specific conflict at hand.

Nevertheless, in peacebuilding the focus should be as much on how things are done as what is done (United Nations, 2010). To select the what and how right, one needs to understand the level on which peacebuilding takes place. For this John Paul Lederach (1997) built a “peacebuilding pyramid” (figure 1), which illustrates the different levels and related approaches to peacebuilding that still today drive the field globally. The different groups, top, middle-range, or grassroots leadership, differ by their size and characteristics. In addition to the three levels presented by Lederach, today peacebuilders also discuss about level 1.5 and multitrack approaches. Level 1.5 is similar to level 2, although government officials can be included in the often unofficial conversations (Wolleh, 2007). Multitrack approach refers to peacebuilding that overlaps with more than one track at a time.

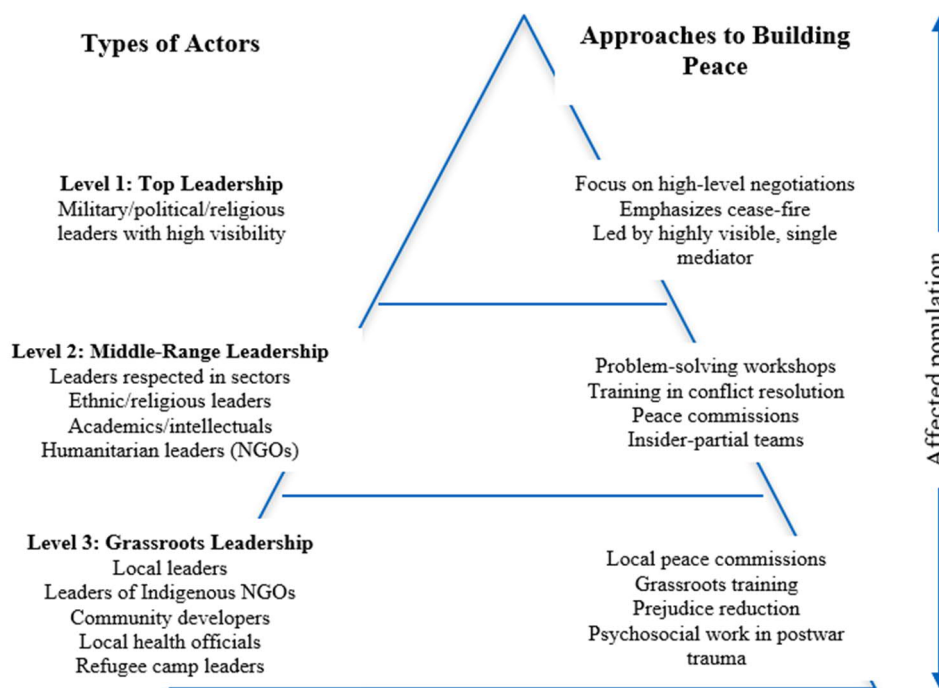


Figure 1. Peacebuilding Pyramid by John Paul Lederach (1997)

Resource: Lederach, J. P. (1997). *Building peace: Sustainable reconciliation in divided societies*. Washington, DC: United States Institute of Peace Press.

2.2.1 Building Blocks of Sustainable Peace

To understand what peacebuilding aims to achieve, it seems relevant to dive deeper into the components of sustainable peace. Reychler and Langer (2006) focus on researching and identifying essential parts of the peacebuilding architecture, hence the key components of successful peacebuilding. Moreover, they state that peacebuilding is not only science, but art, which requires imagination and creativity to succeed.

As is stated by multiple parties (e.g. United Nations, 2010; Deutsch and Coleman, 2012), the best possible outcome of peacebuilding is sustainable peace. Sustainable peace is characterized by the absence of physical violence (direct violence) and absence of unacceptable political, economic, and cultural discrimination (structural and cultural violence), self-sustainability, high level of internal and external legitimacy or approval, and propensity to enhance constructive management and transformation of conflicts (Reychler and Langer, 2006).

Continuing from there, Deutsch and Coleman (2012) present several psychological components of sustainable peace. On top of a non-violent and socially just society, they

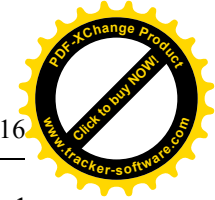


add that the people should have a strong sense of interdependence, which is the base for e.g. inter-ethnic collaboration. In addition, the people should share a common sense of identity, values, and mutual understanding, which is fostered by the freedom to both receive and share information. Moreover, they highlight the importance of fair recourse and social taboos against the use of violence.

Building sustainable peace is not an easy nor a straightforward task, although there are means to reach that state. Reychler and Langer (2006) have identified five different building blocks of sustainable peace that they further investigate in their paper. In order to succeed, the building blocks should be present or implemented simultaneously as they are mutually reinforcing.

First of the five building blocks Reychler and Langer (2006) present is effective communication, consultation, and negotiation, which should be established in between the conflicting parties on different levels. Second comes peace-enhancing structures and institutions that refer to building and strengthening different political, economic, and security-related processes. Third block is integrative political-psychological climate, which is characterized by the attitudes, behaviors, and institutions of the people affected by the peacebuilding processes. Those include for example a vision of a common future, reconciliation, human security, social capital (incl. trust and reciprocity), multiple loyalties (sense of we-ness), and absence of sentimental walls. They also state that peacebuilding leadership is critical and that it should take place on all levels from grassroots to the state head. The last building block they list is supportive regional or international environment. With this they highlight that peace is a common effort and hence there needs to be support from neighboring regions. Although international support may be necessary in a peace process, Jabri (2013) pulls back the attention to the local populations, who should always be in the center of the process.

In addition to the building blocks presented above, Deutsch and Coleman (2012) underline the importance of collaboration and equality between the parties. They highlight the importance of human needs and emotions that are affected by the conflict and thus the peace process. They also bring up the importance of education and the role of educators in fostering the psychological components of peace. Furthermore, they point out that to maintain peace, changes in social norms are needed. They also remind the reader that peace is something that is never achieved, but it is a process that is fostered by a variety of different components.

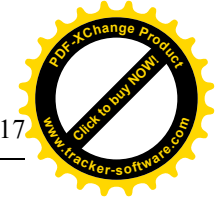


To summarize, there are multiple differing, but overlapping, approaches to peace and hence peacebuilding. It seems that overtime, peacebuilding has become an umbrella term for different approaches to peace with the goal to reach a state of sustainable peace. In this thesis, peacebuilding is regarded as actions that are taken to foster peace, strengthen structures of peace, and build peaceful relationships. It is about solidifying and strengthening peace to prevent societies from falling back into conflict. What should be emphasized when talking about peacebuilding is contextualization of the actions – the people with whom peace is built should always be in the center of the process. Moreover, self-reflection is considered a part of peacebuilding, which is also the base for increased empathy.

2.3 Overview on Peace Technology

Conflict and war have for long been initiators of technological development. Taking a look back into the development of some of the major technologies that influence our lives today, such as the internet, GPS, or digital photography, it can be noted that they have all been initially developed for military purposes (e.g. Guttieri, 2014). While defense still remains a strong influencer on technological development (Tincq et al., 2019), the growth of the private sector and communities of practice that produce technologies for all fields is remarkable. Moreover, many technologies that have initially been developed to support war and conflict have been transformed to support non-violence through an economic conversion process (Martin, 2008).

Although the sole existence of technologies that could be used for non-violence and to support peace does not guarantee positive impact, the consensus between many peace researchers is that technology does provide major opportunities for peacebuilding and for non-violent struggle (Hattotuwa, 2004; Martin, 2008; Kahl and Larrauri, 2013; Gaskell, 2018), but they are not explored to their full potential yet (Tellidis and Kappler, 2016; Tellidis, 2019). While the use of technology is not an end for conflict nor does it promise one, it can still benefit peacebuilding processes from multiple perspectives. Technology for peacebuilding can even become a game-changer, because it can rapidly change structures and landscapes where peacebuilding takes place (Gaskell, 2018).



Peacetech: A Definition

Wider interest in the use of technology for peacebuilding has grown since the emergence of the term “peacetech”. The term is considered to have first emerged at the inauguration of United States Institute of Peace’s Peacetech Lab in 2015. According to Gaskell (2018), from then on, the term came to represent the use of Information and Communication Technology (ICT) for peacebuilding.

What are ICTs then? Hamelink (1997), who has researched ICT in the development cooperation context, defines the term in the following manner:

“Information and Communication Technologies (ICTs) encompass all those technologies that enable the handling of information and facilitate different forms of communication among human actors, between human beings and electronic systems, and among electronic systems.”

(Hamelink, 1997:3)

Hamelink (1997) then categorizes ICTs into five sub-divisions, including capturing, storage, processing, communications, and display technologies. A common feature for all these different ICTs is that they are to digitize information, hence translate information to and process it in the digital realm.

Looking from a slightly broader perspective, the term peacetech has also been used to describe the strategic use of technology in peacebuilding processes (Cottray and Larrauri, 2017). Putting the term “strategic” in the heart of the definition makes complete sense because “strategic” application is also considered vital for the success of peacetech (Hattotuwa, 2004). According to Quihuis et al. (2015), strategic use also translates into the use of technology to mediate interaction between individuals, hence, to enhance our ability to positively engage with others.

Quihuis et al. (2015) continue the conceptualization of peacetech by framing it and categorizing it into four sub-components: sensors, communications technology, computation, and actuators, which are somewhat in line with the sub-divisions by Hamelink (1997). Sensors include any device or software that measure engagement between any two social entity overlooking any barriers such as gender, ethnicity, or income-level. Communications technologies include all communication tools and the underlying infrastructures for mobile communication. Computation refers specially to distributed and cloud-based computing. Actuators on the other hand can be either humans or technologies that enhance our capability to act on an opportunity or a thread detected by any technology belonging to one of the three other sub-components.



In this thesis, peacetech is primarily defined as strategic use of technology for peacebuilding and secondarily as the use of ICTs for peacebuilding. As the use of technology is increasing also in the peace sector, it indicates that not all technologies are used as strategically chosen tools in peace processes. Therefore, I would like to highlight the importance of the word “strategic” in the definition of peacetech over discussing the use of any ICT in the work of peace practitioners.

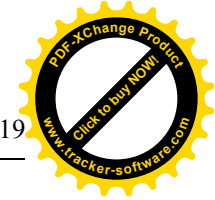
2.3.1 Peacetech in Practice

Previous literature indicates that the impact technology has on peacebuilding stems from its power to help transform conflicts by providing new channels for dialogue, rapid information sharing, and spaces to interact and collaborate (Hattotuwa, 2004; Kahl and Larrauri, 2013; Guttieri, 2014; Gaskell, 2018). To add, overarching themes in previous literature include empowerment of local populations and democratization of power (Kahl and Larrauri, 2013; Guttieri, 2014; Tellidis and Kappler, 2016; Gaskell, 2018). These refer to the capability of ICTs to give voice and mobilize people, especially the grassroots, who have not been part of peace processes previously. Furthermore, the empowerment enables localization of peace processes, which is crucial for peace to become sustainable (Jabri, 2013).

Overall, there are many different use cases for technology in the peacebuilding context. To better understand the potential technology possesses in relation to peacebuilding, Kahl and Larrauri (2013:7) point out different types of peacebuilding programs where technology could help and have a remarkable impact:

- Early warning or early response programs;
- Programs fostering contact and collaboration between groups in conflict settings;
- Programs aiming to promote peaceful attitudes;
- Programs supporting communities to influence pro-peace policies.

In addition to technology providing new opportunities for conflict affected people, the scalability of technologies benefit the work of peace practitioners who by implementing the use of technologies in their work could do more better and faster (Gaskell, 2018). Scalability of peacetech, which is made possible by the pure existence of



and easy access to technology, is something that also Quihuis et al. (2015) point out as an important feature of peacetech today.

To better understand the use of technology for peacebuilding, next I will go through different, common areas of application. First, peacetech will be discussed in the context of data, second in the wider context of communications, and last in relation to gaming.

Peacetech and Data

In previous literature, data seems to be the most discussed and prominent field for applying peacetech. And for a reason: According to Gaskell (2018), data usage has been the most common quality of peacetech projects globally. Based on her research, 80 % of all peacetech projects had data as a central component, which naturally reflects to the high amount of discussion around the topic.

In general, technology can be used to sense, generate, store, compute, visualize, model, navigate, and communicate various types of information (Guttieri, 2014; Gaskell, 2018), which has previously been more difficult due to lacking infrastructure and tools. Today, major positive effects can be noticed e.g. in improved data collection from conflict affected regions, improved organization of data, and faster analysis processes.

Improved data collection and processing have helped peace practitioners to do crisis mapping, build early-warning systems, improve conflict prevention, enhance governance, and empower local populations (Kahl and Larrauri, 2013; Gaskell, 2018). In addition, data has been used to analyze different triggers for conflict such as resource shortages and movements of populations (Kelly, 2019). Moreover, Kelly (2019) points out that hate speech, which is an important trigger for violence today, can be analyzed based on data that has been collected from social media and countered using the same platforms. While social media is a major aggregator of information especially on attitudes and views, the internet, mobile phones, GPS systems, satellites, and drones constantly generate data that is beneficial for peace practitioners globally (Kelly, 2019).

When talking about data and peacetech, one example that often raises up in previous literature is Ushahidi, which is a Kenyan platform used initially to map violence around local elections in 2008 (e.g. Kelly, 2019). Since then, it has been used in many other contexts from natural disasters to political unrests also in the Western societies. Ushahidi relies on crowdsourcing in data collection by enabling its users to report and map incidents and unrests. The platform also helps to manage the data and it generates visualizations that can be further used for crisis mapping (MIT Technology Review, 2020).



In the future, big data is considered to have a stronger influence on peacebuilding as more and more data is gathered globally and released for open use i.e. through data philanthropy by big companies and governments (Hattotuwa, 2013). While this data can be used e.g. for descriptive, predictive, and diagnostic purposes regarding a conflict, it can also be used for shedding light on feelings and emotions regarding a specific topic (Kahl and Larrauri, 2013). Another aspect of data processing that is considered to impact peace in the future is advancements in the machine translation field (Hattotuwa, 2013), which can hugely benefit communications.

Peacetechnology and Communications

Another major field of application for peacetechnology is communications. The positive impact technology can have on communications relies on its capability to connect people who would not otherwise be able to do so. Technology can enable to overcome different barriers for communication such as physical distance, political sensitiveness, or unsafe environments. While data may be the most common quality of peacetechnology projects globally, Gaskell (2018) points out that communications is the most common quality of peacetechnology projects initiated particularly by conflict-affected communities. To continue, communication projects are often aimed at changing behaviors (41% of projects).

The field of communications for peace, which can refer to the provision of new avenues for sharing information and stories, includes e.g. sharing alternative narratives, creating a sense of community, and challenging the notion of identity (Kahl and Larrauri, 2013; Gaskell, 2018). Improved communications can enhance trust-building and transparency in addition to fostering inclusion and participation (Tellidis and Kappler, 2016; Gaskell, 2018). The use of social media in the peacebuilding context is also regarded to invoke behavioral changes, cognitive changes, and attitudinal changes (Roy, 2016). Therefore it is considered to be an effective tool for post-conflict recovery when rebuilding social cohesion (Baytiyeh, 2019). On the other hand, if communication platforms are used for promotion, which they often are by governments and international institutions, their use can turn out counterproductive and lead to problematic outcomes such as reinforcing the top-down nature of peacebuilding rather than empowering local populations (Tellidis and Kappler, 2016).

Tools that improve communications include the more traditional technological platforms, such as mobile phones, radio, and television, and newer platforms such as different social networking channels (Kahl and Larrauri, 2013; Tellidis and Kappler,



2016). Today, the role of social media for peacebuilding seems to get highlighted not only because of the use of such platforms for the good, e.g. for citizen journalism and improving transparency and inclusion, but also for their use to spread rumors and hate speech (Roy, 2016; Tellidis and Kappler, 2016; Baytiyeh, 2019; Kelly, 2019). The spread of hate speech and misinformation that may lead to violence is affected by the uncontrollable nature of information flows online. Furthermore, the outcome of a communication platform selection also depends on the audience, as different tools are used by different demographics. For example, social media is more likely used by youth also in the peacebuilding context (Roy, 2016).

One great example of using new media platforms for building social cohesion, changing attitudes, and fighting racism, is PeaceFactory, which aims to build peace in the Middle East. PeaceFactory is a project that in the beginning focused on connecting people in the Middle East using Facebook. The initial idea was to befriend people on Facebook who represent the other side of a conflict. Today, they have a wider range of ongoing online and offline projects and campaigns to promote peace between different conflicting parties in the region. (sandbox good news., 2020)

Related tightly to communications and the possibility of technology to connect, Gaskell (2018) writes about the possibility of technology to create an alternative space, or foster networking, which refers to the existence of a safe space for interaction during conflict. This space provides opportunities to communicate over silos while providing better opportunities for contact, dialogue, and collaboration.

Furthermore, engagement, which refers to the creation of new ways for people to influence or take action in their communities, together with the possibility to foster positive relations are positively influenced by the existence of technology-enabled alternative spaces. Citizen engagement is fostered through the use of social networking platforms, crowdfunding platforms, and platforms enabling citizens to participate in governance processes (Kahl and Larrauri, 2013). The use of such tools to engage citizens is considered to enhance the grassroots levels' access to peacebuilding processes and challenge existing power biases of institutions (Tellidis and Kappler, 2016; Kelly, 2019). Moreover, wider access to information and networks provided by improved communications enable a more global mobilization of resources (human, financial, and technological), and the creation of online communities and collaboration, which can also help in addressing conflicts (Hattotuwa, 2004).



Peacetech and Gaming

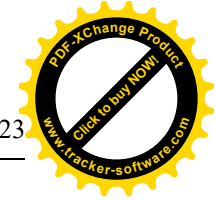
One field under constant exploration is gaming for peacebuilding. Gaming in the peacebuilding context refers to the introduction of gaming elements to the peace processes, which can enhance alternative incentives for action by conflicting parties (Kahl and Larrauri, 2013). These gaming elements can be used e.g. to challenge existing attitudes and for (peace) education. In addition to implementing gaming elements into peace processes, the use of video games, such as Minecraft, is becoming more popular in peacebuilding. Games are considered a useful tool to foster peace, because of their informal nature, accessibility, and global usage especially by youth.

There are multiple examples of companies using video games for peacebuilding, such as ImpactGames with their PeaceMaker game (Kahl and Larrauri, 2013). The goal of the player is to make the right decisions and find a way to solve the Israeli-Palestinian conflict. The player selects to play either the Israeli or Palestinian head of state with the aim to gain a better understanding on the situation and new perspectives on the conflict (Games for Change, 2020). Although there are companies providing video games used for peacebuilding targeting particularly children and youth, the level of application of gaming elements in the peacebuilding processes remains rather low (Kahl and Larrauri, 2013).

Peacetech: Other Approaches

As can be noted from above, there are several use cases of technology for peacebuilding. Their very essence is to enhance the ability to trust, which on the other hand positively affects the capability to engage with other people regardless of their physical location (Quihuis et al., 2015). With the integration of tools from behavioral psychology to technology, the capability to measure human behavior has increased. With this change in place, it becomes possible to design technologies to promote positive social behavior. With enhanced trust and promotion of positive social behavior, Singer's "expanding circle of altruism", or in other words increasing our ability and motivation to help others, becomes the reality. As a result, there is potential that peacetech can be used to transform empathy and hence improve peaceful living among people.

Another approach that highlights improving peaceful living among people as an optimal outcome of using technology for peacebuilding comes from a non-scholarly source. In the book "Rauhankone" (Eng. Peace Machine) Timo Honkela (2017) works on a utopian idea of a machine that would enhance peace and peacefulness in the world. The



peace machine described in the book would result in increased mutual understanding, peacefulness, and enhanced social justice, security, well-being, and wealth. To reach these goals, the machine would help us humans to improve our language and interaction skills, to work on promoting positive emotions, and to improve community action. Moreover, the peace machine is to work on enhancing empathy. When comparing to other previous literature on peacotech, the focus has been on the use of technology in conflict-affected settings, whereas Honkela as well as Quihuis et al. (2015) point out that the core idea is not only to solve conflicts, but to help people live a more peaceful life on a daily basis.

The development of such a peace machine would be a lengthy and a difficult process and when combining this with the presented reality that peacotech is not as common as it could be, the future of the field does not seem too bright. Yet, there is space to develop more for the peace sector. To introduce more technologies in the field, Martin (2008) notes that there are three ways for peaceful technologies to emerge. One option is that more people would be encouraged to use existing technologies that are meant for non-violent action. Another way is to make minor tweaks into existing technologies to enhance their non-violent features or build entirely new technologies with the sole purpose to foster peace. As was discussed in the beginning of this chapter, peacotech can even emerge from the military sector, as the internet has through economic conversion, or peace-conversion, of technologies, or from the for-profit sector as a positive side-effect (Quihuis et al., 2015). Such technologies that emerge from the for-profit sector, are often platforms that facilitate collaboration and cooperation among groups of diverse people, which on the other hand is at the core of peacebuilding and of central interest in this thesis.

2.3.2 Technological Platforms

In this thesis, special interest is paid on exploring technological platforms that are used for peacebuilding. On one part, this is done to narrow down the scope of the thesis. On another part, the goal is to turn the focus on such technologies, which can particularly enable interaction between different groups of people, which has been considered an essential feature of peacotech (Quihuis et al., 2015). The essentiality of interactions is emphasized even more when empathy is within the area of interest. Moreover, platform businesses present a major part of technology companies today. According to Cusumano et al. (2020), 70 % of 200 unicorns, or technology startups listed to value more than 1 billion, in 2017 were platform businesses. Although this number does not directly reflect to all technology



companies, it does indicate a trend in current development and the raise of platform businesses.

In previous literature one can find various definitions for technological platforms, which stem from different research approaches. According to Baldwin and Woodard (2009), there has been three different approaches to platform research: one looking at platforms from the perspective of product development, one of technology strategy, and one of industrial economics. Although all the approaches have their own nuances, they all are rooted in engineering design. At the core of a definition by each approach is the conservation or reuse of a core component to achieve economies of scale while reducing the cost of creating a wide variety of complementary components. This reuse of components is then expected to provide more flexibility for product development.

In more recent research, Gawer (2014) points out two research approaches to platforms: one inspired by economic theory and one by engineering design – grouping together all three approaches identified by Baldwin and Woodard (2009). Economic theory sees platforms as multi-sided markets while engineering design considers them modular technological architectures as explained in the previous paragraph. These two differing approaches also yield different insights on platforms: economic theory focuses more on platform competition, while engineering design concentrates on platform innovation. In reality, many platforms combine both, innovation with increased competitive tensions.

Regardless of the point-of-view, platforms share multiple similarities. Gawer (2014) points out six:

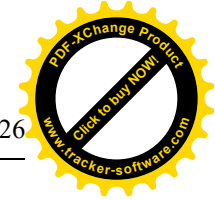
- 1) As a phenomenon, platforms can be found from different levels of analysis and from various organizational settings.
- 2) The constitutive agents of platforms include the following: a firm and its sub-units for internal platforms or an assembler and its suppliers for supply-chain platforms or a platform leader and its complementors for industry platforms.
- 3) Platforms consist of modular architectures that are organized around a core and a periphery.
- 4) Technological interfaces, which are closed, semi-closed or open depending on the organizational setting, can be found between the core and the periphery.
- 5) While the scope of the platform broadens, its access to innovating agents and their capabilities increases.

- 6) All platforms have a certain coordination mechanism, which are managerial hierarchy for internal platforms, contracts for supply-chain platforms and ecosystem governance for industry platforms.

As a conclusion, Gawer (2014:1245) defines technological platforms as “evolving organizations or meta-organizations that: (1) federate and coordinate constitutive agents who can innovate and compete; (2) create value by generating and harnessing economies of scope in supply or/and in demand; and (3) entail a modular technological architecture composed of a core and a periphery.”

As one type of platforms, multi-sided markets are considered facilitators of interaction between actors that could not otherwise interact with each other (Gawer, 2014). This type of platforms hence includes coordination among two or more groups of agents (Baldwin and Woodard, 2009; Gawer, 2014). The value captured by such platforms increases with the increasing customer bases on some or all sides of the market. The definition for the phenomenon is network effects, which are an essential feature of platforms that also shape platform competition. Just as with technological platforms, multi-sided markets create value through economies of scale and scope, while providing low-cost, decentralized options (Baldwin and Woodard, 2009). Examples of multi-sided markets include for example Uber or Amazon.

As has been explained previously, one essential benefit of peacetech is the ability to connect people, who could not otherwise get connected. Regardless whether the connections are made to collect and process data or to communicate, platform technologies seem to represent a major part of peace technology. Hence there is special interest in exploring multi-sided markets, communication platforms, networking platforms, etc. for peacebuilding. As has been presented above, social media and social networking platforms, such as Facebook, Twitter, and WhatsApp, for sure play a major role in peacebuilding today (Roy, 2016; Tellidis and Kappler, 2016; Baytiyeh, 2019; Kelly, 2019), but so does other technological platforms designed for communications such as virtual reality (VR) (e.g. Ivanovitch, 2017) or open-source data-bases (Hattotuwa, 2013). In addition, there is research on how the use of such platform technologies can affect our emotions or empathy (e.g. Hasler et al., 2014; Ivanovitch, 2017).



2.3.3 Challenges of Peace Technology

Although technology provides numerous opportunities for the peace sector, there are also a number of challenges that need to be addressed. Although the non-neutrality of technology is an asset, it is a challenge at the same time. While technology can be developed and used with positive, peaceful intentions, it can as well be used to promote violence or war, immoral or unethical behavior, or hatred or crime. In addition to the non-neutrality of technology, there are other common biases and challenges to overcome when using technology for peacebuilding.

One major risk is the potential to cause unintentional harm when implementing peacetech into use. In another words, technology for peacebuilding is a double-edged sword; if it is not designed to empower, it can turn out harmful (Kahl and Larrauri, 2013; Gaskell, 2018). Understanding that conflicts are always tied to their context may help in assessing the impact of peacetech, at least evaluating the socioeconomic setting, demographics of the users, and currently used technologies may help in the development process (Mancini and O'Reilly, 2013; Tellidis and Kappler, 2016). Moreover, it is relevant to understand that technologies are no panacea for holistic issues, although they can be of great help (Hattotuwa, 2004; Mancini and O'Reilly, 2013).

One basic bias mentioned by many peacetech researchers is that of connectivity: Although access to technology is global, not every individual is capable of taking advantage of it. As was presented in the introduction, 93 % of the world population could access the internet, but only 53.6 % are connected to it (ITU, 2019). This is explained by the fact that not everyone has access to computers, mobile phones or other devices they could use to connect. In general, such devices are not affordable, people are discouraged from using them, or there are other, local, infrastructural issues, such as electricity breakdowns that prevent the use (Hattotuwa, 2004; Kahl and Larrauri, 2013; Mancini and O'Reilly, 2013; Tellidis and Kappler, 2016; Tellidis, 2019). Moreover, possible technological illiteracy is affecting the adaptation and use of technology globally (Mancini and O'Reilly, 2013; Tellidis and Kappler, 2016).

Another issue that e.g. Tellidis and Kappler (2016) highlight, is that the success of peacetech depends on the underlying power dynamics of the peace process. Initial power imbalances include for example a top-down attitude towards peacebuilding that can in worst case be enhanced with the use of ICTs. The use of ICTs can also create new power biases that relate to the identities and socio-economic situations of their users. To be more



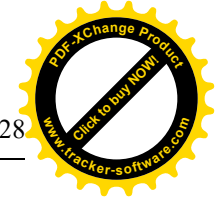
precise, in the context of fragile economies, computer and mobile technologies are more often used by young, wealthy, urban, technology-literate men, which means that the use of technology can be highly exclusive. Media use possesses similar issues, as it is dependent on a variety of social factors, such as income level and education. Assessing the user-base is especially crucial when talking about civic-tech and gov-tech platforms that in general are meant to foster inclusion (Tincq et al., 2019).

Moreover, technology can be used to promote hidden agendas or spread untruthful messages. Often these are negative downsides of the use of communication platforms for promotion or the use of social media for peacebuilding. This has been the case for example in the civilian mobilizations related to the Arab Spring in early 2010's and the spring of the Syrian civil war (Lynch et al., 2014). The conflicts in the Middle East were mobilized due to the distribution of well-curated, manipulated information that spread rapidly particularly on social media. Different sides of the conflict were spreading their own messaging spiced up with violent pictures and videos to increase the impact on the viewer.

In addition to the spread of misinformation and manipulated content, social media is often used as a channel for spreading hate speech, which in itself is a trigger for violence (Kahl and Larrauri, 2013; Larrauri et al., 2015; Kelly, 2019). Furthermore, distribution of such content in social media is considered to polarize debates, because people tend only to engage in communications that they personally support. This can strengthen the polarization of societies and even lead to violence.

Another, a more technical, issue related to the use of technology for peacebuilding is that the development and usage of such technologies require relatively lot of manpower and resources that are not always available. Especially when it comes to the possibility of ICTs to enhance data gathering and processing for peacebuilding, human agency and initiative are a must. Many services and tools built for this purpose are rather complex as they are often designed for expert-organizations, which limits the use by peace practitioners. (Tellidis and Kappler, 2016)

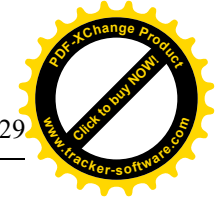
Moreover, it is good to note that there are structural issues related to the development of technology. As is reminded by Tincq et al. (2019), still today the defense industry remains among the heaviest investors into the development of technology globally. Especially the development of cyber-war tools and programs, autonomous weapons, and space forces are considered worrisome. In addition, it is good to remember that many technologies that are used for peacebuilding use raw materials and components that are often sourced from regions that are poor, underdeveloped or even under conflict (Tellidis



and Kappler, 2016). Furthermore, limitations of peacetechnology include any ethical, privacy or security issue related to the use of technology in general (Kahl and Larrauri, 2013) in addition to technology's capability to distract us from face-to-face, positive engagement with other people and cyberbullying (Quihuis et al., 2015).

To mitigate the potential harmful use of peacetechnology and to make sure that the technology at hand is truly designed to empower, Kahl and Larrauri (2013), Mancini and O'Reilly (2013), and Gaskell (2018) all refer to the idea of "Do No Harm". The key principle of the Do No Harm -framework (Wallace, 2015) is that the wellbeing of the people one is aiming to help must be in the focus of all taken measures. This means that any program meant to support others must be thoroughly evaluated taking into consideration the potential benefit and harm it may cause for those people. One way to assess this on a constant basis is by including local beneficiaries in the technology development process and by establishing a level of trust and transparency in it (Mancini and O'Reilly, 2013). One framework that can be used for the design process is Principles for Digital Development, which include guidelines for digital development designed especially for development cooperation practitioners.

To summarize, it can be stated that technology possesses a lot of potential for peacebuilding. Technology has provided new ways for peace practitioners to analyze and predict conflicts due to the increased availability and capability to process data. In addition, the use of ICTs has significantly improved communications and provided new avenues for alternative narratives to be shared, which may initiate changes in behaviors and attitudes. Social networking platforms have impacted the creation of international communities and social movements, which has resulted in increased citizen engagement. Moreover, new tools, such as video games, are introduced in the peace process and for peace education. Overall, technology has the ability to connect people regardless of their physical location and create a sense of community. At the same time, it has the power to divide people if used for sharing misinformation, hate speech, or promoting violence. There are a number of challenges associated with the use of technology for peacebuilding that peace practitioners should take into account when deciding to implement peacetechnology. Those challenges are best addressed by constant evaluation and impact assessment of peacetechnology and inclusion of local beneficiaries in the development process.



2.4 Empathy

As the last section of this literature review, I will shed light on previous literature regarding empathy, empathy for peace, and empathetic technologies. This part works as the base to respond to the research question regarding the use of technology to foster empathy in the peacebuilding context. Although previous research on empathy for peace and empathetic technologies is rather limited, there are great insights that indicate that empathy is a cornerstone of peacebuilding and that there are means to foster it in the virtual realm.

Empathy is generally defined as the ability of an individual to sense and feel the emotions of other people. Often, this capability is combined with the ability to step into another person's shoes – to imagine what this person is thinking or feeling. In Cambridge Dictionary, empathy is defined as “the ability to share someone else's feelings or experiences by imagining what it would be like to be in that person's situation”, (Cambridge Dictionary, 2020). The verb empathize is defined as “to be able to understand how someone else feels”, (Cambridge Dictionary, 2020). As can be noted from the definitions, the human capability to understand another person is central when talking about empathy.

In previous literature, there are two types of empathy that are distinguished from each other: affective (also known as emotional empathy) and cognitive empathy (Decety and Jackson, 2004; Shamay-Tsoory, 2011; Waldman, 2016b). Affective empathy can be defined as the capability of an individual to physically feel what someone else is feeling and take action to help if needed. This process is called emotional contagion and the human mirror neuron system (MNS) plays a major role in it (Shamay-Tsoory, 2011). Cognitive empathy simply refers to the ability to imagine how another person is thinking or feeling. Cognitive empathy is further divided into affective and cognitive mentalizing, which refer to the ability to adopt another person's psychological point-of-view and imagining oneself in someone else's role. Waldman (2016a, 2016b), who has written about empathy in the context of international affairs and peacebuilding, points out that the focus should rather be on cognitive empathy because it is easier to approach and draws also on knowledge on the other's character, culture, history, and experience.

As an ability, empathy is considered to enable better communication and collaboration, as well as to improve understanding of the other and mitigate biases (e.g. Waldman, 2016a, 2016b). In addition, Waldman (2016a) points out that empathizing can



enhance our self-awareness and thus help in identifying our own misinterpretations and false assumptions limiting the progress in peacebuilding. Moreover, Decety and Jackson (2004) state that self-awareness and emotion regulation that follows are necessary for empathy to emerge in the first place, which makes empathy a conscious behavior.

Empathy can also encourage prosocial or even altruistic behavior (Eisenberg and Miller, 1987; Hoffman, 2008). To engage an individual in prosocial behavior, it is necessary to understand how empathy can be fostered. Hoffman (2008) explains five empathy arousing modes that can be divided into two categories: preverbal and cognitive modes. Preverbal modes, which include mimicry, conditioning, and direct association, are viewed as passive and involuntary, while cognitive modes, such as verbally mediated association and perspective taking, require action from the empathizer. The different arousal modes can operate in any combination or alone.

While any of the modes can evoke empathy, there are certain phenomena that can provoke the different modes. First, the MNS, which is activated while observing someone else performing an action or during preverbal modes, increases our ability to understand others' intentions and behaviors (Iacoboni et al. 2005). Second, storytelling is considered an effective means to arouse empathy when activating cognitive modes (Manney, 2008). Stories, whether real or fictional, enable us to see the world through the characters eyes and to understand the common needs, goals, and aspirations that us humans share.

While there are multiple mechanisms for enhancing empathy, there are certain aspects that can make an individual less empathetic as well. In their white paper, Abu-Akel et al. (2019) point out seven ways empathy may be affected negatively, including obedience to authority, ideology, in-group vs. out-group relations, early neglect and abuse, trauma, genetics, and hormones. Many of these reasons for diminishing our capability to empathize, such as beliefs that may be related to the underlying culture, religion, or social circles, also work as catalysts for violence.

From the seven ways affecting empathy negatively, one that pops-up more often than others is the in-group vs. out-group relation. This refers to our inability to empathize with people we consider other to us, which leads to perceiving our in-group superior to the out-group (Hoffman, 2008; Abu-Akel et al., 2019). Moreover, there are general concerns on whether we can empathize others who are distant to us or we are unable to meet physically (Eisenberg and Miller, 1987; Hoffman, 2008; Waldman, 2016a), which reinforces the in-group, out-group division.



Regardless of the challenges there are in relation to empathy, there is a consensus that it is possible to overcome them as empathy is a skill that can be trained and enhanced (Hoffman, 2008; Manney, 2008; Waldman, 2016a; Abu-Akel et al., 2019). The idea that it can be trained also leads to the thought that it can be used as a tool to do better peacebuilding and that there are technologies that can be used for that purpose.

2.4.1 Empathy for Peace

Empathy is not a topic that would arise often in previous literature regarding peace, although during the past decade, there are clearer linkages made between empathy and peacebuilding. The fact that empathy is not thoroughly explored in the peace context also strengthens the underlying reason for why this thesis is written. Nevertheless, empathy is considered an essential component of successful peacebuilding when it comes to the relationships between the opposing conflict parties or relationships between conflict parties and peace practitioners (Waldman, 2016a).

To begin with, there are mentions of empathy in previous literature that were presented in previous sections already. For example, Galtung (2000) puts empathy as one of the three cornerstones of peacebuilding together with non-violence and creativity in his TRANSCEND model. Quihuis et al. (2015) point out that technology can help to foster trust and positive social behavior, which leads to expanding Singer's circle of altruism, which can be associated with empathy if combined with the thoughts of Eisenberg and Miller (1987) or Hoffman (2008). Moreover, Honkela (2017) states that enhancing empathy is a central element of what his utopian peace machine would do, because in the end empathy is needed for people to live in harmony with each other. Moreover, Abu-Akel et al. (2019) state that empathy is an invaluable natural resource for peace.

Waldman (2016a, 2016b), who dives deeper in the concept of empathy for peacebuilding, highlights its importance especially for peace builders and mediators. Conflicts are the result of human action, which is driven by human psychology. Empathy helps to understand the human and hence is a tool to understand the conflict parties and conflicts better. This idea is backed and expanded by Hameiri et al. (2014) who consider empathy one skill that can be trained by the conflict parties so that their socio-psychological repertoire that supports the continuation of conflict would change. Empathy opens the eyes to the suffering of the other and while it enables to see their needs and goals.



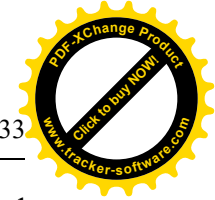
According to Waldman (2016a, 2016b), empathy allows mediators to grasp on the mindsets, motivations, driving emotions, objectives, values, and beliefs of conflict parties as well as indicate underlying reasons for conflict and negotiation opportunities. In addition, Waldman points out that empathy is a way to make the parties feel heard, respected, and understood, which is linked to trust-building – an essential building block of peacebuilding. Moreover, he points out the humanizing power of empathy, which is the base for rebuilding relationships between conflict parties.

Another context where training empathy is considered to have a significant impact is peace education, especially when it comes to educating children and youth (Sagkal et al., 2012). Providing children and youth with tools to realize conflicts and their effects on other people is regarded to prevent conflicts from emerging in the first place. Moreover, empathy is a tool to transform interpersonal or intergroup conflicts and build a culture of peace already from younger age.

Regardless of the transformative power empathy has on peacebuilding, it possesses certain limitations and challenges as well. Waldman (2016b) states that empathy can e.g. be misunderstood, exploited, or used for discriminatory purposes. Empathy has also been regarded to cut moral judgement, cause false perceptions of the self and the peace process, and in some situations, it is considered socially or politically costly. For empathy to flourish, it is essential to overcome the underlying and common assumption that the enemy is evil and have a certain level of open-mindedness and willingness to devote time into understanding the other. Moreover, to widely adopt empathy as a tool for peacebuilding, it needs to be acknowledged by the people in the field as an analytical tool and associated with its positive outcomes rather than weakness and femininity.

2.4.2 Empathetic Technology

Empathetic technology is another field, which is not yet widely explored although there is evidence that especially communication technologies can be used to foster end user empathy. For example, Manney (2008) states that “empathy and technology have been linked for millennia. ... Empathy and technology became inextricably linked when information technologies developed”. This may be true, especially when taking into account how empathy can be aroused: the more knowledge, cues, and stories we can share using technology, the more likely it is that the use has an effect on end user empathy. The



effect on the other hand can be either positive or negative depending on the content and context.

There are multiple examples of empathetic technologies, hence of technologies that have been used to foster empathy. One group of technologies that has received a lot of attention recently is immersive technologies, which include VR among other immersive virtual environments. These environments are considered highly impactful because the end users' perceptual input of the real world is replaced with perceptual input from a virtual world, which creates the sensation of actually being inside a virtual environment or in other words increases the sensation of presence (Ivanovitch, 2017; Schutte and Stilinovic, 2017; Herrera et al., 2018). In addition, such environments are considered to increase engagement that the end user is experiencing, which together with increased presence is considered to positively correlate with the level of experienced empathy (Schutte and Stilinovic, 2017).

In general, immersive technologies, such as VR, can be used to foster understanding on phenomenon that are taking place far, such as deforestation in the Amazon and its effects of biodiversity and climate change (Tincq et al., 2019). In addition, VR can work on generating empathy by putting ourselves in someone else's shoes so to say, be it refugees, elderly, or racially different people. For this reason, VR has even been considered the ultimate empathy machine (Milk, 2015) when it comes to changing people's attitudes.

When taking the broad definition of peace, any of the above examples of using immersive technologies to foster empathy could be considered measures to build a more peaceful society. In addition, there are few examples on using such technologies to solve conflicts. One example is by Hasler et al. (2014), who explored the use of VR and avatars to increase empathy towards the Palestinians in relation to the Israeli-Palestinian conflict. Although they did note positive effects and increased empathy by the Israelis towards the Palestinians after virtual sessions with an avatar, they were concerned regarding the generalizability of the effects. It was not considered evident that the increased empathy would be mirrored to the whole Palestinian population. Another general concern is whether the positive effects on empathy are long-lasting or not. Moreover, there are concerns regarding the accessibility of VR systems and their use to promote violence, yet Ivanovitch (2017) considers that VR will have an increasing role in peacebuilding in the future.

Other technological applications that could have an increasing potential for peacebuilding and peace education especially are empathy enhancing games. For example,



Lim et al. (2010) present a virtual role-play called ORIENT in their research article, which focuses on exploring the effects of the game on its players. As a conclusion, they note that such games have the power to foster inter-cultural empathy, engage in activities with people with differing backgrounds and hence promote collaboration.

Other technologies that have been studied to foster empathetic behavior include e.g. social media and social networking channels. As Gorry and Westbrook (2011) point out, there is enormous potential in using social media channels for engaging audiences. According to them, social networking channels can be used to facilitate deeper and more authentic connection. In addition, social media provides a channel to listen to the audience, which was considered to develop more empathy towards them. A great example of using social media to foster empathy and reduce prejudices towards others is a platform called Humans of New York, which uses social media, such as Instagram, to share stories of different people living in the Big Apple.

Nevertheless, there are reasons to state that any communication technology could be used to foster empathy. According to Manney (2008) empathy is enhanced through storytelling, which is something that also Gorry and Westbrook (2011) refer to. Stories allow individuals to open their sensors and experience the world through someone else's eyes. For example, the power of a chatbot-based solution called "Yeshi" was in the story that was told by this little Ethiopian girl while searching for clean water. As Manney (2008) points out, stories have been used to trigger empathy for centuries, ICTs are just new platforms for sharing those.

To summarize, empathy refers to the ability to sense and understand the emotions of others. For this reason, empathy is the base for common understanding and a sense of common humanity. Therefore, it can be said that empathy is an important tool for peacebuilders – something that should not be neglected but trained. As empathy is regarded as a skill that can be enhanced intentionally or unintentionally, it is something that technology can help foster. One way technology can be used to train this skill is through storytelling, which is considered an important mechanism for enhancing empathy since centuries.



3 Research Method

The empirical part of this thesis was built particularly to deepen the understanding on the use of different technological platforms in the peace sector today. Moreover, the goal was to understand whether there are any links between the use of these technologies for peacebuilding and end user empathy.

This chapter focuses on describing the empirical part of this thesis in detail. First, the method and approach will be explained, then the research site, participants, and interview agenda will be introduced. Last, the analysis process will be explained. The findings will be presented in chapter 4.

3.1 Method

When roughly categorizing, academic research can be divided into descriptive and exploratory research. While descriptive, or quantitative, approaches are aimed at describing situations in detail by sharing counts and measures of things, exploratory, or qualitative, approaches are aimed at finding answers to the questions what, how, when and where, and hence contributing to theory (McNeill and Chapman, 1985; Berg, 2001). Qualitative research thus taps into the essence and ambiance of the things that are explored and refers to their meanings, concepts, definitions, characteristics, metaphors, symbols, and descriptions (Berg, 2001). For this reason, the results of qualitative research cannot be generalized to a larger population whereas the results of quantitative research can be.

Exploratory research is often initiated because a topic or an idea one wants to learn more about emerges, but there is only little previous research on it (Berg, 2001). As there often are no expectations of the outcome that should be validated as in descriptive research, exploratory research is an excellent way to examine novel phenomena, which have limited research conducted previously. As there is only limited research available on peace technology and on the relationship of technology and empathy, using exploratory research approach to study the topic of this thesis seems valid. This research was hence conducted as a qualitative study for which data was collected in interviews with peace practitioners representing different areas of expertise.

The interviews were conducted as semi-structured, or semistandardized, interviews following the general interview guide approach (Berg, 2001; Turner, 2010). This type of interview is located somewhere in between a completely standardized and a completely



unstandardized interview (Berg, 2001). As is stated by McNamara (2006) this style for interviewing allows more flexibility while still making sure the same topics are discussed with all the interviewees. The predetermined topics or questions are often gone through in a systematic manner in each interview, although the interviewer is allowed the freedom to go beyond finding responses only to these topics or questions (Berg, 2001).

This approach for the interviews was selected to comply with the different backgrounds and areas of expertise of the interviewees. As the interviewees were expected to share differing, but valuable, information for this thesis, it seemed relevant to allow some level of flexibility. Moreover, it was expected that this approach would not limit the thinking of the interviewees while still sharing relevant information for reaching the goals. Therefore, the general interview guide approach seemed like a better fit than an informal, unstandardized interview or a completely structured interview approach.

The interview guide, which was designed to support the interviews, included the predefined themes that were gone through with each interviewee and some questions that were asked if needed (appendix 2). The topics that were discussed over the interviews included peacebuilding and how the interviewee defines it, technology as a tool for peacebuilding and the use of platform technologies for peacebuilding. An overarching theme was empathy and how it relates to peace. As mentioned, the defined questions were only meant to help if needed to find good examples on the use of technology for peacebuilding and whether or not empathy could be fostered in the process. In the beginning of each interview, a consent for recording the conversation was asked. Transcripts of all the interviews were written based on the recordings.

3.2 Research site

The interviews for this research were all conducted using different information and communication technologies. This decision was made due to two main reasons: First, the interviewees were located in different countries, hence organizing face-to-face meetings and commuting would have been inconvenient both from a financial and a sustainable point-of-view. Second, at the time when the interviews were conducted (April, May, and June 2020), the world was facing a global pandemic (COVID-19) due to which multiple limitations on meeting people in person and commuting were in place. Moreover, online conferencing tools function seamlessly, hence the decision made to conduct the interviews online was rather easy.



Each interviewee was asked for their preferred ICT tool to make the interview as easily accessible as possible. This was considered a suitable approach as it also allowed the interviewees to take into account possible cybersecurity measures that they were required to take care of by the organizations they represented. In case the interviewee did not have any preferences on the tool, the interviewer proposed to use either Skype or Zoom, which both have their own call recorders. Backup recordings for all calls were made using Audacity application for Windows 10.

Although the world situation while conducting the interviews was rather chaotic due to the COVID-19 crisis, the empirical part of the research was conducted successfully and without further issues. There were no major connection breaks during the interviews, apart from one which was with Christina. This interview needed to be restarted after the first five minutes had passed.

3.3 Participants

Participants for the interviews were selected so that they represented a variety of different approaches to building peace. An underlying expectation was that all interviewees were currently using or had used some technologies in their work or that they had encountered different technologies while working in the peace sector. As empathy in general is considered a key building block of peace, it was also expected that all the interviewees had an opinion on the intersection of peace and empathy.

To gain a better overview on the topics at hand, participants were selected so that they represented a variety of different backgrounds from a professional and a demographic perspective. Five out of the 11 interviewees were women and most of the interviewees were located in different parts of the world with the focus on different aspects of peacebuilding and on different geographic regions. To maintain confidentiality and ensure that the interviewees remain anonymous to the reader, pseudonyms are used to identify the different interviewees. Background information on the interviewees can be found on the table 2.

The participants for the interviews were gathered through snowball sampling to overcome the potential difficulty to reach populations. Snowballing refers to a process where some people are initially identified with the relevant characteristics for the research and then they are asked to reference other people with similar personal attributes (Berg,

2001). When connecting with the potential participants, an invitation for the interview together with a brief introduction to the research topic were shared (appendix 1).

Table 2: List of Interviewees

Name (Pseudonym)	Location	Area(s) of Expertise	Years of Experience
Anna	Finland	International relations; crisis management; peace mediation; business; peacetech	25+
Marcus	Finland	Development cooperation; humanitarian work; peacebuilding; ICT	20
John	Belgium	Crisis management; civilian crisis management; international affairs	27
Matthew	Germany	Political psychology; conflict transformation	4
Chris	Israel	Video games	6
Lucas	Finland	Political science; peace mediation	20
Sofia	Spain	Political science; development and trade; peace education	20
Alex	Qatar	Peacebuilding; conflict transformation; youth movements	30+
Christina	Spain	Development studies; peace education; youth in peacebuilding; inner peace	11
Jasmin	United Kingdom	International relations; anthropology	5
Miranda	Poland	Human rights; peace education	9



3.4 Interview Agenda

The interviews were all held in English, which in most cases was also the common language between the participant and the interviewer. Although the common language would have been the native language (Finnish) of both the interviewer and the interviewee, a decision to hold the interview in English was still made. This was considered suitable for the interviews because the interviewees were accustomed to use English in their work in the peace sector.

An agenda, or the interview guide, was prepared for the sessions with a schedule to keep the conversation to 1.5 hours max. As the interviews were semi-structured, the conversation flew freely while the interviewer made sure to cover the topics listed on the interview guide and to mind the time. The interviewer's role was to lead the conversation back to the topic in case it went to an irrelevant side-track. The interview guide can be found from appendix 2.

In general, the interviews started with a short, free form introduction to the main topic followed by a short introduction from behalf of the interviewees to understand their relationship with peacebuilding and area of expertise. The goal in the beginning was to establish a conversational, relaxed environment and to set the grounds for further discussion. Once the introductions were done, the interviewees were asked to share their definition of peacebuilding so that the interviewee would understand their take on the topic better. Other topics presented in the interview guide included the use of technology for peacebuilding and the role of emotions and empathy for peacebuilding. The topics were discussed in order of appearance. The exact questions written on the interview guide were rarely asked, because in most interviews, the conversation flew organically from one topic to another.

This approach enabled the interviewer to give more space for the interviewees to share their experiences on the topic at hand. When the conversations were not guided too strictly, the interviews ran in a more relaxed manner and in some cases, this led to the interviewees having epiphanies on the go. Moreover, interesting mentions were made also on topics that were not listed on the interview guide, such as the relationship between the current COVID-19 pandemic, peacebuilding, and the development of peace technologies.

3.5 Analysis

For analyzing the data collected for this research, an interpretative approach was selected. The interpretative approach enables the researcher to discover the practical understandings of meanings and actions (Berg, 2001). This approach was selected over other approaches, such as a social anthropological or collaborative social research approach, as it best suits the analysis of written text – in this case, interview transcripts. Through the analysis, the aim was to unfold the essence of peacetechnology platforms and understand their perceived relationship with end user empathy.

In general, content analysis begins by determining the categories for it. The different categories can be determined inductively or deductively, or in some cases by the combination of both. In inductive approach, the content is key as the researcher aims to find seemingly meaningful themes that emerges from it. Deductive approach on the other hand is defined by the use of an existing categorical scheme presented in previous theory that the researcher uses to assess the hypothesis. (Berg, 2001)

For this research, the content analysis was done using inductive approach. As Berg (2001) mentions, the inductive development of categories allows the researcher to link the categories to the actual data better. Although the categories for this research were drawn based on the open coding of the interview transcripts, the researcher noticed many similarities emerging from the data on themes that had been mentioned in previous literature and in the interview guide.

The analysis of the content started after all the interviews were conducted and translated into a written format. Each transcript was then gone through in terms of the attitude and perception of the interviewee towards the use technology for peacebuilding and of main findings of the interview. In practice, the analysis followed the Gioia methodology (Gioia et al., 2012): To start, a first-order-analysis was conducted to mark down all relevant pieces of information, after, a second-order-analysis was conducted to thematically categorize those pieces. Based on the analysis, a data-structure was drawn to help understand the findings. The goal of the analysis was not only to find whether the findings had precedents, but also to see whether new concepts were discovered.

As mentioned, the goal of the analysis was to find emergent themes from the data based on which conclusions could be drawn. Although the themes were developed using an inductive approach, all apart from one could have been deducted from the interview guide. The themes that were identified are:



- Peacebuilding according to the interviewees
- Technology for peacebuilding: current state, future potential, and possible pitfalls
- Emotions, empathy, and peacebuilding
- Emotions, empathy, and technology for peacebuilding
- COVID-19, peacebuilding, and technology for peacebuilding

After categorizing, the content was analyzed in terms of similarities and patterns, relationships, commonalities, and disparities. Overall, there were only little major disparities, for most parts, the interviewees agreed on several topics, which made drawing similarities, patterns, and relationships easier.



4 Findings

This chapter focuses on presenting the findings of the empirical part of the thesis. First, the interviewees' approach to peacebuilding will be presented to clarify the context for the rest of the findings. Second, the interviewees point-of-views on technology for peacebuilding and their thoughts on its current state, future potential, and possible pitfalls will be introduced. Then, the focus will shift on the main theme of this thesis, which is the intersection of peacotech platforms and empathy. Last, other findings will be presented, which include the relationship between the ongoing COVID-19 pandemic with peacebuilding and peacotech.

4.1 Peacebuilding According to the Interviewees

To set the ground with all the interviewees and to understand their perspective on the topic at hand, they were first asked to share their approach to peacebuilding. The participants had relatively similar views on the concept, many talking about actions or processes that are implemented to foster peace. Peace on the other hand was commonly defined referring to Galtung's approaches on negative or positive peace. Negative peace refers to the absence of all violence, direct, structural, and cultural, whereas positive peace refers to something that goes beyond the mere absence of violence, such as justice for all or a state of sustainable peace. In addition, two participants highlighted the presence of inner peace when defining the concept.

Overall, peacebuilding was considered to refer to processes, which transform societies so that they become more peaceful. The end goal of such processes would be a state of sustainable peace, where there is no risk for the society to spiral (back) into conflict. In the short term, this means that violence is prevented, and its effects are encountered. In the long term, societies are repaired and built anew, and conflict interests are transformed into other kinds of interests, i.e. by providing other avenues than the conflict for generating income. To reach the goal also the human being is transformed into something more positive while prejudices, attitudes, and behaviors are changed actively to enhance fairer relationships. Overall, peacebuilding was regarded a lengthy process as rebuilding societal structures, institutions, and relationships on all levels may take years.

Regardless of some minor differences in the approaches to peacebuilding, all participants agreed on some basic elements. First, there was a consensus between all



interviewees that conflicts are highly contextual, which naturally affects the nature of all peace processes. The contextuality factor was also considered to have an impact on the use of technology for peacebuilding. Second, there was an agreement on the vitality of trust building in the peace process. Third, building common understanding was considered essential, because otherwise there would be no room to find solutions for common problems. In addition, it enables differing narratives on the conflict to be bridged and areas of disagreement to be found. Last, some participants highlighted the importance of inclusivity in the peace process, because it was regarded to lead to better solutions. In general, the interviewees thought that the people who are affected by the peace process should always be able to take part in it one way or another.

One of the differences regarding the concept of peacebuilding was about the width of the concept. Some interviewees put the term “conflict” in the center of peacebuilding, while others defined peacebuilding as something that takes place even without an active conflict. For example, Lucas said directly that it makes sense to put the term conflict in the center, while Matthew stated that although there is no active conflict in the “so-called West”, there is still need for peacebuilding to reduce prejudices, racism, and polarization of societies.

Another difference was related to the notion of inner peace. Two participants stated that understanding the self and building inner peace are also essential parts of the peace process. Peacebuilding was hence considered to be something that begins by looking within. Same was considered to apply for empathy: one needs to empathize with oneself first before trying to empathize with others. The roles of inner peace and empathy were also highlighted when it came to building trust and common understanding. Only when the ground is set for the peace process, it is possible to find ways to approach common problems together, or to “cross the artificial dividing lines”, as Alex mentioned in the interview.

“Just like in a plane when you fly out somewhere in the world, the seat safety instructions are: Let's put the face mask first on yourself for the oxygen in case of an emergency. Then you take care of the other.

The same principle applies here.” – Alex

Overall, the approaches of the interviewees were aligned, which reflected to a common view on what peacebuilding would look like. According to the participants, success was defined as peace that lasts, societies that function, and peaceful relationships



between people and communities. Then there would be no need to actively work on achieving peace, because peace would be deeply integrated in the lives of the people. There would be no thread of violence, but there would be respect for each other and appreciation of difference. Peace would drive individuals to manage their emotions and use non-violent means to solve problems together. Moreover, peace would not only be technical, but the people would perceive their society peaceful.

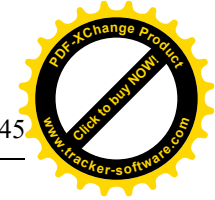
4.2 Peacotech According to the Interviewees

Prior to diving deeper into the use of technology for peacebuilding, the concept as it was perceived by the interviewees is presented. The fact that the interviewees had different professional backgrounds did affect how familiar they were with the concept of peacotech. Some interviewees had a very clear understanding of the topic, while for others the concept was new although they were users of peacotech. Regardless of the different levels of understanding, it is possible to present a shared idea of what peacotech is: Peacotech was considered to refer to the use of any technology for peacebuilding, if it is used as an essential tool in the peace process.

When discussing more about peace technologies, most interviewees referred to technologies that fall under the ICT category and definition of a technological platform. Technologies that were discussed included e.g. radio, TV, mobile phones, the internet, social media (Facebook, Instagram, TikTok), instant messaging (WhatsApp), web-based platforms, VR, blockchain and cryptocurrencies, drones and Unmanned Aerial Vehicles (UAVs), 3D printing, etc. A commonly accepted idea was that in the end of the day, any technology can become peacotech if it is used strategically for peacebuilding.

“Often these technologies for peacebuilding are the same technologies that you would use for any kind of societal processes. So we’re looking at exactly the same kind of Google Analytics or Facebook or Microsoft Teams or variants of these most often used tools in society at large. Because, well, as I said, conflicts impact all societies, so any tool used to strengthen the society can be used here and there. So that’s basically the largest group of peace technologies; they are the technologies that we don’t really talk about as peace technologies.” – Anna

The purposeful use of technology for peacebuilding was raised as an essential component of peacotech because the idea that technology is not neutral was raised multiple times in the interviews. Nearly all the interviewees highlighted that what matters more than



the technology itself, is the people who are using it and their intentions. Therefore, technology can only be a tool to do peace better rather than a solution to establish peace.

“The reason why I am interested in these technologies is basically an understanding or thinking about how can you do peace better. How can we have more durable, better peace processes. And with technology and through innovation processes we can actually help in creating more sustainable and better peace processes, which will be more contextual and more sustainable.” – Anna

Current State of Peacetechnology

Before jumping into the more practical use of technology for peacebuilding, a couple of words on the current state of peacetechnology are shared. As some of the interviewees pointed out, the phenomenon of using technology for peacebuilding is rooted in the overall change the world is going through. Our world is being transformed into a more technological world, which means that our reality is hugely influenced by technology. Therefore, technology is deeply integrated in everything we do, and its use affects our emotions and behavior. Digital is becoming the new normal.

Nevertheless, there was a consensus between the interviewees that the reality of peacebuilding is not transformed as thoroughly as the reality of other industries or our daily lives. In general, the use of technology for peacebuilding was considered to remain on a very simple level. As John put it, the role of technology overall is quite big and increasing, but technology is not well applied in the peacebuilding work in practice. The low level of application gets underlined when it is compared e.g. to the development and use of technology for defense and war.

“There’s two parts to this: There’s the ‘what kind of a role does it (technology) play now’ and ‘what kind of a role could it play in the future’. And the role now is very limited. I think that it can be said. At least the direction now is very limited. We see peace technologies, ground level applications, and some of them seems to work better than others. Interesting stuff happening with communities, interesting activities, but then when we’re looking at the scene as a whole, the role of specific technology that has been developed to promoted peacefulness is very limited.” – Anna

“I don’t think that technology is used at all in its all possibilities, and the capacities that it could then support and assist in the peace process and peacebuilding. And again, we need to look a bit about what we speak about. Do we speak about technology related to the activities preventing wars and conflict, so let’s say, in building peace and protecting peace from the development leading to worse? Or are we speaking about post-war and post-conflict face? Or are we speaking about the exact technical process of peace agreement



and peace mediation? I would say that ... when we choose the more broad understanding (of peacebuilding), then we would say that all technology that is related to keeping the society running based on human rights, equality, equal access to school, equal access to justice, equal access to political participation, to free information shared by free and independent media, so to building society, keeping the society up and running based on the will and the needs of the population can already be seen technology assisting peace to stay and peace to be frequent.” – John

“I think that with peacebuilding we’re still debating about the basics, how we standardize data, how we make sure data is accessible, so scratching the surface really on the peacebuilding side. That is why I think this topic is hugely relevant as we are lacking behind (compared to wartech), maybe even unable to catch up.” – Marcus

As the consensus was that peacotech has not reached its full potential yet, the only question that remains unanswered is why. One underlying reason affecting the limited use of technology for peacebuilding is the low level of technology development in the peace sector. There are only a few technologies that are developed specifically for peacebuilding, other peacotech are adopted from other fields. Yet, the interviewees thought that there is a need to modernize the approaches and tools that are used for peacebuilding, because many that are currently in place date back decades.

Other reasons that were pointed out were the slow transformation pace of the peacebuilding field compared to other fields, such as technology development, and compared to the issues peacebuilding aims to solve. In general, peacebuilding was considered a very traditional field where the adoption of new technologies is simply not fast enough. A couple of reasons were pointed out to explain the slow adoption. First, peace practitioners might not be aware of their technological needs, because they do not understand the different possibilities technologies could provide. Second, peace practitioners may be lacking skills and interests in implementing technologies in their work. Both reasons were directly pointed out by some of the interviewees, who themselves seemed to lack technological understanding, skills, and interest in implementing more technologies in their work. On the other hand, several interviewees seemed blind to the amount of technologies they used already and the number of doors their use had opened.

Furthermore, some of the interviewees pointed out that the full potential is not reached because currently many technologies are developed to support causes other than peace or non-violence. According to Anna, current technology development is neither aspirational nor inspirational from the perspective of peace practitioners. One reason



leading to this may be the gap between the two fields: The peace community is not interested nor does it have the resources to develop new technologies and the technology community might not understand the needs of the peace practitioners, which makes them unwilling to take responsibility over changing the reality of the field and pour their own resources into the development. Clashing values may also be problematic as the technology field is typically highly profit-driven whereas peacebuilding is values-driven. Financial interests of one do not necessarily meet with the willingness to pay of the other.

Moreover, as John pointed out, peacebuilding is a human-centered process at its core hence there is neither time nor brain capacity to think about innovation or the use of technologies whilst in the middle of a conflict.

“I would say that every time we face crisis and conflict, our priorities are so much around that conflict itself that there’s no time or people to think, let’s say, the aspects of development and innovation around the problems we work with. So, when we are in the conflict we are so much finding the reality, finding the practical solutions on reactive premises, so that there’s no time, space or brain capacity to think what might be some other innovative aspects to be developed to help. In general, the work related to peace is very human driven.” – John

Nevertheless, the interviewees shared a positive attitude towards the future of peacetech: Technology possesses a lot of potential for peacebuilding. Technology has already transformed conflicts, so why could it not transform peace. Currently, the attitudes towards the use of technology are changing towards more open and positive while a peacetech ecosystem is being created. In addition, the globally tech savvy youth is driving the adoption and wider use of technologies for peace. This can also lead to more peacetech emerging from outside the major tech hubs including conflict-affected regions. Moreover, as the use of ICTs is making conflicts more international, new avenues for the use of technology for peacebuilding are opened at the same time.

“But then there’s the possibility for the future. And that possibility is transformative for many reasons. We’re seeing a lot more technology in conflict, be it social media, hate speech and everything associated. We’re also seeing conflicts where the population is very young. And when we have these young populations, they tend to be quite technologically savvy. And in some conflict areas there is very active technology development, which is really positive. And in general, what we can see is that fragility and conflict systems are becoming much broader and influencing our globe much more widely, so there is growing interest in mechanisms that support societal stability and peace.” – Anna



Use Cases of Technology for Peacebuilding

The opportunity for technology to foster peace in the large scale has been hugely impacted by the possibility to provide stable internet connection globally. As was noted previously, technologies, including the internet, are not solutions to conflicts, but as they can positively transform the world, they can be used as great tools to do peace better. As an example, several interviewees pointed out the transformative power of ICTs, such as mobile phones, instant messaging, and social media. They make the world feel smaller and they enable new doors to be opened; They possess potential for people to widen their networks. These technologies are equally important to the people affected by conflicts and to the people working to solve conflicts and reconstructing societies.

“In Kosovo for example, the minority, the Serbian population that became the minority, were actually living in separate villages in the middle of the Kosovo Albanian, the majority population. After the war the situation was very tense, and violence was still used. Now it turns that the new majority was using violence on the new minority and the minority leaders, the village leaders, wouldn’t now even talk to each other, because there was no infrastructure where the Serbian minority committees from one village to another village could talk to each other. Therefore, building the local network and providing the leaders with mobile phones was actually the way how they could start communication between the minority groups and that way be more representative as a minority when solving the problems with the majority population.” – John

“And one was creating WhatsApp groups, for example, to make sure that what was talked about in the room (where peace negotiations were taking place) was shared with people outside the table to connect with a lot of feedback that was quickly able to tabulate information and provide it to the young people inside the room that enabled them to then use it to advocate for issues, which led to the issues of refugee status of young people to be included in the peace agreement. Right. So those kinds of ways technology has been an amazing tool to have.” – Alex

In general, the focus of the conversations was on software applications, but other, more traditional communication technologies, such as radio, videos, and TV, were also discussed. From these technologies, the power of radio was underlined multiple times in the context of developing countries, sub-Saharan Africa especially. The effectivity of radio was explained by radio leaving more space for the listener to tap into imagination, whereas TV gives the viewer a more complete picture of a story. In addition, it was emphasized that today the use of both radio and TV converts into mobile phones, which makes them more attractive for youth. For example, many widely used social media platforms, such as Facebook, can be used for broadcasting while engaging the people in a conversation.



“You know about the hate radio program in Rwanda that they know ended up leading to killing millions of people? But you might not know that on the other side of the border in Burundi we were even asked by the US government to start up this radio program to help reduce the fear and the tensions that existed in Burundi when millions of people running across the border from Rwanda. And that actually helped calm people down, they reduced the tensions, they reduced the fear of the other, which is unknown. Fear of the unknown, which was reduced, and therefore the number of people killed in Burundi dropped, and over a million and a half people who were running away, lives were saved.” – Alex

The effectiveness of ICTs for peacebuilding relies on their capability to rapidly share information, news, and stories in a reliable manner. They can also be used to foster community building and strengthen the sense of belonging. Online platforms can in addition be used to support the organization and coordination of people and events, such as social movements and protests. Platform technologies can also improve decision making processes and inclusion, which can lead to better responses to violence and conflicts. Overall, the use of ICTs has made the time between identifying a need and addressing it shorter worldwide.

One example that was shared in relation to community building was regarding an online platform for bringing people together to explore peace and conflict resolution related topics. The web-based platform was built in 2004 to connect youth from different countries in West-Africa. Although the platform itself was simple and the content was limited because of unstable internet access, it still managed to empower its users by building a sense of community. The platform enabled to solve issues of mobility, because it allowed the young peacebuilders to connect regardless of their physical location. The platform enabled the users to connect and communicate through its e-groups and discussion forums, which were actively used also by the platform providers e.g. to share messages spiced up with humor to reduce stereotypes.

The reason why ICTs were considered essential tools for improving communications and building a sense of community lies in their ability to share and popularize narratives. Storytelling was considered e.g. to impact attitudes and behaviors as well as to foster empathy. When technology can be used to open the users' mind and heart to think differently, it can be used as a tool for building trust and common understanding. Therefore, technology and storytelling can become means to transform underlying social norms, which is the first step of a peace process. New social norms lead to institution building, which leads to new marketplaces being established. Whereas storytelling using



technology can initiate the peace process, technologies can also be used to bridge the different parts of the process together.

“Why worry about somebody else’s narrative, when you need to be creating your own narrative and popularize it, socialize it, and get people in it, building norms around it. If you think about the peace process, one step is norm building, second is institution building, making institutions more accountable, more suitable for these new norms, and the third is, building a new marketplace ... And then the market is about how people see this (the new norms) as a valuable way of doing business. Then they invest in that market and create a new market, whether it is corporations or other organizations. So that is the three-step model to thinking about peace, taking the concept of peace, and making it institutionalized to fit in, and technology can be a bridge to all of that.” – Alex

In addition to improved communications and connectivity, another major area technology has already had an impact is the collection and usage of data for peacebuilding. Tools that help gather, process, and communicate data were considered to enable positive change, especially if they were locally applicable. Such technologies that rely on gathering and processing data have been used e.g. to identifying human rights violations or violations of ceasefire agreements. Data can be used to improve overall security, or it can even be used to affect politics of peace and war.

“Have you heard about Ushahidi? Ushahidi is a beautiful story. You have a bunch of coders spread around Africa, who started this platform, which originates to Kenya. They were in a serious attempt to prevent incidents, trying to make information available also to reduce violence. Not only to be alarmist, but to really show what was going on and needed a reaction to keep peace in that sense. And also to build peace. Ushahidi is being used elsewhere also, like in Japan ... in one of the most technologically advanced nations in the world. ... what I find relevant is that the same platform is used for example for tracking harassment in Egypt. So there you have broader peacebuilding looking at the question to give societal peace in relatively stable societies where for example gender-based violence and harassment are big issues. So the same platform is applied, and that is a good example of what we call an organic peacetech element where a platform can be used in very different circumstances.” – Marcus

The interviewees also mentioned other use cases of peacetech, which included technologies for reconstruction and for military peacekeeping. There are multiple technological platforms that can help in the reconstruction process, such as 3D printers or different mapping and modelling tools. The use of technology for reconstruction can be considered beneficial for the overall peacebuilding process because it can make peace more concrete for the people affected by conflict, which then can enable trust building.



Military peacekeeping technologies on the other hand were considered more or less on the grey area because the line between those and wartech is quite fine.

Features and Attributes of Successful Peace Technologies

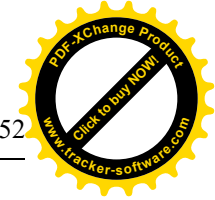
Among the conversations on peacotech, the interviewees shared ideas on the features and attributes they should possess. The most important feature that was pointed out by all the interviewees was accessibility, which was often followed by a notion that peacotech should be free for the end users. Accessibility and the low-cost of peacotech were often mentioned hand-in-hand, although other reasons explaining why it should be free were also mentioned as can be noted from the quote below.

“Of course I understand that it asks that there needs to be resources (to build peacotech) and that’s one of the biggest problems here. That the conflict parties don’t have any money, they cannot even pay you anything, because if the other party pays you more than the other party, they would think that you were biased because the other party paid you more than the other party. So basically, mediation and technology for peace has to be free.” – Lucas

Moreover, several interviewees pointed out that peacotech should be easy to use with simple user interfaces. When the complexity and price of technologies increase, there should be ways to overcome them if used for peacebuilding e.g. through education and technology collaboration.

The possibility to contextualize technology was also considered an advantage – even a necessity, although for wider adoption of a certain peacotech some level of standardization was regarded an asset. To contextualize technologies and increase the likelihood to succeed with the use of technology for peacebuilding, there was a consensus that peacotech should be co-created with its end users. As in any development process, the end users should be part of it to understand their needs and how the use of a certain technology would impact them. Co-creation was highlighted also because conflicts cannot be solved externally, but the conflicting parties can be assisted to find better solutions for their challenges. Moreover, when technologies are developed in collaboration with the end users, testing and scaling become easier.

Another topic that was pointed out as transformative by several interviewees was transparency that technology can provide when it is designed as a quality of a system.



“things like transparency can be very transformative. And it has been really interesting to see for example how, even with all its problems related to workers’ rights etc, Uber has undone certain kinds of low-level criminality and corruption in certain areas. As taxi drivers can no longer try to get money of you through Uber. These are very interesting transformative technologies as well.” – Anna

One way transparency becomes an asset is when it increases safety of the users, which otherwise was generally raised as a concern together with security and confidentiality. Regardless of the risks, the interviewees shared a positive view on the potential of peacetech, when serious efforts are put into mitigating potential security related challenges. When security measures are in place, technology can for example enable participation of such people in the peace process who would otherwise even risk their lives while doing so. On the other hand, provision of some level of privacy was also considered essential for successful peacetech.

“Also, confidentiality, there are people that don’t want to share their personal accounts, or, when you work with a fellow from Libya, from Iran, they are being monitored. What they say, what they share, so you have to be careful. What you ask them to say or do, show that the whole group agrees to keep things in that conversation.” – Sofia

Although with certain features and attributes peacetech can flourish, several interviewees highlighted that peacebuilding is a human-centric process, where technology can only be used as a helping tool. Therefore, in the end the platforms themselves do not matter that much, but the people using them do. This means that the ones who are bringing technological tools into the peace process should possess the right abilities and attitudes to use the tools properly and to maintain human connection.

“So how can you build that trust and that connection? In the end, no platform will give you that unless you have the right attitude.” – Christina

The Potential of Technology for Peacebuilding

As was pointed out earlier in this chapter, several interviewees thought that technology is not used at its full potential when it comes to peacebuilding. Therefore, multiple areas for further development were mentioned during the conversations.

The idea that there is a lot of room for further development stems from the thought that there are multiple problems peacetech could solve. To find the right problem and



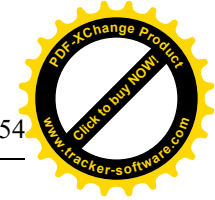
corresponding solution, the people developing peacotech would need to ask the right questions and identify the desired societal change. The answers should come from the conflicting parties, which yet again highlights the importance of collaboration with the end user.

In general, the interviewees thought that the highest potential of peacotech is when it is used at the grassroots level. For example, technologies can be used to strengthen safety in the communities, foster democracy and fair elections, enhance networking, facilitate learning, and fulfil professional needs, which can all help in conflict prevention and recovery. At the same time, technology democratizes power and enables people to organize, to build protest and social movements. While social media, crowdfunding, and e-learning platforms were considered beneficial for the above, blockchain and cryptocurrencies were also said to possess huge potential. For example, there are past examples on using blockchain for organizing fair and democratic elections and more recent ones on using cryptocurrencies to improve the livelihoods of refugees and reduce organized crime.

On a more societal level, technologies were considered to have untapped potential when it comes to reducing stereotypes and fighting racism, which would in turn help change attitudes. Social media and immersive technologies could play a major role in these processes. Moreover, technology could be used for trust building and bridging gaps in societies to prevent conflicts for example through technology assisted state, institution, and capacity building. Another important topic where technology could assist is in transforming economic interests centered around conflict into something else. The use of technology could e.g. enable the creation of new economic interests by the establishment of new partnerships, such as technology startup collaborations.

Improved data gathering and processing could be further developed for conflict analysis. A lot of data is already gathered using social media, smart phones, and other devices, but the tools to analyze that data and gather more conflict specific information were regarded limited. More information is needed on issues and their effects, people's perspectives on those issues, and priorities of conflict parties when it comes to solving them. Improved conflict analysis would work as a base e.g. for improved predictions and common understanding. The use of more localized data gathering tools could also improve inclusion if information was gathered covering a wider population.

Another field that several interviewees wanted to see technological advancements in was peace mediation and dialogue for which improved data gathering and analysis were



considered essential. In addition to improving inclusion of masses, technology could be used to identify conflicts among people to understand where mediation and interventions are needed. Although mediation technologies were considered highly relevant overall, their importance was highlighted especially in relation to the grassroots level.

One last field that was mentioned to possess potential for the future was tracking technology if it was developed and used with positive intentions. Tracking was considered essential in relation to fighting fighters and terrorist, organized crime, smuggling people, drugs, guns, or oil, which are often related to conflicts and war. Interestingly, a couple of interviewees pointed out that such software platforms that could be converted for the use for peacebuilding are being developed due to the COVID-19 crisis. Hardware platforms that could be used more for such purposes include drones and UAVs.

Technology for Peace Education

One major field that ICTs have already impacted and that could be more thoroughly transformed in the future is peace education. In short, the goal of peace education is to make people understand that peace is more beneficial than war. This topic emerged multiple times as an important field for future development for several reasons: first, peace education is often targeted to youth, who tend to be more tech savvy and shaping the future of peacebuilding. Second, due to the current situation with COVID-19, many educational operations have already been transferred online, which builds a solid base for future development. Third, the aspect of empathy is strongly present in peace education as many activities and exercises aim at understanding the perspectives of others. Last, several interviewees had first-hand experience with peace education, which affected the results.

When talking about technology for peace education, several interviewees pointed out that they had already used different communication tools, social media, and video streaming platforms, in addition to online education platforms, such as Google Classroom, in their work. What was considered relevant, was the aspects of information sharing and rapid communication, which enable trust and community building. The main concern related to the use of technology for peace education was the question of human connection, which was considered essential for the process, but not necessarily translatable to technology.

As said, empathy is central for peace education at all levels, from educating children in the kindergarten to adults, even if the cognitive ability to put oneself in someone else's



shoes only develops in the teenage years. This so-called multiperspectivity is gained through role-plays, simulations, and storytelling, as well as active listening, dialogue, and self-reflection. When it comes to peace education, technologies that can support these activities would also be used to foster empathy in the context. Technologies that could be used more for the purpose include communication platforms, educational platforms, and video games to name a few.

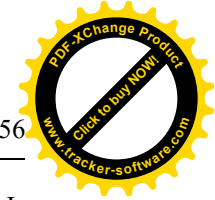
“And we thought that that (Minecraft based game) would be an incredible way to reach young people in the language that they're familiar with, and help to humanize the stories of people going through it (war and conflict) because you know, the news obviously condense things into stereotypes and images. And very often you know all of us have limited opportunities to really encounter stories of other human beings to humanize what it is that's going on.” – Miranda

When talking about future potential, a number of interviewees pointed out the power that video games possess for education. Although there are already multiple video games that are used to discuss peace and conflict, there remains a lot of untapped potential. For example, games could be further explored to bring people together in a virtual environment to reduce stereotypes and racism. Examples that were mentioned by the interviewees included e.g. the PeaceMaker game by ImpactGames and Games for Peace as an organization.

The power of video games lies in their ability to bring people together and lower barriers for interaction because the starting point is that everyone is equal. This equality is often enabled by the use of avatars and a common language (English) in the games. The fun-factor of games was also considered to connect people. Moreover, games are also relatively accessible and low-cost as the only thing needed for participation is a computer or a mobile device.

One gaming platform that several interviewees pointed out as a good example to develop educational games on was Minecraft. The success of using Minecraft for peace education is based on the thought that it is a positive game: It is about building, not about fighting. In addition, it is an open environment to develop new narratives on and bring up other perspectives to topics such as the lives of refugees. Most importantly, Minecraft is popular among children and youth, which makes it more attractive for developers.

“I think games are probably, when I am talking about education, the most unused medium with the most potential. It doesn't matter what you want to teach, you want to teach empathy or math or history, they



have potential to help you teach that. And specifically, if your audience is children. That's the bottom line. I don't think it is the perfect tool, but I think it is the tool with the most potential that is not being used."

– Chris

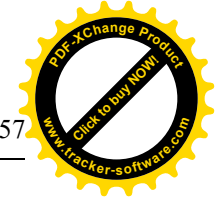
Releasing the Potential of Peacetech

When talking about peacetech and its potential, many interviewees shared examples on how to improve the use of existing technological platforms for peacebuilding. The focus of the conversations was on widely used tools because as several interviewees agreed on, it is difficult to build new tools solely for peacebuilding and compete against the major platform providers, such as Google or Facebook. In most cases, the local populations are already using the mainstream platforms even if they were not considered convenient e.g. from the security perspective. Therefore, some people argued that peacetech should be specifically developed for the cause it aims to serve, although compromises are needed to make the technology more acceptable, understandable, contextual, and user-friendly. Hence, peacetech developers need to balance between the use of existing technologies and building new ones.

Improving the development and adoption of technologies for peacebuilding can be done by investing consciously into it and integrating technology deeper into the work of peace practitioners outside of conflicts. As was mentioned by John, it is the task of national service to provide the tools that are used by the people working in the field. He also underlined that there are political means to reinforce public support for innovation, which would then benefit NGOs and the private sector working to build peace as well.

What should not be disregarded when talking about the development and future potential of technology for peacebuilding is youth. A couple of interviewees noted that youth in general are more open towards new experiences and hence towards the use of technology. Moreover, younger generations have different worldviews, which are constantly changing due to the use of technology and which will shape peacebuilding in the future.

“Generally speaking, the way young people see the world is in a horizontal way. The leadership model young people process is a horizontal leadership model. Whereas adults, the older they get, the more we get stuck with these vertical leadership models that have hierarchies. And I think there, that's why it really comes to working with people, they (young people) automatically, generally think about the other. They're able to see the future, and the person, and then have the sense of urgency to solve something because they see

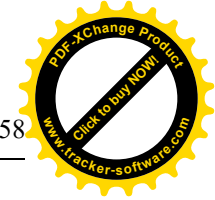


they don't want the same problems inheriting, but they also don't want to see suffering that prevails. And what technology has done is fast track that (development) even more because they are able to see something, two continents away, and in their own backyard.” – Alex

At the same time, youth globally are growing up in a technological world, where most people have access to the internet through their mobile device. Because of the extensive use of technology among the youth, also fostering empathy using technological tools becomes more important. On the other hand, there are downsides to being immersed in a technological world. The human connection can get lost and so does the sense of what is true and what is not. How technology will impact our lives in the future will remain unforeseen, but the potential development did raise one question among some interviewees. Even if technologies possessed huge potential for peacebuilding and future peacebuilders were naturally more tech-savvy, what will their attitudes be like towards technology for peace?

As a conclusion, it could be said that a vast majority of the interviewees agreed that any step of a peace process has room for technology intervention. Moreover, all technology can contribute to peace when taking the positive definition of it. Yet it is important to keep in mind that change happens where people live, which is not the online world. The potential technology possesses for peacebuilding can be best released when technological platforms connect the online with the offline world helping people live better.

“This is where online and offline worlds need to come together a little bit. If you're able to find harmony between what happens in the internet world or technology world and what happens in your physical world, they need to be a little bit more in sync. So that it really gets people together on the internet, but still act in person. Especially in the peacebuilding world it is really important when this change happens where people live. And that's important to keep in mind too: change happens where people live. People are not living in glass cylinders. This glass in this can be the internet world. But people are living outside of those glass windows, then that change needs to happen there. The transition from the glass to the outside is critical, because that's where people can then realize the other better and try to understand how to understand themselves to understand the other. So that type of realities are there. Now that's at a local level. Because we are so connected, what happens far away and what happens nearby are so dependent intricately connected to young people especially. Someone can make a really good case that can affect change faraway using technology, but without having to be there and still feeling safe. And I think that is a unifying factor. It empowers people far away and it empowers people locally. So that's a way to bridge this thing with technology.” – Alex



Downsides, Biases, and Possible Pitfalls

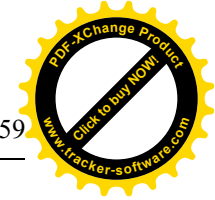
“Some (peace technologies) are great in practice, but what this pandemic is teaching us is that we also have to be dealing with mental health issues because of technology. So, it is not a panacea. It is not the magic bullet so to say, or the, magic concoction that can solve everyone's problems. So that to me is one key principle.” – Alex

Although peacetechnology possesses potential there are certain downsides that cannot be overlooked. First of all, several interviewees pointed out that on a more generic level the use of technology reduces our capacity to think and feel, which can lead to losing human connection. In addition, even if technology can give us answers with the speed of light, the overload of information can weaken our sensors. On the other hand, not all essential components of peacebuilding, such as trust building, directly translate to technology, which makes it harder to prevent violence and solve conflicts in the technological realm only.

On the more practical note, many interviewees also pointed out issues related to technological infrastructure, such as access to mobile networks and the internet. Internet access is not yet global nor is it accessible by everyone. On the other hand, in areas where the connection is established, limiting the access purposefully can serve as a reason to initiate violence. Moreover, any reason that prevents people from having equal access to technologies strengthens the digital divide. One such reason is low digital literacy, which discourages from using technologies in the first place, but also reduces the capacity to use a variety of technological platforms. Another barrier to overcome that was mentioned is language: The people who speak English benefit more from the use of technologies, because they have wider access to knowledge and international networks.

“Depending on the area, it might be very difficult for people to have internet access, and it might be that depriving people from internet access has now become a means of conflict. As there's so much happening now on mobile phones so ... to get rid of mobile connection is now almost the same as poisoning was in the past. People may be really unable to carry out a living normally if they cannot have an internet connected mobile, because then they cannot for example access their money or they cannot trade goods and cannot do this and that.” – Anna

While security issues were pointed out as one major concern, also moral and ethical issues were raised. Some interviewees even stated that ethical considerations on the use of



technology can be a factor affecting success. These moral and ethical questions were regarded important when it comes to collecting data on individuals, surveillance, and law enforcement. Potential issues that were raised included e.g. the risk for data abuse or the use of drones and UAVs with negative intentions.

Another major concern that was pointed out is the spread of misinformation and hate speech online. Not only that false information can easily be spread using online platforms, but also that information can easily be manipulated. Both misinformation and hate speech affect conflicts and they can seriously divide people. Technologies that are often used for such activities include social media and instant messaging platforms where information can be rapidly shared and the negative effects are often immediate. What was considered to increase the negative impact of misinformation and hate speech is slow response from the peace builders' side.

Many concerns were also raised in relation to younger users of technology. While they are often more vulnerable, they are also more affected by the negative sides of the online world. Younger people, who tend to have a lower capability to critically analyze content, can be heavier affected by the internet and have more emotional reactions to online content. In addition, the overload of information may be harder for the youth to process and they may pray victims to cyberbullying and online abuse.

“But I think the bigger issue that we see is also how digital tools are being used to affect young people. Whether there's cyberbullying, whether it's deep fake issues or others, people are really afraid of what that can do. So, at the same time, a lot of people are in Facebook and use a Facebook page that they pay for and are in the webpage for their own decision at a very basic level. But what we see around there is that they are ready to share information that is not real. Especially when you grow up in the internet world, the knowledge you share becomes normal. The issues of privacy, or what is considered privacy for older generations, is not privacy for younger generations. The challenge is that some people use it to make profit.

And that is where the grey line crosses over into a red line.” – Alex

The best way to mitigate risks and overcome challenges is that the people developing peacetech would keep in mind the common biases. In addition, engaging the end users in the development process may help as well as systematic assessment of the impact of a peacetech. Although there might not be proper evaluation methods to assess the effects of peacetech yet, evaluation should not be neglected. Last, the developers should not be naïve; despite good intentions something negative or counterproductive might come out.



“In Syria there was this ... app, which was to show people where safe havens were. That had open data, and people were crowdsourcing where is it likely that you could be safe. And then that app was actually used to target civilian populations.” – Anna

4.3 Peacotech, Emotions, and Empathy

To respond to the research question regarding end user empathy and to understand empathy better in the technological context, all interviewees were directed to share their thoughts on emotions and empathy for peacebuilding, and the connections between the use of technology, emotions, and empathy. Not everyone, but most interviewees, were able to draw connections between the three topics and had experiences with empathetic technologies. Although some did not have first-hand experience, they did understand the phenomenon and theoretical use-cases of such technologies.

Empathy for Peace

First, to draw a connection between emotions, empathy, and peace, peace could be regarded as freedom of fear, which is related to both emotions and empathy, as John stated. Emotions and empathy were considered to be in the heart of both war and recovery from it leading to peacebuilding. Both are part of the human, and if we are not aware of them, we might react in ways that lead to violence. Negative emotions were considered something that can blur rational thinking, block trust building, and stop us from being empathetic. Meanwhile positive emotions, such as love and joy, were considered to drive positive change and work as the base for a sense of common humanity.

Being able to humanize the other was something that came up several times in the interviews. To do so, we should tap into our basic emotions and understand ourselves better e.g. through the practice of mindfulness. Trust building and finding common understanding were also considered to depend on the ability to look within. As Alex pointed out, first, we must understand ourselves, then we can try to understand the other. Once we build this understanding, we can overcome fear of the other and truly feel, hear, and sense the other, which is the starting point for empathizing.

As was mentioned earlier, all the participants agreed that the role of empathy for peacebuilding is huge, because the ability to put oneself in the shoes of the other is the cornerstone for trust and common understanding. Furthermore, most of them agreed that



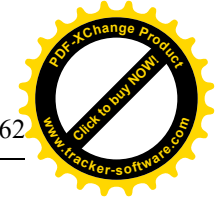
empathy is a skill that we all have and as a skill it can be trained. Hence cultivating empathy in the peacebuilding field was considered an essential building block of conflict transformation and a tool for overcoming perceptions and assumptions we have on others. Empathy should therefore be inherent in the peacebuilding work, although the level of empathy that is beneficial depends on the level of the peace process. As several participants noted, at a higher level, the role of empathy diminishes. On the other hand, field work was considered emotionally more challenging and there the role of empathy and emotional resilience grow bigger.

“I think that in the beginning when we were speaking about the different levels; are we speaking about international organizations or are we speaking about work of the states, of the capitals or are we speaking about the work of our missions and operations in the field, where we are under the same sun and in the same mud and dust, working in there where our local partners and the local people are living their lives. They are the real victims and the real casualties who really look for more peace and the rest that we are doing. And of course that is also emotional environment.” – John

“But I do think that the kind of personnel who are in these high risk, very stressful environments, if they would be better taken care of emotionally, then that would help. I can’t see how that would not have a positive effect on the peace process. For example, the soldiers, the peacekeepers they meet local residents every day. They hang out with children everyday. They get the same kind of fatigue that everyone gets in a very difficult situation.” – Anna

Although empathy was considered central for peacebuilding, the interviewees also had concerns regarding the topic. The main concern was related to how empathy is affected when living in the middle of a crisis; whether seeing suffering on a daily basis reduces the capability to empathize and interest to help the suffering people. In peacebuilding, this relates especially to field work and the first steps of a peace process. After all, as it was pointed out, one needs to be both very empathetic and not at the same time, because too much empathy might be paralyzing, yet it is needed to understand the other.

“And I would say that empathy and the ability empathize are really difficult things, because if you have too much empathy it often paralyzes you. So if you really are super empathetic, you cannot do the work, because you get paralyzed by what you see. But if you are not empathetic at all, then you are also absolutely no good at what you do, because you need to have empathy to understand what the people are going through and to



act in a way that is appropriate and that supports the community. And there actually is one of the challenges of working in this field: You have to be both empathetic and keep your distance at the same time”

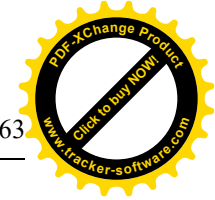
– Anna

Another concern that was raised by a couple of the interviewees was the question whether it is too much asked for from the conflict parties – are they capable of empathizing each other. When the starting point for peacebuilding is that people are processing loss, grievances, and hatred, it was not considered evident that there is room for empathy for the other, especially if a conflict has been going on for years. What the interviewees pointed out would be more important was that the conflict parties would not show disgust or anger towards the other so that they could at least discuss in a constructive manner. Moreover, the need for empathy and the benefits of empathy are also contextual.

“I think getting an emotional response from a conflict party or people who have been involved in a conflict, I think you can get that. Getting empathy for the other side, that would be a very interesting question. Can we get to that level, that most commonly you want to get, broadly speaking, conflicting parties around the same table, you are dealing with a starting point that they don’t want to sit, they definitely don’t want to be seen as weak, and they definitely won’t accept any of the pains that the other side of the table has. But they want to make sure that their own pain is reflected. So, this actually is the standard kind of setup - this would be mediation, so small part of peacebuilding. I don’t think that the conflict parties at the beginning would be ready to experience empathy. Even if they would, they would also have all sorts of reactions to not really show or accept that. Having said that, in most cases there may be common grounds, and this is obviously what you would like to find out in the end, are there and what are all the topics that you would agree on. And maybe, what would maybe support empathy is that if you take that away from the conflict parties and look at something else that is happening in the society. And in the end, that may actually be joint hope that you are having. So for that empathy may actually be possible. And to get that into technologies is an interesting balancing act.” – Marcus

Enhancing Empathy Using Technology

When talking about fostering empathy, several interviewees pointed out the role of stories in the process. Stories were said to take us on journeys, which may open our sensors and allow us to gain new perspectives. According to Alex, the journey should first and foremost be self-reflective, second, the focus could be turned on the other. This way it is possible for the people to see progress, which can lead to self-transformation and social transformation, which both were considered to strengthen peace in societies. In addition,



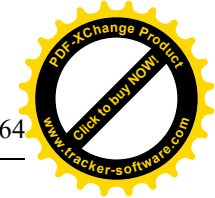
stories can help us relate with the other and understand the other. They can also influence social norms, which is what empathy is ultimately about: creating social norms and figuring out ways for non-violence.

When adding technology in the equation, we can go back to the idea that everything we do is transformed by technology. This means that technology also affects our emotions and our capability to empathize. Furthermore, ICTs can be used for sharing stories. In addition to storytelling, technology could be used to immerse people in simulations that help to understand the perspectives of others. In general, the role of technology in evoking our emotions was considered even more important when circumstances change, and people are not able to interact with others in a normal way. For example, as Marcus pointed out, now during the COVID-19 crisis the emotion altering power of technology has become closer to all of us.

Through stories, technologies can provide exposure to such people and places, which in reality would not always be accessible. Different ICTs, including multiple software platforms, were raised as technological solutions that can be used to foster empathy, because of their ability to connect people regardless of the context. On the more traditional side, a couple of participants reminded about the power of radio and TV in providing this exposure. As was mentioned earlier, especially radio was considered very effective, because it allows the listeners to tap into their imagination and hence be more engaged in what they hear.

When talking about more modern technologies, Matthew among a couple of other interviewees emphasized the power of different immersive technologies, such as VR, augmented reality (AR), and 3D installations in enhancing empathy. He for example mentioned a project called “The Enemy”, which provides its users a view to the side of the combatants in three different conflicts around the world. The tools that they use to provide the exposure are VR installation and an AR application that can be downloaded on a mobile phone.

When using communication technologies to enhance empathy, it was considered important to pay special attention to the message that is delivered, the messenger, and the audience. These components of communication were highlighted because for the communication to be effective and reach its goals, the receiver of the message, or the user, needs to understand the message, relate to it on some level, and find ways to act based on it. The messenger can also affect the level of empathy a message evokes while the people to whom the message is referring to may also matter. The psychological aspects



of relating and empathizing were not discussed with any interviewee, although it was pointed out that e.g. the use of avatars and fictional characters could be beneficial when transmitting content that is meant to evoke positive emotions.

“So it is a kind of cycle ..., because when the public services are not functioning, there’s huge poverty and lack of everything. No access to health services, because you would have to bribe the only doctor in the huge region and you don’t have money to bribe, and there’s no public healthcare, and you have your sick child.

There’s also a lot of private initiatives where people are collecting and giving and gathering from each others. And people give, even if they are poor, because you know they think that the next day, it might be my child who is sick or having leukemia or other serious illness so that the child has to be sent to another country for operation or treatment. And this is collected, very often in social media, for example in Facebook.”

– John

In addition to paying attention to the message and messenger, assessing the audience was considered important. As Anna pointed out, it does not make sense to target empathy enhancing content to people who are already “converted”. This means that it does not make sense to put efforts into evoking empathy of people who are already empathizing with the desired object. This of course makes the process of using such technologies more difficult as one should reach audiences that are not necessarily familiar with or interested in the topic at hand and format the message so that they are attractive to those audiences.

Furthermore, it was questioned whether empathy that is fostered using technologies, stories, and virtual experiences is long-lasting or momentary. The length of the effect and hence the true impact of the use of technologies were considered difficult to assess, because evaluating empathy in general is hard. Most of the current evaluation methods are based on self-evaluation in the short term, although real effects and changes in behavior can only be noted in the long term.

In summary, it could be stated that all the interviewees agreed that technology can be used as a tool to foster empathy in the peacebuilding context. This kind of empathetic technologies are already being developed, yet there is huge potential for future development. The only things that remained uncertain were whether there is potential for wider adoption of such technologies and what is their true, transformative power. Some interviewees pointed out that the transformative power could be greater in case the technologies were used in a facilitated environment rather than anywhere, which of course limits the potential to scale. Others highlighted that the transformative power is dependent on whether empathy comes with help and support for the object or is it just “empty



empathy”. Overall, empathy was considered essential for peacebuilding as it is the base for trust, respect, and common understanding and for this reason any means to foster empathy were considered useful.

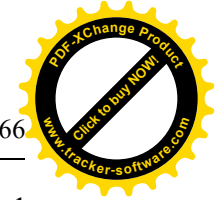
“I think empathy is something that you might already have without showing it to the other. When I am thinking about the parties, I am not sure about empathy, but they are all suffering from the same things of the conflict. So basically, everybody there should be empathetic, because everybody is suffering. The main point is that they are not waiting for empathy from you or from the other, but they want to solve the problem. But they don’t benefit from empty empathy. And actually, it can be harmful that they have false hopes on empathy that is only empathy. But when empathy comes with help and support then it becomes more substantial.” – Lucas

“So there are these kind of opportunities (for technology to foster empathy), but I think the question is whether it is now or whether it is later. So whether there are tools now or whether these kind of tools could be developed. I think tools could be developed, certainly, and I think that there are some tools that are developed and there’s technology out there, but whether those technologies become used, widely used, and whether they have transformative power and impact are kind of secondary questions that are difficult to answer.” – Anna

4.4 The COVID-19 Pandemic, Peacebuilding, and Peacotech

All the central topics of this thesis are now presented, although one major finding remains uncovered. The relationships with the ongoing COVID-19 pandemic, peacebuilding, and the development of peacotech were not in the focus, but the topic naturally emerged in most of the interviews. The ongoing pandemic was brought up by the participants because it brings peacebuilding closer to all of us. The current national settings with restrictions on individuals’ freedom and the whole global situation was considered to be parallel to a low-level conflict. For this reason, the pandemic may also lead to the emergence of new technologies that could be called peacotech in the future.

There were a couple of connections that were made in relation to the pandemic and the topics of this thesis. First, the pandemic has an impact on the development of new technologies and these technologies are rolled out fast because of a serious need. The situation sounds similar to urgently finding new tools to help solve conflicts. Not only that the development process of new technologies may hold important teachings for peace practitioners, but the technologies themselves may be beneficial as well. New solutions are

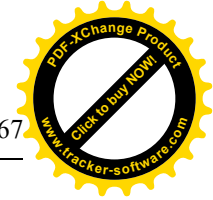


constantly developed for tracking and monitoring the spread of the disease, building social cohesion, communications, manufacturing, healthcare, etc., all of which relate to peacebuilding and can also benefit fields such as humanitarian aid. On the other hand, a concern was raised on the use of surveillance and tracking technologies, their security and whether they are rolled out with other intentions than tracking the spread of the virus only.

Second, it was brought up that as we are more affected by the use of technologies due to the pandemic, we can also experience their emotion triggering effects better. The pandemic has increased the use of different communication platforms compared to before, which influences our daily lives even without us noticing it. On one hand we may notice how the use of technological platforms trigger positive emotions and empathy, on the other hand we may feel more frustration and loose human connection. On the more negative note, we are also more likely to be influenced by conspiracies, misinformation, and hate speech, which may lead to violence in the real life. As was noted by some of the interviewees, the pandemic has already increased violence towards the Chinese, the Jews, the Africans, and other groups of people who have been blamed for the spread of the disease. For this reason, Matthew remarked that the crisis can even make the case for peacebuilding bigger in Europe and in the so-called West at large.

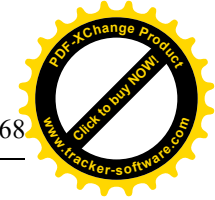
“I wouldn’t say that communication technologies have changed the way that we communicate completely, as people still communicate mainly with people that they’ve always communicated with and trust is necessary, but there’s a lot of possibility to reach out in ways that there haven’t been before.. You noticed that in times of disaster that people reach out further than people reached out before. And the situation of others certainly impact us more than it has done in the past. World feels like a smaller place and in many ways is a smaller place. The COVID-19 situation it is making that feeling (of a smaller world) stronger still.” – Anna

Finally, as was noted by a couple of interviewees, reconstruction is required to build the societies anew after the COVID-19 crisis unfolds. Just as any peacebuilding process, this may be a lengthy one, which begins by establishing new social norms and rebuilding institutions around them. Moreover, a lot of work is required to strengthen economies and economic well-being of individuals. As there is a lot of uncertainty in what comes to surviving the crisis, reinforcing people's emotional resilience is needed. All of which can be assisted with the use of technology.



“But I think that the missing piece is that the technology is used for practical crisis management purposes mainly. And that is all well and good. But after this crisis (COVID-19) we have a society that needs to be rebuilt and for years of rebuilding ahead of us. In a kind of a marathon way. So the way you talk about empathy, the same questions of resilience, of how do we create people to withstand pressure for long time. How do we create populations that two years from now, that there’s the economic catastrophe and then they still keep on going? And how can we start ensuring that now. Are there technologies that could help us do that now? As the corona crisis unfolds, you may be able to see more peace technologies emerge as well.”

– Anna



5 Discussion

In this section I will analyze the findings and draw connections between them and previous research. First, the focus will be on peacetechnology from a wider perspective, then on the intersection of peacetechnology, emotions, and empathy, and last on the relationship between the COVID-19 pandemic, peacebuilding, and peacetechnology.

Overall, the results indicate that there are still many miles to go for technology to be fully adopted in the peacebuilding scene, although the potential is huge. Moreover, based on the data it is evident that there is a connection between the use of peacetechnology platforms and end user empathy, although fostering empathy using different platform technologies is not so straightforward. The main reasons making the connection blurry include accessibility issues, difficulties to produce impactful content, lacking understanding on the audience, and the difficulty to evaluate the impact technology use has on end user empathy. Nevertheless, there is potential in the field of empathetic technologies, especially when it comes to immersive technologies and tools to foster inner peace.

5.1 Technology for Peacebuilding

To discuss and analyze the findings, it seems essential to define the main concepts of this thesis once again. When looking at both previous literature and the data, there seems to be quite many differing views on peacebuilding and peacetechnology, which makes the analysis of the findings more difficult. The difference in approaches has a lot to do with the term “conflict”: Some put the term conflict in the center of peacebuilding and therefore peacetechnology refers to the strategic use of technology to solve conflicts, while others regard peacebuilding and hence peace technology as something broader that are present even without an active conflict.

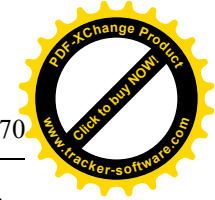
For this thesis, I have chosen to use the broader understanding of the concepts, which derive from Galtung’s approach to positive peace. Positive peace refers to justice for all, a state, which goes beyond the absence of direct, structural, or cultural violence (Galtung, 1969, 1990). The idea of social justice is then combined with the concept of inner peace, which refers to an individual’s capability to self-reflect and find peace within, to live in harmony. After all, inner peace can be regarded the base for different building blocks of peacebuilding, such as empathy, trust, and common understanding.



Peacebuilding is then defined as actions or processes that are implemented to foster peace and peacotech as strategic use of technology for peacebuilding. These actions and processes lead to peace becoming sustainable, which is characterized by effective communication, consultation and negotiation, peace-enhancing structures and institutions, integrative political-psychological climate, peacebuilding leadership, and supportive regional and international environment (Reychler and Langer, 2006). The processes that lead to the creation of sustainable peace include norm, institution, and marketplace building as was noted by one of the interviewees.

When discussing about peacotech, I find it important to highlight the word “strategic” in the definition, because just like any other white-collar workers, peace practitioners seem to use many technological platforms as non-strategic tools in their work. In addition, I think it is relevant to underline the importance of intention behind the use of a technology for peacebuilding. As was stated by Martin (2008), technologies are always developed with specific motives in mind, which leads to the technology at hand being best suited for that cause. Therefore, in theory, any technology can become peacotech if it is further developed and used with the intention to build peace. Yet, it is good to keep in mind that technology is not a panacea, but a tool of our making that can be used only to help build better peace (e.g. Hattotuwa, 2004).

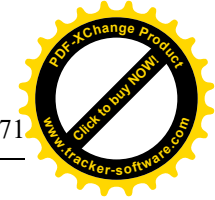
Yet using technology to help build better peace is not the reality. It is clear that technology is not used at its full potential for peacebuilding. Based on previous literature, it has been so for almost two decades (Hattotuwa, 2004; Tellidis and Kappler, 2016; Tellidis, 2019). There are many potential reasons explaining the slow integration of technology in the peace sector. In previous literature, this has been mainly explained by associated risks, accessibility issues, and other problems emerging from the end user side (Hattotuwa, 2004; Kahl and Larrauri, 2013; Tellidis and Kappler, 2016; Tellidis, 2019). Based on the data, I would put more emphasis on the peace practitioners’ side and their lacking interest or even unwillingness to use technologies in their work. In addition, it seems that peace practitioners have limited understanding on the possibilities technology could provide and they might lack technological skills. Furthermore, there is a gap between them and the ones developing new technologies, which was considered to limit the adoption of new technologies for peacebuilding. Moreover, the peace sector has limited resources when it comes to investing in research and development of new technologies and partially therefore it lacks far behind industries such as defense.



Due to limited resources, only little technologies are developed particularly for peacebuilding. Nevertheless, as was discussed earlier, any technology can become peacetech if used with the intention to foster peace. Therefore, it is not necessarily the most fruitful approach to even focus on developing entirely new technologies but encourage and train peace practitioners to use existing technologies more effectively. Martin (2008) presented three ways for new peace technologies to emerge and based on the data, I would only focus on two: encouraging more people to use technologies that are meant to foster non-violence or make minor tweaks into existing technologies to strengthen their non-violent features. Same mechanisms apply to the development of empathetic technologies. After all, what is more important than the technology itself is that it would be widely accessible, free for the end user, easy to use, and secure. These features are often provided with widely adopted technologies. Moreover, although the possibility to contextualize the technology according to the use-case at hand, some level of standardization was considered an asset.

Although the development and adoption of technology for peacebuilding is lacking behind other industries, its importance is arising. Technology is impacting our world and transforming our lives in multiple ways. It is for example reshaping power structures by shifting power from the elite to the citizens, which leads to empowering the grassroots level actors (Kahl and Larrauri, 2013; Tellidis and Kappler, 2016). This on the other hand influences the models and frameworks that can be used for peacebuilding. For example, there has been criticism towards the traditional track model, because organizing peacebuilding based on vertical hierarchies was not considered accurate anymore. Technology is already transforming the peace process into something more horizontal by enabling more voices to be heard and improving especially the inclusion of women and youth.

To conclude, the use of technology is considered beneficial for the peace sector, although it seems that the adoption of technologies in the work of peace practitioners is not very common. While acknowledging that technology is not a panacea, peace practitioners seem to wait for better and more secure technologies to emerge rather than taking the initiative to develop new tools themselves. On the other hand, peacebuilding is a traditional field, which transforms slowly and thus does not keep up with the ongoing technological development. Moreover, peacebuilding is human-centric, not technology-driven. Nevertheless, I think that even this field should keep up with the ongoing development and



build more trust in the use of technology for peacebuilding. As many great examples show, technology use may indeed lead to building better peace.

The Potential of Technology for Peacebuilding

On the technological side, the data indicates that especially ICTs and different communication platforms possess the most potential for peacebuilding. Referring to Quihuis et al.'s (2015) sub-components of peacotech, most technologies that were discussed in the interviews were communication technologies or actuators, which refers to technologies that are used to encourage to take action. Overall, such technologies were considered to have the highest likelihood to transform the peacebuilding sector in the future.

As has been discussed in previous literature (e.g. Kahl and Larrauri, 2013; Gaskell, 2018), the ability of technology to connect people regardless of physical limitations and boundaries is a key quality of peacotech. This quality enables community building online, networking, creation of social movements, and rapid information sharing. Moreover, as the world is getting smaller due to the increased use of communication technologies, being able to engage, connect, and build virtual relationships become more important.

On the technological side, radio, mobile phones, and the internet were mentioned multiple times as transformative technologies, but so were different social media platforms, video conferencing platforms, and video games. While many of them are already quite used for peacebuilding, tools such as video games were considered to have a lot of untapped potential especially when it comes to education (e.g. Kahl and Larrauri, 2013). In addition, the power of immersive technologies was raised multiple times both in previous literature and in the interviews as they are perceived to have a lot of potential when it comes to changing attitudes and behaviors, including enhancing end user empathy (e.g. Ivanovitch, 2017).

Unlike in previous literature, based on the data only little emphasis was put on data as a central quality of peacotech. Nevertheless, the interviewees did acknowledge the potential improved data gathering, processing, and usage possess for peacebuilding especially when it comes to understanding and preventing conflicts. On the other hand, the interviewees pointed out the potential data has on the development of mediation technologies. Mediation technologies have not been thoroughly discussed in previous literature, although Kahl and Larrauri (2013) point out that one area where big data could



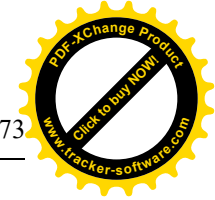
have a strong influence is on mapping people's attitudes and emotions towards e.g. a conflict at hand, which could help in the peace mediation process. The fact that data was not of special interest to several interviewees was most likely due to lacking personal experience in working with data and higher focus on communications in the day-to-day work.

Last, it seems relevant to point out that overall technology possesses higher potential when it comes to building peace with the grassroots level actors than with political elite. This has not been explicitly mentioned in previous literature, although many case examples, such as Ushahidi or the PeaceMaker game, are about technologies used within the grassroots communities (e.g. Kahl and Larrauri; Tellidis and Kappler, 2016). To strengthen the point, technological platforms such as WhatsApp or Facebook, which are widely used by grassroots globally, were raised multiple times as examples for peacotech. Overall, technological platforms are considered powerful tools to support peace within the grassroots, because they enable inclusion of masses in the peace process.

Regardless of the potential peacotech possesses, it is good to keep in mind the challenges that are related to their use. Such challenges may limit the potential or even cause negative effects. For example, the fact that technologies are globally used more by men than by women, and more by younger generations than older generations affect the outcome of peacotech use by changing power dynamics and limiting the potential to increase inclusion (e.g. Tellidis and Kappler, 2016; Tincq et al., 2019). In addition, digital illiteracy is a major issue preventing the use of technology in addition to the lacking infrastructure to provide stable electricity or internet. The biases and challenges can be mitigated through collaboration with the end users or continuous assessment of the developed technology where the Do No Harm -framework (Wallace, 2015) or Principles of Digital Development may help. If the challenges are well approached, the empowering potential of peacotech can be fully released.

5.2 Peacotech, Emotions, and Empathy

As the study together with previous literature demonstrate, empathy is a key component in building peace (e.g. Waldman, 2016a, 2016b). Thus all means to foster empathy can be considered beneficial for peacebuilding. The idea that empathy can be enhanced is based on the idea that empathy is a skill that can be trained (e.g. Hoffman, 2008). Therefore,



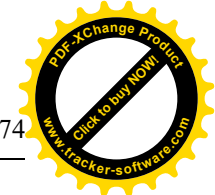
technology can be used to foster empathy, although the use of technology can also affect our capability to empathize negatively.

Storytelling using ICTs as media for distribution is one way to open our sensors and feel more empathy towards others (Manney, 2008). At the same time hate speech and distribution of misinformation using ICTs can decrease our capability to empathize and as a result even initiate violence (e.g. Abu-Akel et al., 2019). As the distribution of hate speech and misinformation is a major issue also in the Western societies, the case for peacebuilding becomes more important. Therefore, peacebuilding should be regarded as something broader than solving conflicts, as in most cases in the West, peacebuilding is about reducing prejudices and fighting against racism so that conflicts would not emerge in the first place.

As both the data and previous literature indicate, the power of technology in fostering empathy lies in the possibility to use it to share stories and immerse ourselves into different narratives. These narratives enable us to see the world through someone else's eyes (Manney, 2008). Being able to imagine or experience the emotions and perspectives of others is an essential building block of trust, respect, and common understanding, which on the other hand are cornerstones of peacebuilding. The use of technologies can facilitate storytelling and hence enhance empathy, although there is no guarantee of success, nor are the effects easy to measure.

Regardless of the uncertainty of the outcome, there are certain aspects to consider when developing technologies to foster empathy. One rule of thumb to keep in mind is that the use of empathetic technologies has higher impact when one is not preaching for the converted. This means that before using technological platforms for delivering empathy enhancing content, one should at least define the desired audience and target them accordingly to strengthen the impact. In addition, the experience – the story – should be engaging and lead the end user to take action rather than being disengaging, which on the other hand is harder to guarantee. Furthermore, it can be beneficial to use empathetic technologies in a facilitated environment, as the presence of a facilitator may improve the empathy enhancing effects. On the other hand, the presence of a facilitator has a negative impact on the scalability of such technologies. Moreover, the success of empathetic technologies is dependent on the same factors as is the success of peacetechnology in general, such as accessibility, usability, security, and accuracy of delivered content.

On the more technological side, the power of immersive technologies, such as VR, AR, 3D modellings, as well as video games rise multiple times when discussing about the

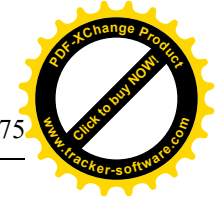


relationship with technology and empathy both in previous literature (e.g. Ivanovitch, 2017; Herrera et al., 2018; Tincq et al., 2019) and in the data. Although these might be the most effective platforms for fostering empathy, they are not widely accessible and available unless the end user is equipped with the right device. For example, it seems that many VR experiences with the mission to foster empathy, e.g. in the case of “The Enemy” that has been presented in this thesis previously, have been conducted in a laboratory setting or in another closed and surveilled environment. Until these technologies become more accessible and cheaper, their empathy enhancing power remains highest there where such technologies and experiences are developed and available – often in the West.

The fact that many of the aforementioned technologies are not yet so common leaves more space for the development of empathy enhancing technologies for mobile phones, which are widely accessible globally. Specially to reach youth, broadcasts, videos, and social media could be better equipped for the purpose, which are all accessible on mobile. Storytelling is something that does not look at the platform that is used, but at the message and the messenger. For example, there are multiple local initiatives that are using such platforms for fostering empathy, one great example being PeaceFactory with the focus to build peace in the Middle East. At the same time, there is a need for more global initiatives to foster social cohesion and the most prominent tools to do so include social media platforms, such as Facebook, Instagram, or TikTok.

Another field for further exploration and development is technologies that are used to foster inner peace. As has been discussed earlier in this thesis, inner peace and the ability to look within should be regarded as processes that take place before an individual is truly able to empathize with the other. Although this topic was not discussed in the interviews or in previous literature in more depth, there is a lot of potential to develop more e.g. in relation to mindfulness. This kind of tools meant to support mental wellbeing could not only be beneficial for any human, but also for people working in crisis affected settings, such as in the middle of a conflict or in the healthcare sector during a global pandemic. Escaping the reality of a crisis using a tool alike could help in building emotional resilience to survive.

To conclude, it could be said that, yes, technological platforms can be used to foster empathy in the peacebuilding context, but there are no clear ways for how to nor tangible results to prove their effects. Even in previous literature, there is only limited proof available, which states that the effects would be long lasting or generalizable (e.g. Herrera et al., 2018). In order to have some tangible results, more efforts should be put in

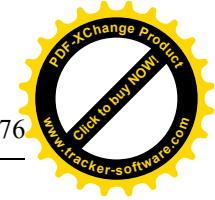


monitoring and evaluating the level of empathy and whether or not it leads to action. Currently, measuring empathy seems nearly impossible, especially in the long run. Measuring empathy is difficult due to its subjective nature, but also because in the long run it might be hard to track the components that have affected empathy to one specific point, such as use of technology in the past. Nevertheless, it is already somewhat important that we are aware of the increased empathy and hence acceptance of differences, but to understand the phenomenon better, improvements in how to measure empathy would be beneficial.

5.3 The COVID-19 Pandemic, Peacebuilding, and Peacetech

The relationship of the topic of this thesis and the COVID-19 pandemic that has been going on in the year 2020 was something unexpected, but interesting. Due to the novelty of the topic there is no previous research on it, although there is a lot going on currently. Already now, in July 2020, we can see that the development of technologies to mitigate the challenges that the pandemic has brought us has been extremely rapid. Many countries have for example launched software applications that use the GPS of mobile devices and data collected from their owners to track and manage the spread of the virus. This kind of technologies possess potential also for the peacebuilding sector when they are built in a secure and safe manner. Tracking and monitoring is only one field that can benefit the peacebuilding sector, others include data, health, and security, which could also benefit e.g. humanitarian aid.

Crisis often works as a great initiator for technological development, although it is not necessarily all positive when new technologies are rolled out fast. Even in the midst of a crisis it is necessary to assess the impact of the technology at hand, e.g. by referring to the Do No Harm -framework (Wallace, 2015). After all, all the technologies are meant to serve the people hence their impact on the people should somehow be assessed. One major concern regarding technologies developed the help mitigate the COVID-19 crisis is security. Now that data is collected more actively and distributed for numerous parties, it would be even more crucial to pay attention to privacy and data security and prevent abuse of such sensitive data. As the data indicates, there are always some people who want to take advantage of the development and turn good intentions into bad outcomes.



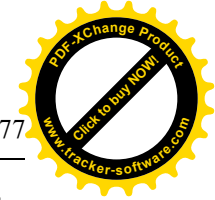
6 Conclusions

In this section, I will conclude the thesis by sharing implications, discussing limitations, and proposing paths for future research. Finally, to wrap up the thesis a short summary will be presented.

6.1 Implications

Overall, the findings of the empirical part of this thesis are in line with previous literature, although they do broaden certain concepts. First, peacetechnology should first and foremost be about strategic use of technology for peacebuilding, rather than the use of any technology, or ICT, for peacebuilding. Second, the term conflict should not be in the center when talking about the use of technology for peacebuilding as technology can also assist in building more sustainable peace and socially just societies from a broader perspective. That being said, basically any technology can become peace technology and there are reasons for using such technologies also in Western, traditionally more peaceful societies. This means that there is no reason to limit thinking when it comes to peacetechnology, but to keep eyes open for the development of technologies that can help strengthen social cohesion in any given way. Last, as stories were considered a key component in enhancing empathy, the use of any technology that can transmit stories could be regarded an empathetic technology. It is clear that some technologies possess more empathy enhancing power than others, but here as well, there is no reason to limit imagination. Sometimes the use of the simplest tools can have the greatest impact.

This being said, I would highly encourage peace practitioners to use and apply technologies in their work as many great tools that could support peace processes already exist. To begin with, one could just look at the technologies that are already used globally and see how they could be used as strategic components in peacebuilding. Finding new tools might require additional resources, but when resources are put into supporting innovation, the results can be substantial. On the other hand, it is understandable that not everyone is receptive to the idea of using technology in the peace process, but I would highlight the potential it possesses especially when it comes to collaborating with the grassroots. There is evidence that technology can e.g. improve inclusion, which on the other hand is a good base for long-lasting and sustainable peace. Moreover, I would not overlook the need for peacebuilding in the Western societies and only focus on the most



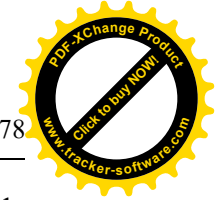
conflict affected settings. As has been highlighted both in previous literature and by the interviewed peace practitioners, conflicts are getting more global which also means that meaningful work can be done on a more global level. On the other hand, technology usage is more common in the West, which makes the use of peacetech more convenient and reduces the amount of resources that are needed for implementation.

On another note, it is clear that the ongoing COVID-19 pandemic is affecting the work of peace practitioners who have been searching for new ways to conduct their work. While the crisis may affect certain parts of the work negatively, it can also initiate change towards more technologies being used for peacebuilding. If so, I would later assess how did the change go and evaluate how could the use of technology be developed further. Furthermore, I would keep eyes open for new, emerging technologies that are developed to survive the pandemic, because there can be several interesting tools to apply to the peace sector as well.

6.2 Limitations and Future Research

The generalizability of the results and the reliability of the data is impacted by the limited number of peace practitioners that were interviewed for the study. In addition, although most of them were representing different areas and had different backgrounds, their takes on the topic were rather narrow. It would have been interesting to include people who are currently working in the field in conflict affected settings and hear first-hand experiences on using technologies for peacebuilding on top of the rather theoretical approaches that were now gathered. Moreover, as literature on empathy for peace and empathetic technologies is limited, it would have been fruitful to include people who are currently working with these topics to gain deeper understanding on them.

Another approach to the study would have been to conduct the interviews with people who are living in conflict-affected settings and have been part of peacebuilding processes where technologies have been used – also to foster empathy. Observing the use of technologies by the grassroots or interviewing them would have made the research more practical and potentially yielded more tangible results. This brings us to one prominent area for future research, which is the use of technology for peacebuilding among conflict affected populations. These populations might be harder to reach and researching the topic would require different methods, but there is for sure many topics to explore, such as what

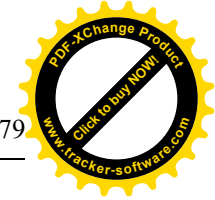


technologies are used, how, and why. This could be even further narrowed down to include e.g. the use of technologies for conflict prevention, for mobilizing crowds, or for fostering empathy towards others.

Moreover, the fact that several interviewees had experience in peace education also directed the study to include more data on that topic. There is more data on peace education regardless the conversations with the interviewees were kept on a more generic level. At the same time, this is another area that I would suggest for further research. Peace education seems to be a lot about training empathy and seeing the world through someone else's eyes. Now with the COVID-19 pandemic, the field is also slowly moving online, which means that more technologies are used in this context. In the future, it would be interesting to first explore the use of technologies for peace education and assess the type of technologies that have specifically been used for training empathy.

Finally, the differing views that the interviewed peace practitioners had on peacebuilding and hence peace technology made the analysis of the data more difficult. To mitigate the challenge, I decided to use relatively broad definitions of peace, peacebuilding, and peace technology. As this was an exploratory study, the fact that the explored field was quite broad did not affect the results that strongly. Anyhow, I would recommend narrowing down the scope for future research e.g. by the level where peacebuilding takes place or context of the conflict at hand by geographic location, type of conflict, length of the conflict, etc.

Other interesting areas for future research include methods for measuring empathy. As has been discussed throughout this thesis, evaluating the effects the use of technology has on our capability to empathize is difficult. Profoundly evaluating existing methods and developing new ones would seem to highly benefit the research on empathetic technologies. Focusing more on this topic was out of the scope of this study, and therefore it opens a new but rocky path for future research. Moreover, the effects of COVID-19 pandemic on the development and emergence of peacetech is an interesting area to research. As has been mentioned previously, the world is currently in a low-level conflict state and due to the pandemic new technologies to mitigate challenges are rolled out rapidly. Once the situation cools down, it would be interesting to explore how these new technologies could be implemented in the peace sector as well.



6.3 Summary

In this thesis, I have studied the use of technology for peacebuilding and whether there is a connection between the use of peacetechnology platforms and end user empathy. This study was conducted as an exploratory, qualitative research for which data was gathered through semi-structured interviews with peace practitioners. To conclude, it can be said that first, there is a lot of room for improving the use of technology for peacebuilding and developing new peacetechnology platforms. Second, there is a link between the use of technologies and end user empathy, although it is still very shallow.

When looking at the use of technology in the peace sector, it seems that one underlying reason for slow adoption of technological tools in the work of peace practitioners is the results of resistance from the peace builders' side. It may be that the resistance is partially related to the overall challenges there are in relation to the use of technology, such as accessibility issues by conflict parties or concerns regarding cybersecurity. On the other hand, it seems that the technological knowledge and skills of peace practitioners are not up to date, and they are afraid of losing the human connection considered essential for peacebuilding. Unlike previous literature, this research showed other reasons that limit the use of peacetechnology that stem rather from the peace practitioners' side than from the end users' side.

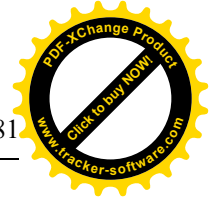
At the same time, there is a consensus that technology possesses a lot of potential for peacebuilding and more technologies could be implemented in the work of peace practitioners. Particularly information communication technologies (ICTs) were considered to possess transformative power when it comes to peacebuilding. Technologies such as radio, TV, internet, mobile phones, social media, and immersive technologies were all said to affect the work of peace practitioners now and in the future. After all, what was considered essential in relation to using technology for peacebuilding is the capability to connect, share information, and build a sense of community regardless of the context. Moreover, the possibility to collect and process localized data was considered an asset made possible by technological development.

When it comes to the intersection of peacebuilding, peacetechnology, and empathy, the relationships were considered more complex. Empathy is regarded a cornerstone of peacebuilding as it is the base for trust and common understanding, yet it is a subjective experience and hence hard to measure. Regardless, there is evidence that different technologies, especially communication technologies and immersive technologies, can be



used to foster empathy also in the peacebuilding context. In general, any tool that can transmit stories can be used to enhance end user empathy. The complexity then stems from the difficulty to evaluate the impact and effects of the use of such technologies. Moreover, there are barriers to overcome to make empathy enhancing technologies more accessible, e.g. when it comes to the use of VR for the purpose. Nevertheless, there is a lot of room for development and future potential.

In the future, it seems relevant to pay more attention to the use of technologies for peacebuilding also in the empathy enhancing context because the use of technologies globally is increasing. Not to forget that the youth is growing up in a technological world, which will have a stronger impact on the way peace is built in the upcoming years. This also reflects to e.g. peace education, where there is a lot of potential for technological development. For example, there is a lot of untapped potential in the field of gaming for peace, but also in the use of social media for peacebuilding. Yet, it seems that some change is taking place, which may be the result of the ongoing COVID-19 pandemic that pushes all industries including the peace sector to digitize faster.

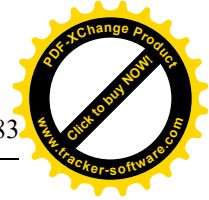


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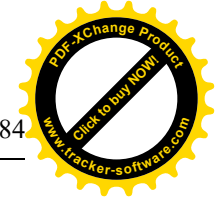
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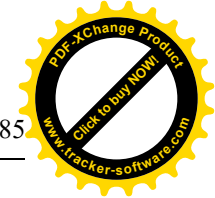
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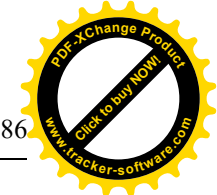
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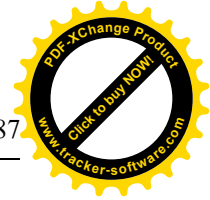
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Appendix A: Interview Invitation

I am researching peace technology for my master's thesis in Aalto University with the focus on the intersection of technology and empathy. This is an exploratory research with the aim to find out whether platform technologies can foster empathy in the peace context or not. For this study, I am looking for individuals working in the peace sector to participate in a 1.5 -hour long interview. My goal for the interview is to deepen understanding on work in the peace sector today as well as on the technologies that are used for peace work - how are they used and what are they used for.

As is stated on the United Nations Agenda 2030, “there can be no sustainable development without peace”, which entails that making, building, and managing peace are all crucial for global development. Moreover, as global megatrends predict, technology is becoming more and more embedded in our daily lives. While the use of technology, especially digital technology, is becoming a norm in all sectors, it becomes interesting to explore its relationship with the peace sector as well. This is no new phenomenon, as peace technology as a term has been long used, referring to the strategic use of technology in building peace.

Although previous research on peacetechnology exists, the introduction of emotions and empathy in the context is rather novel. Especially when it comes to the intersection of platforms and empathy, only little previous research exists. Through this research, I hence hope to shed light on this topic while looking at it from the peacebuilding context.

I would love to invite you to take part in this research as an interviewee. The interview is held using a preferred online communication tool or via telephone. All information gathered is confidential.

Yours sincerely,

Aino Piirtola



Background and Scope of the Study

As it has been stated in the past, technology is neither neutral nor good or evil in itself. It is the people using technologies who define whether it is equipped for the positive or for the negative. One way to apply technologies for the good is by equipping them to foster empathy and empathetic behavior within our societies. This can be done by using existing technologies to foster empathetic behavior of their users or by developing new technologies with the sole goal to enhance empathy within or between societies.

Empathy is generally defined as the ability of an individual to sense the emotions of other people. This capability to sense is then often combined with the ability to step into another person's shoes - to imagine what this person is thinking or feeling. As many researchers define, there are two types of empathy: affective and cognitive empathy. Affective empathy can be defined as the capability of an individual to physically feel what someone else is feeling and taking action to help if needed. Cognitive empathy on the other hand simply refers to the ability to imagine how another person is feeling and thinking. In this research, the focus is on exploring how these different types of empathy can be enhanced using platform technologies.

In this research, I chose to focus on the use of platforms and whether they foster empathy or not. Platforms can be defined as technologies that create networks and that are used as bases for the development of other applications, processes, or technologies. There are multiple different types of platforms, although all of them share one key benefit: the one or multi-sided network they offer, which often consists of producers and consumers. In the context of this research, I am interested in finding out whether there are platforms that are used to affect the consumers by enhancing their empathetic behavior.

When looking into existing research, the focus of peacetechnology studies has lately turned towards the intersection of technology and emotions. For example, there is existing research on how the use of different technologies, such as social media platforms or virtual reality, affect our emotions. Moreover, there is research that proves that virtual reality is even effective in enhancing empathy. On the other hand, although a vast number of different platforms exist and new ones are developed on a constant basis, only little research exists on their relationship with emotions or empathy, or then it is limited to one platform type. Through this study, I aim to shed light on the aforementioned relationship in the peacebuilding context.



Appendix B: Interview Structure

Theme: Technology and Empathy for Peacebuilding

Sub-themes: Peacebuilding, emotions, empathy, technology, platforms

Use and scope of the thesis: This thesis is part of my master's degree at Aalto University and will be published online by the university. In addition, an academic article might be written based on the findings of this exploratory research. All information given is confidential.

Consent for recording: y/n

The purpose of the interview is to gather further information on the work in the peace sector today and the use of technologies, especially platforms, for peacebuilding. The goal is to gain a better understanding of different technologies in use and their purpose - whether they are to foster empathy or not.

The Interview Guide

Welcome Words and Introduction (5 min)

Background of the Interviewee (5 min)

Area of expertise, Years of experience in the peace sector

Peacebuilding (10 min)

How would you define peacebuilding? (definition and goals)

How does successful peacebuilding look like to you?

Can you name any essential tools or methods that are used for peacebuilding?

Peacebuilding and Emotions (10 min)

What kind of a role do emotions play in peacebuilding? (E.g. overcoming negative emotions between different parties to solve a conflict or fostering positive emotions while building peace)

What kind of a role does empathy play in peacebuilding?

Can you share any case examples on working on emotions or empathy in the peacebuilding context?

Technology for Peacebuilding (30 - 60 min)

What kind of a role does technology play in peacebuilding?

Have you encountered or strategically used any technologies in your work in the peace sector?

Can you share any common technologies used for peacebuilding and what are they generally used for?

What kind of technologies do you think work best for peacebuilding? (E.g. attributes or goals)

Have you encountered or used any platform technologies in your work in the peace sector? (platform: a hardware or a software product that is used to host any other application or a service; often connecting producers and consumers; providing the users network effects)

How do you think platforms could benefit peacebuilding?



Can you share any good case examples on the usage of platform technologies for peacebuilding?

Technology and Emotions (30 min)

How do you think the use of technology affects the emotions of its users, if it does at all?

Have you encountered or used any technologies that are meant to enhance positive emotions in your work in the peace sector?

How about technologies that are meant to enhance empathy? (empathetic technologies)

Can you share any case examples on the usage of empathetic technologies for peacebuilding?

Thank You for Your Participation