Rationale and Design for the Peace Box

An Electronic Device for your Home or Office

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This thesis offers a summary of different lines of thought on how Information and Communication Technologies (ICTs) can be used for promoting the ideal of peace, for example by helping to manage a crisis, by supporting development and education, by overcoming authoritaran regimes, or by promoting a global civil society and global culture of peace. After introducing these ideas, the concept of a „Peace Box“ is presented, which is a small computer-like device that can be set up in any home or office to provide applications and services for actively supporting the various visions of using ICTs for peace.

Contents

1. Introduction

The widespread availability of Information and Communication Technologies (ICTs) has led to the globalization process and continues to have a large influence on social, economic, political and cultural structures around the world. Much work has been done in the academia to get to a good scientific understanding of the causes, nature and consequences of today's interconnected world, and to analyze both opportunities and threats that ICTs pose to humankind[1]. In exploring opportunities for working toward a better world, the academic field of Peace and Conflict Studies with its inherent character of being based on concrete values rather than striving to always be objective on all accounts is especially suited and challenged to explore how ICTs should be judged and used when it comes to promoting an ideal – the ideal of peace.

Many prominent statements exist which inspire thoughts about the potential of ICTs for promoting the interrelated concepts of peace, democracy, freedom, justice, and human rights.

Already in 1993, media entrepreneur Rupert Murdoch noted that

> *"Advances in the technology of telecommunications have proved an unambiguous threat to totalitarian regimes everywhere."*

In 1999, George W. Bush asked us to

> *"Imagine if the Internet took hold in China. Imagine how freedom would spread."*

During the opening ceremony of the *World Summit on the Information Society* in Tunis in 2005[2], where the United Nations as well as a large number of other stakeholders worked on evaluating the opportunities and risks of the now ubiquitous information society, the then Secretary General of the United Nations Kofi Annan articulated the desire to use ICTs for working toward the ideal of peace, by declaring that

> *"While most other conferences focus on global threats, this one will tell us how to best use a new global asset."*

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[1] For example, see (Castells, 2000)

[2] http://www.itu.int/wsis/tunis/index.html

During the *LeWeb* conference in Paris in 2009, Queen Rania Al Abdullah of the Hashemite kingdom of Jordan said that

> *"Digitizing ourselves has heightened our instinct to be selfless."*

And United States Secretary of State Hillary Clinton stated in her much-regarded speech "Remarks on Internet Freedom" in 2010 that

> *"Once you're on the Internet, you don't need to be a tycoon or a rock star to have a huge impact on society."*[3]

The importance of ICTs for promoting peace is also reflected in the fact that the United Nations have started a number of organizations to explore this potential, e.g. the *United Nations ICT Task Force*[4], the *United Nations Group on the Information Society (UNGIS)*[5], the *Internet Governance Forum (IGF)*[6], or the sector on *Communication and Information*[7] within the *United Nations Educational, Scientific and Cultural Organization (UNESCO)*.

Indeed, ICTs can be used in numerous ways to promote a more just, democratic and peaceful world, however, they can also pose threats to democracy, peace, and human rights. This thesis is an attempt to give an overview of different lines of thought on how ICTs can be used both for and against peace, and to describe the vision of a specific piece of technology with the designated name "Peace Box", which can be used to work toward the ideal of peace in various ways.

1.1. ICTs for Peace

An online initiative started by the Italian version of *Wired Magazine* has successfully campaigned to nominate the Internet for the 2010 Nobel Peace Prize[8]. The initiative argues that the Internet is a "web of people" rather than a "network of computers", that it has laid the foundations for a new kind of society which is advancing dialogue, debate and consensus through communication, that contact with others has always been the

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[3] http://www.state.gov/secretary/rm/2010/01/135519.htm

[4] http://www.unicttf.org/

[5] http://www.ungis.org/

[6] http://www.intgovforum.org/

[7] http://www.unesco.org/new/en/communication-and-information/

[8] http://www.internetforpeace.org/

most effective antidote against hatred and conflict, and that therefore the Internet is a tool for peace and nonviolence. Although the Internet as the nominated entity did ultimately not win the prize, many controversial discussions have emerged following the nomination[9]. In 2011, similar ideas arose again, this time with speculations about Facebook founder Mark Zuckerberg becoming a contender for the award[10].

Throughout human history, there have always been visions and hopes that advances in science and technology can contribute to building a better world, and many engineers consider their profession to imply a responsibility for employing their skills for positive social change. When it comes to information and communications technologies in particular, hopes about their potential for freedom, democracy, and peace are diverse. The following is a high-level summary of different lines of thought on how ICTs can help to promote peace:

- ICTs can help international organizations, NGOs, and relief organizations to manage a crisis.
- ICTs can support development by creating new economic opportunities, or by providing means for better education.
- ICTs can be used as a tool in revolutionary movements against an oppressive regime.
- ICTs can contribute to building a healthy, democratic society, e.g. by improving governance, by strengthening institutions, or by supporting citizen journalism.
- ICTs can support a "global civil society" to address and solve global challenges.
- ICTs can support a "global culture of peace" to promote intercultural dialogue and tolerance, and to overcome cultural differences.

[9] A comment thread at a blog post: http://mashable.com/2010/02/06/internet-nobel/. An open response letter by Wired magazine: http://mag.wired.it/news/storie/why-the-internet-deservesthe-nobel-peace-prize-an-open-letter-to-pete-cashmore-mashable-com.html

[10] See (Netburn, 2011)

1.2. ICTs against Peace

Despite the fact that ICTs clearly have a large potential to work toward the ideal of peace in various ways, they also have potential to work against it. When modern ICTs such as the Internet became widely available in mainstream society during the 1990s, the fast spreading of this then new technology sparked strong reactions on both ends of the spectrum, ranging from utopist hopes that new levels of democracy would lead to a more peaceful and just world, to the fear that its effects on humanity would threaten political and social order world-wide. Such ambiguous responses have always been typical of new technological developments in human history. For example, the invention of railroads has led to concerns about the "annihilation of space and time" and its adverse effects on the human psyche[11]. During Japan's Meiji Restoration in 1868, violent conflict emerged after a long period of peace, in response to plans to drastically modernize the country. And in many Hollywood movies such as *Tron* (1982), *The Terminator* (1984) or *I, Robot* (2004), the central narratives are based on the fear of new technology.

In alignment with Freud's concepts of *Eros* and *Thanatos* as the two opposing driving factors within the human soul, the Internet and related technologies have often been described as neutral tools, which can be used for either good or evil. The following is a quick summary of several ways in which ICTs can be used to work against peace:

- ICTs can be used by oppressive regimes to exert control over their citizens.
- ICTs can be used as weapons in war (cyber-warfare).
- ICTs can be used as weapons by terrorists (cyber-terrorism).
- ICTs can be used for surveillance, censorship, manipulation, and propaganda.
- ICTs can increase cultural violence, cultural conflicts, cultural imperialism, and cultural homogenization.

[11] See (Lardner, 1850) for an early assessment of the effects of railroad travel.

2. Technological Considerations

In order to further explore the potential of ICTs for and against peace, it appears necessary to first examine at least on a basic level some of their technological characteristics, especially with regard to their ability to act as a medium for exchanging information between senders and receivers, and with regard to the nature of their organizational structures.

2.1. Properties of the Medium

The principal properties that are generally mentioned when examining modern ICTs such as the Internet as a medium – as opposed to more traditional media such as the telephone, television or postal mail – are their high speed, low price and interactivity. It is faster to send an e-mail than to send a letter, it is cheaper to use Skype than to make a traditional international phone call, and unlike television, on the Internet everybody can interactively both publish and receive information. Extensive academic work has been done to describe mathematical aspects of electronic communication technologies, by using terms such as sender, receiver, message, channel, reliability, latency, throughput, or "bit"[12]. Building on this foundation, it becomes possible to evaluate the potential of various electronic communication technologies for transmitting information. It is important to point out that the Internet by itself is not a medium. Instead, it is technical infrastructure on which applications can be built around and serve as a conduit of information. In this respect, different Internet applications can exhibit very different characteristics. For example, a text-based discussion forum is a very different medium than a Skype video conference, and is therefore suitable for different contexts and purposes.

In addition to a suitable medium, communication between two or more individuals also requires mechanisms for interactively conveying semantics – information that is meaningful to human beings. In its most common form, dialogue is conducted by people who meet face-to-face. In this case, the medium is the air between them, and the

[12] See (Shannon & Weaver, 1963), generally considered one of the principal works that established information and communication theory.

mechanisms for conveying semantics consist of verbal communication (speech) and non-verbal communication (gestures, body language, facial expressions, etc.). This is generally the most effective form of communication, capable of transporting large amounts of information in a short amount of time. Compared to face-to-face communication, any electronic medium is necessarily more limited and less able to efficiently convey all the semantics that are typically found between humans. In general, an increased ability to transport information in the mathematical sense (i.e. a high "throughput") also results in an increased potential to convey human-understandable semantics, however, due to their variety it is still necessary to examine all the different concrete applications of ICTs individually. Sometimes, limited technologies such as text-based systems can be semantically enhanced in creative ways, such as by spatial arrangement of words or the use of emoticons[13]. A case can be made that emoticons as well as language that has limited semantics can even be desirable[14].

The main lessons to be kept in mind here about ICTs as a medium are that they are fundamentally different from previous media in various ways, and that different ICT applications can exhibit significantly different communication characteristics and as a result, different potential for political and social change.

2.2. Network Architectures

"The network, stronger than the node,
can circumvent a failing part.
Security and control code
keep alive the network's heart."

Besides fundamental properties of the medium itself, another important aspect of ICTs to consider at the technological level is the nature of network architectures, which refers

[13] Cellphones in Japan have a wide range of emoticons which enhances non-verbal communication in a society where direct speech can often be viewed as rude.

[14] For example, during the Cold War, the initial version of the Moscow-Washington hotline (the "Hot Line"), was consciously chosen to be a simple text-based telegraph line, in spite of the ready availability of more advanced electronic communication technologies such as telephones. One reason for this decision was a consideration that a medium incapable of transmitting voice and emotions might be better suited for solving the kind of crises that were expected to arise between the two superpowers.

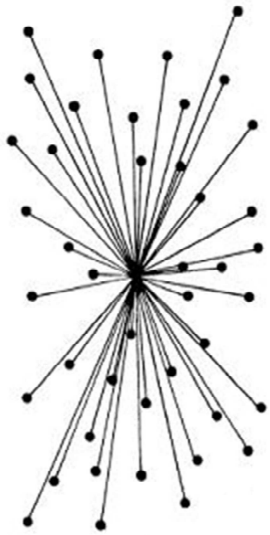
to the organizational structures according to which participants of an ICT application or service exchange information. The possible types of communication patterns that can be realized on existing electronic infrastructure are diverse, with centralized architectures at one end of the spectrum, and fully distributed architectures at the other end. Hybrid forms exist as well. These different structures can be analyzed using methods from the mathematical field of graph theory, and it should be noted that they can not only be used to describe ICT network architectures, but that they are really trans-disciplinary concepts, which have been applied to many practical situations and academic theories both in the natural and social sciences[15]. In the social sciences for example, the idea of distributed networks has been applied to fields of study such as the structures of corporations, international relations, terrorist organizations, revolutionary movements, and civil society.

Centralized network architectures are based on the idea that all communication flows through a central point in the system, which is responsible for managing the flow of information between participants, coordinating their behavior, and introducing hierarchies. This approach has the advantages of being efficient, well organized, reliable, and secure, as long as all key components of the hierarchy function correctly.

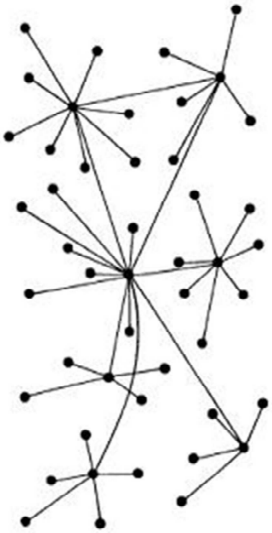
Alternatives to centralized forms of networks are commonly referred to by the technical terms “peer-to-peer”, “decentralized”, or “distributed”, which means that some or all communication takes place according to patterns that are less or not at all dependent on any single central point in the system. As a consequence, participants are given more control and independence. Such networks offer greater resilience against disruptions, unlike centralized structures, which contain sensitive weak points. Also, distributed networks are effective in repairing topological damages due to redundant and re-adjustable connections between participants, and their ability to easily add and remove new connections enables them to recruit and integrate new participants into the network at any time, or to even join separate networks together. Yet another strength of such networks is their ability to transmit and process messages in a very efficient way, bypassing hierarchies that may cause obstruction and delays, and getting information directly to the participants that need it. Connections between participants can

[15] For example, see (Powell, 1990)

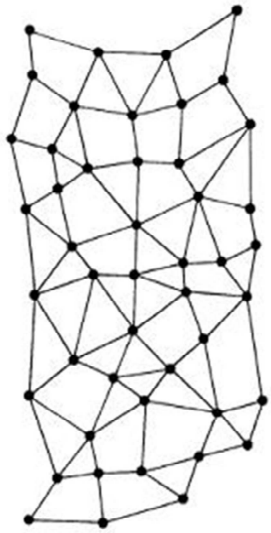
dynamically be optimized, and resources or communication channels that are found to be valuable can immediately be used again.



Centralized



Decentralized



Distributed

Overview of different network architectures[16]

In recent years, a strong tendency toward centralized and strictly hierarchical designs of ICT applications and services could be observed. In practice, this means that they make use of central "hubs" or "servers", which transmit, control, and organize all information and all communication within the network. Such designs are sometimes known as client/server architectures, or more recently described with marketing terms such as "software as a service" or "cloud computing". Today, most popular services such as Google Search, Gmail, Facebook, Twitter and Youtube are all based on a strictly centralized network design, involving a powerful server structure at the center of the architecture, and large numbers of clients on the periphery which depend on instructions and information from the servers.

The key realization to make is that in such centralized systems, the political or corporate entity offering a service is in full control of all data and communication processes which take place, and as a result, there is an inherent potential for exerting and abusing power

[16] See (Baran, 1962)

over participants. Today, criticism of such architectures has become widespread. Potential abuse scenarios and harmful consequences are to a large part based on violations of privacy and include the storage, analysis, aggregation, manipulation, and monetization of personal data, as well as the surveillance and manipulation of people's thoughts and opinions as they are exchanged via a network. As a consequence, attempts to build less centralized Internet applications have recently achieved a lot of attention and hype. Examples include file-sharing applications such as *Napster*[17] or *BitTorrent*[18], as well as the *Diaspora* project[19] and the *Federated Social Web*[20], a "Facebook without a single Facebook", or in other words, an online social networking system where multiple providers and users can interact with each other and fulfill their social communication needs, without being dependent on any single company or server system.

2.3. Digital Divide

One well-known technical problem associated with the widespread availability of information and communication possibilities is the so-called "Digital Divide" (or "Digital Gap"), which is the unequal ability among people to access ICTs, both between different areas of the world and among different parts of society within a country. The Digital Divide is caused to a large part by unequal availability of the technical ICT infrastructure, but also by differences in education and "computer literacy" – the skills required to efficiently use ICTs. The existence of such differences results in disadvantages for those groups of people who do not have adequate access to ICTs and therefore cannot fully benefit from their potential. Therefore, ICTs can not only serve to help solve some of world's big challenges, but can in fact also result in new problems as

[17] Napster (http://www.napster.com) – today mostly remembered for having sparked massive illegal sharing and downloading of copyrighted music and other material – is generally considered the first mainstream application that effectively demonstrated the advantages of peer-to-peer network architectures over traditional hierarchical systems.

[18] BitTorrent (http://www.bittorrent.com) is today's most used peer-to-peer file-sharing technology for transferring large amounts of data, e.g. movies or software packages.

[19] The Diaspora project (http://joindiaspora.com) consisting of four young students has raised USD 200,000 via a "crowdfunding" platform, and has attracted significant media attention.

[20] http://federatedsocialweb.net, launched in July 2010

well as in the amplification of existing ones. In discussions on how to address the problem of the Digital Divide, it has been suggested that basic access to ICTs should be considered a human right (see Section 7.1).

One of the best-known and highly acclaimed projects toward this goal is the *One Laptop Per Child (OLPC)* initiative, founded by Nicholas Negroponte, former head of the Massachusetts Institute of Technology's *Media Lab*[21]. The initiative's main product, the OLPC XO-1, is a low-cost laptop computer (also known as the 100$ laptop), which is intended to be distributed to school children in least developed countries (LSD). It has also sparked a lot of interest at schools within the United States and other heavily industrialized countries. This laptop is designed to be robust, low on power consumption, culturally neutral and easy to use.

Despite such initiatives however, the Digital Divide today is far from being closed, which has to be kept in mind when discussing the potential of ICTs for peace[22]. For example, when evaluating the amount of influence ICTs can have on revolutionary movements (see Section 4) such as the ones of the Arab Spring, it is necessary to consider the extent to which ICTs are actually available and used by the general population. According to one report about the usage of ICTs within the respective region, in spring 2011 Facebook had a penetration rate of 22.49% in Tunisia, and 7.66% in Egypt. Twitter had a penetration rate of 0.34% in Tunisia, and 0.15% in Egypt[23]. This means that even though these Internet services have been hailed as having greatly influenced the revolutions of the Arab Spring, a majority of the population was not actually connected to them, and is therefore likely to have received news of the events through more traditional media or through word-of-mouth communication.

[21] http://one.laptop.org/

[22] For example, see these statistics from the International Telecommunication Union (ITU): http://www.itu.int/ITU-D/ict/statistics/index.html

[23] See (Dubai School of Government, 2011)

3. ICTs for International Organizations and NGOs

3.1. Development and Education

One way in which ICTs can help to promote peace is by improving development in *Least of the Less Developed Countries (LLDCs)* and by working toward the United Nation's *Millennium Development Goals (MDGs)*, with development usually being defined using terms such as "growth" and "human comfort". The idea of using ICTs for development has become an accepted field of research and action known by the term *ICT4Development*, which includes a growing amount of research, publications and conferences[24]. The basic idea of *ICT4Development* is that ICTs can provide individuals with access to information, with communication across borders, with the ability to creatively generate and share knowledge, and with tools to create new economic opportunities[25]. For example, farmers in remote areas may get better access to price information, market their products to a wider audience, increase their income, and therefore achieve a higher standard of living.

ICTs can also greatly support development through education[26]. For example, online libraries and e-learning applications can help to improve education and make specialized knowledge available in areas where it would be hard to obtain otherwise. In some projects, ICTs even help teachers acquire knowledge which they then pass to others. UNESCO has a long tradition in promoting education as a human right and as a basis for a better life, for example through its *Education for All Programme*[27]. In addition to advancing education, UNESCO is also committed to preserving existing knowledge through its *Memory of the World Programme* and – having realized that ICTs are increasingly used for archiving knowledge – has adopted a *Charter on the Preservation of the Digital Heritage*, which recognizes that information stored on the Internet (created

[24] For example, http://ict.ez-blogs.de/ict4d-berlin-conference/

[25] This is relevant to MDG 1: Eradicate extreme poverty

[26] This is relevant to MDG 2: Achieve universal primary education

[27] Started in 1990 as the result of a World Conference on Education, http://www.unesco.org/education/efa/ed_for_all/index.shtml

digitally or converted from existing analogue resources) is a legacy that has to be protected[28].

3.2. Crisis Management

ICTs may also be used as tools by international organizations as well as by NGOs to increase the effectiveness of their important work in the area of preventing, responding to, and recovering from crises. One example of how technologies can help in such situations is the relief operation undertaken after the destructive tsunami in the Indian Ocean in 2004. After this catastrophe the governments of affected countries were overwhelmed by logistical challenges and depended heavily on international organizations as well as on local NGOs. Each of the participating organizations was specialized in a certain field (rescuing people, medication, providing shelter, registration, etc.). However, in order to effectively carry out their work, they needed to communicate with each other and exchange data extensively. On the technological level, this meant the need for a common data strategy and an easy way for transporting various different kinds of information. In the end, an open database system and other technologies using flexible data structures and communication protocols made it possible for all participants to incorporate all required information into the existing infrastructure. As a result, they were able to conduct their operations in a far more coordinated and effective way than they could have on their own.

Since then, the use of ICTs in crisis prevention, response and recovery has greatly increased. Special types of software such as "crisis mappers" have emerged and are now frequently used in crisis management, humanitarian aid, and peace-building. Organizations such as the *ICT4Peace Foundation*[29] or *ReliefWeb*[30] are dedicated to developing such technologies with the goal of enhancing the performance of the international community in crisis management. Further examples of how ICTs can help with crisis prevention, response and recovery are database projects for IDPs[31], early

[28] See (Charter on the Preservation of Digital Heritage, 2003)

[29] http://ict4peace.org/

[30] http://reliefweb.int/

[31] Internally Displaced Persons, i.e. people who were forced to leave their homes after a disaster or conflict, but did not cross borders of their home country.

warning systems, the distribution of safety information to field personnel, web portals for making information available in a reliable and timely way, logistics in peacekeeping operations, and more. One report by the *United Nations ICT Task Force* analyses the various ways in which ICTs can help in crisis management processes, and gives 16 recommendations on how to further increase their potential[32].

[32] See (Stauffacher, Drake, Currion, & Steinberger, 2005)

4. ICTs for Revolutionary Movements

"We had no freedom of assembly in the streets of Cairo,
so we assembled in cyberspace instead."

-- Message on social networks during the 2011 Egypt revolution

The potential of ICTs has received a lot of public attention when it comes to revolutionary groups engaging in (violent or nonviolent) political struggle against an autocratic authority or an unjust situation. In particular, the use of terms such as "Twitter Revolution" in media reports during the Arab Spring in 2011 suggested that ICTs have suddenly emerged as omnipotent weapons for easily overcoming authoritarian regimes in countries such as Tunisia or Egypt[33]. However, the use of modern information and communication technologies by political movements is not new: As early as 1994, the *Zapatista Army of National Liberation (EZLN)* in Chiapas, Mexico, pioneered the use of ICTs for political goals by communicating its motivations and demands through a public electronic network to sympathizers and supporters all around the world[34]. In 2000, the Serbian *Otpor!* movement against the socialist regime of Slobodan Milošević was famous for having had a website for recruitment and political outreach even before it had an office[35]. In 2008, hundreds of thousands of people, organized through Facebook, held a march in the Colombian capital Bogotá to protest the continuing, violent activities of the *Revolutionary Armed Forces of Colombia (FARC)*[36]. Many similar examples of political struggle exist, in which ICTs have played an important role. Specialized online platforms can help to systematically facilitate nonviolent action for a wide variety of causes[37].

The question is how and what ICT applications exactly can be used in revolutionary movements. Daryn Cambridge of the *International Center on Nonviolent Conflict*[38] says in

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[33] For example, see (Zuckerman, 2011)

[34] According to (Castells, 1997), this movement was the "first informational guerrilla movement".

[35] See (York, 2002)

[36] See (BBC NEWS, 2008)

[37] See for example http://avaaz.org/ or http://riseup.net/

[38] http://nonviolent-conflict.org/

a video lecture that the specific context of a conflict should determine how, when, and if ICTs should be used at all, and that the goals of a movement should shape how exactly ICTs are used, not vice versa[39]. The ways in which ICTs and the new media they enable can be used by such movements are diverse. According to a report by the *United States Institute for Peace*, there are five levels of new media influence that can be distinguished when it comes to political movements[40]. While these levels are complex and interrelated, and they are all difficult to research empirically when applied to concrete cases, they provide a useful framework. These five levels of influence are as follows:

• *Individual Transformation*
New media can influence politics via the effects they have on individuals, their competencies and their political views.
• *Intergroup Relations*
New media can promote or undermine the bonding of group members to one another, and the bridging of members of different groups.
• *Collective Action*
New media can be used to initiate and organize collective action, such as marches or demonstrations.
• *Regime Policies*
New media can help established regimes to maintain their power in various ways, such as through censorship or counter-propaganda.
• *External Attention*
Information about a movement such as its ideologies and goals can be published to a wide audience, both domestically and internationally. This can happen in the form of

[39] "The Digital Duel: Resistance and Repression in an Online World", http://www.nonviolent-conflict.org/index.php/learning-and-resources/educationalinitiatives/academic-webinar-series/1192-the-digital-duel-resistance-and-repression-in-anonline-world

[40] See (Aday, Farrell, Lynch, Sides, Kelly, & Zuckerman, 2010)

manifestos, statements, demands, images or videos on web sites or social networking services. As a consequence, political sympathy or hostility from outside actors can be mobilized, and new participants can be recruited to the movement.

Interestingly enough, some of the ways of using ICTs for political action can also be categorized with the same taxonomy as the one developed by Gene Sharp in his classic list of nonviolent methods[41]:

• *Protest and Persuasion with ICTs*
Communicating a political message to a large audience using ICT applications, for example with Facebook pages, blog posts, Youtube videos, online petitions, chat rooms, or discussion forums.
• *Noncooperation with ICTs*
Using ICTs to passively withdraw from or resist against unjust societal processes, for example by employing technology to circumvent firewalls and censorship.
• *Nonviolent Intervention with ICTs*
Using ICTs to actively disrupt unjust political conditions and instruments of power, for example by hacking into government websites, or by launching virus or denial-of-service attacks.

In the discussion on how decisive ICTs can be for revolutionary movements, one should acknowledge their role as tools for all involved parties, but also be careful not to overstate their overall influence. As Srdja Popović of the *Centre for Applied NonViolent Action & Strategies (CANVAS)* puts it[42],

> *"Don't mix tools with the substance. You will never change your society towards democracy if you sit down and click. There are risks to be taken, and there are living people who are winning the struggle."*

[41] See (Sharp, 1973)

[42] See (United States Institute of Peace, 2011)

4.1. Censorship, Propaganda, and Oppression

"Unfortunately, I have to get out of Egypt,
to be able to speak about the plight of the Egyptians."

-- Mohamed El Baradei

One important and inevitable aspect of the use of the Internet and other media in revolutionary political movements is that they are naturally not only available to members and supporters of such movements, but also to governments and their supporters in at least the same way. The fact that most ICT applications and services we use today are based on centralized network architectures (see Section 2.2) leads to a situation where the key institutions responsible for operating communication infrastructures (such as telecommunications companies and Internet service providers) are easily controlled by the governments of the countries in which they operate. Therefore, movements that are directed against an established governmental authority will often find themselves confronted with an imbalance of power not only in the form of control over traditional media, the police force, the army and other institutions, but also on the Internet, which governments can easily monitor, analyze, manipulate, slow down, or turn off altogether.

Historically, attempts to control information and communication have a long tradition not only in warfare[43], but have also again and again be used in peacetime by established authorities for the manipulation and oppression of people, from the Catholic Church's early attempts to control Gutenberg's printing technology to the fearsome propaganda machine of German National Socialism. In this tradition of "knowledge is power", it is not surprising that today, authoritarian regimes world-wide attempt to maintain their power to a great extent by controlling the dissemination of information, and that information and communication technologies become powerful weapons for both the

[43] See Aeschylus ("The first casualty of war is truth"), or Sun Tzu's principles for the conduct of war ("All warfare is based on deception")

government and the governed[44]. Today, while some countries provide ICT services in a very free and unrestricted manner, others exert tight control in the name of security[45].

Judging by examples from the last few years, governmental countermeasures against political movements in the online world can be summarized as falling into the following categories:

• *Censorship and shutting down connectivity*
Selective censorship has been a common measure by established regimes throughout the Arab Spring in 2011. Also, during the Egyptian Revolution in 2011, the regime has gone as far as blocking Internet access entirely, both for domestic users and for incoming international requests, which is a move that is unprecedented in Internet history[46].
• *Online counter-propaganda*
For example, during the Iran Green Movement in 2009 the technology was used by the political establishment to undermine the movement's outreach efforts, and to mobilize its own supporters online using Flickr or Youtube[47]. As a consequence, the Iran Green Movement in 2009 is often used as an example to dispel the utopian myth of omnipotent new media for political freedom, and to illustrate the limits of their potential.
• *Identification, infiltration, and tracking down of activists and sympathizers*
For example, during the Tunisian Revolution in 2011, Internet services such as Youtube, Wikileaks, human rights web sites and activist blogs were censored, and the government has even gone as far as stealing its citizens' passwords on Facebook, in order to invade, manipulate and delete content on their social networking accounts[48]. And countermeasures by the government were not limited to the online world – dissident

[44] See (Burkhart & Older, 2003, p. 31)

[45] For a report on Internet freedom and censorship world-wide, see (Freedom House, 2011)

[46] For example, see (Kanalley, 2011)

[47] See (Morozov, Internet in Iran, 2011)

[48] See (O'Brien, 2011)

bloggers such as Slim Amamou and Azyz Amamy, who had covered the events in Sidi Bouzid, were identified, threatened and imprisoned[49].

One of the best-known critics of the potential of ICTs for supporting political revolutions, Evgeny Morozov – known for coining terms such as "digital dictatorship" – suggests that the Internet may actually be more useful to authoritarian regimes than to the popular movements that oppose them[50]. And that even if a society had unlimited access to online information and communication systems, it might still not be able to overcome an authoritarian regime[51].

[49] See (Reporters Without Borders, 2011)

[50] See (Morozov, 2010)

[51] See (Morozov, Does the Internet spread democracy, 2009)

5. ICTs for a Global Civil Society

> *"We are caught in an inescapable network of mutuality, tied in a single garment of destiny. Whatever affects one directly, affects all indirectly."*
>
> -- Martin Luther King, Jr.

Perhaps the biggest (and potentially most beneficial) consequence of the spreading of modern ICTs has been the emergence of a "global civil society". The concept of civil society refers to the social space in which individuals and groups of individuals who are unaffiliated with hierarchical state structures and market-based economic structures take collective action in order to advocate their shared values and interests. There is no universally accepted definition of civil society. It can simply consist of individuals, or it can manifest in informal groups of people or social movements, but also in a large variety of concrete institutional forms such as registered charities, NGOs, churches, independent media, sports organizations, trade unions or self-help groups. Those entities interact with each other in many different ways, and they vary in their degree of formality, interconnectedness and influence. Often, definitions are formulated based on structural or behavioral aspects of civil society, rather than in a normative way. It is sometimes called a "third system", which in an "endless effort for emancipation in history" does not seek governmental or economic power, but rather its own autonomous power vis-à-vis both the state and the economy[52]. It is important however to note that even actors which are clearly placed outside of the state and the economy do not necessarily constitute civil society. They only qualify as long as their discourse is based on democratic values and rules, otherwise perhaps the proper term to apply would be non-civil society (e.g. terrorist organizations).

Civil society has always been linked to peace, being a "societas civilis", a zone of civility in which violence has been minimized, in contrast to states which historically have often had a war-making function[53]. In this sense, civil society may not be a solution for the

[52] See (Nerfin, 1987)

[53] See (Kaldor, 2003, pp. 3, 7)

problem of war, but it is a way of debating and addressing the issues leading to it. For Hegel, civil society was the "achievement of the modern age", for Marx, it was the "theatre of history", and for Vaclav Havel, it was the "universality of human rights to allow us to fulfill our potential in all our roles".

Civil society discourse takes places within a public sphere, which has the role of mediating between the private sphere (the family) and a public authority (the state)[54]. This public space in which the actors of civil society operate is an arena open to anyone, a place where diverse interests collide and compete for attention, and engage in discourse and consensus-building processes. This concept of a public sphere goes back to emancipatory ideas from the Renaissance and the Enlightenment as well as early civil rights documents such as the American *Bill of Rights* and the French *Déclaration des Droits de l'Homme et du Citoyen*.

The relationships between the state, economy and civil society are complex. The boundaries are often blurred rather than sharply defined. There is competition within as well as between them. The three actors also have obligations toward each other. In the relationship between the economy and civil society, it can be argued that the role of the former is to provide economic freedom as a prerequisite of individual freedom, while the role of the latter is to ensure a fair distribution of goods and resources. The relationship between the state and civil society is also interesting. Here, the role of the state is to provide a fertile public sphere by guaranteeing the basic human rights of freedom of expression and privacy, the rule of law, as well as an open discourse and the fair competition between ideas, and the role of civil society with regard to the state is to ensure the maintenance of a democratic society. This task consists of much more than just going to elections, it also includes making active contributions to democratic processes[55]. Therefore, while the objective of civil society is not to take over state or economic power, it does have the important controlling function to ask questions, voice concerns and provide input to a state's political process and an economy's market

[54] See (Habermas, 1962)

[55] In fact, so-called "democratic states" can be very undemocratic despite the holding of elections, see for example the rise of the Nazis during the Weimar Republic.

practices, therefore sharing responsibility, and improving accountability and transparency.

To summarize, the concept of civil society is characterized by self-organization, self-motivation, spontaneity, pluralism, by its independence from but interaction with state and economy, by its aspiration to freedom and democracy, and by the public sphere in which its discourse and nonviolent action take place.

5.1. Global Crisis

One reason for today's importance of the concept of civil society is that it is accompanied by hopes that it can address a perceived global crisis, the solution to which requires the establishment of new processes at the global level. Early well-known predictions and analyses hinting at this emerging global crisis include the Club of Rome's reports on the "limits of growth" and on "mankind at the turning point"[56]. Since history is full of conflict and peace, problems and solutions, crises and recoveries, it might be debatable whether humankind at this particular time is indeed confronted with a global crisis that is of a significantly greater magnitude than others at other times in history. But issues such as global warming, transnational terrorism and financial crises do indicate that today, we as a species are for the first time confronted with a concentration of highly threatening problems that we can only attempt to solve together.

According to some scholars, this "general crisis" can be traced back to a predominant "white, Western, Christian and elitist" world view at the founding of the United Nations in 1945, which is since being challenged by a "great awakening of the Third World" [57]. This crisis is described to be based on unequal exchange and hegemony, and argued to be a crisis which is "at the same time economic, financial, environmental, social, cultural, ideological and political, as well as one of security".

There is a wide range of predictions and proposals on what will happen as a result of the global crisis, or what could be done to cope with it. Immanuel Wallerstein explains that "systems of any kind always move away from equilibrium, but there are usually elements that push it back to it", and that "if those elements are not strong enough, the

[56] See (Meadows, Meadows, Randers, & William, 1972) and (Mesarovic & Pestel, 1974)

[57] For example, see (Nerfin, 1987)

system fluctuates and finds itself at a bifurcation" [58]. He goes on to predict social struggle from which either the "Spirit of Davos" or the "Spirit of Porto Alegre" will emerge as a new order.

Some even speak of a "hydra-headed crisis", arguing that individual catastrophic events such as the Haiti earthquake, the famine in East Africa, the Taliban attack on Kabul, the collapse of Lehman Brothers, the Boxing Day Tsunami or Hurricane Katrina are brought to our attention at a such quick, successive way that it appears as if new ones pop up as soon as another disappears[59]. To some extent, the evolution of modern ICTs has simply led to the fact that today we are more aware of such events than in the past. But ICTs have also resulted in a fundamental transformation of our political, economic and social relations that may very well be the root cause of some of the individual crises that make up the global one.

One possible interpretation of the global crisis is that it is a crisis of values, that it is radical individualism and materialism in the Western world – reinforced by the widespread availability of ICTs – which are the root causes for many of today's global problems. Explanations like this resonate well with the teachings of religious and spiritual leaders. Pope Benedict XVI says, "ethical values are needed to overcome the current global economic crisis as well as to eradicate hunger and promote the real development of all the world's people"[60].

This global crisis is accompanied by a decline in trust and relevance of the world's political and legal systems, which are based on the 1648 Westphalian concept of national sovereignty. Given today's advanced transportation and communication technologies, this system of strong nation-states may not accurately reflect social structures anymore. Especially when dealing with today's challenges of a transnational nature, individual governments may simply prove to lack suitable structures and resources for appropriately addressing them[61]. As early as 1995, it was suggested that

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[58] See (Miszlivetz, 2010)

[59] See (Held, Kaldor, & Quah, 2010)

[60] See (Benedict XVI, 2009)

[61] According to (Brinkley & Hackett, 1991), Jean Monnet (one of the architects of European unity) goes as far as considering nation-states an obstacle to peace.

ICTs would have such a profound impact that the role of the nation-state would change dramatically[62]. On the other hand, there are also views arguing that rather than leading to the erosion of nation-states, the globalization process will actually lead to nation-states strengthening and extending their sovereignty into the online world, and to a "new cyber Westphalian world of virtual borders"[63].

5.2. Global Civil Society

"A single all-embracing global civilization has arisen."

-- Vaclav Havel

In the face of unresolved global problems, it might be the "third system" civil society which steps in to fill the void created by the potential inability of established governmental and economic structures to effectively deal with them. Today, this civil society is no longer confined to the territorial state. The "global civil society" reflects a new reality enabled by the fusion of the terms "globalization" and "civil society", and it is accompanied by a "global public sphere", which is both an outcome and an agent of global interconnectedness[64]. Individuals and groups of individuals communicate across borders, and their primary identifying factors are often no longer the nation-state. This process is known as deterritorialization, which means that location, distance, and borders no longer have a determining influence[65]. Instead, the factors that connect individuals to each other are the values and causes they share and care about, which can be very diverse and include for example peace, women's emancipation, human rights, economic inequalities, refugee and migrant solidarity, environmental concerns, and much more. A global civil society promises to apply a global, holistic approach to global challenges, unlike nation-states, which are mostly concerned with their own spheres of influence, and international organizations, which often turn out to be politically paralyzed by conflicting political interests of their members. Just like for the term "civil

[62] see (Negroponte, 1995).

[63] See (Demchak & Dombrowski, 2011)

[64] See (Kaldor, 2003)

[65] While globality has not taken over territoriality, territoriality no longer has the monopoly on social geography. See (Miszlivetz & Jensen, 2006)

society", there is no single, universally accepted definition for "global civil society" either.

The term itself was born in the 1990s out of seven overlapping streams of concern[66]: The revival of the old language of civil society after the military crushing of the Prague Spring; a rising influence and availability of modern ICTs; a new awareness of a fragile world system, stimulated by the peace and ecological movements; the perception that after the collapse of the Soviet Union, a new world order would emerge; the world-wide growth of neo-liberal and market-capitalist economies; the disillusionment with the broken and unfulfilled promises of post-colonial states; and the rising concern about dangerous vacuums opened up by the collapse of empires and states and the outbreak of uncivil wars.

When considering its relationship to globalization, civil society can be described as both reactionary and progressive at the same time. On one hand, one of the root ideas of global civil society has been to confront adverse social effects of global capitalism and neoliberalism[67]. The main events that have brought this opposition to public attention were the neo-Zapatista uprising in Chiapas, the demonstrations at the Seattle meeting of the *World Trade Organization*, and the founding of the *World Social Forum*. On the other hand however, the global civil society that is addressing these issues is itself a form of globalization. This paradox is made evident by seemingly contradictory slogans such as "globalize the resistance" or "world-wide movement against globalization". It would be a mistake to describe global civil society as anti-globalization.

It is possible to distinguish between a "transnational civil society", "international social movements", and a "true global civil society". Whereas the first two terms simply describe the collaboration of individuals and organizations from different nation-states on common values and goals, a "global civil society" in its strictest interpretation assumes discourse and action to take place in the world as a single political, economic, and social global space. Therefore, a true global civil society requires global citizenship[68]. Such global citizenship would imply the existence of a global governance

[66] See (Keane, 2003, p. 1)

[67] In other words, the market-friendly policies of the 1989 Washington Consensus.

[68] See (Edwards & Gaventa, 2001, p. 2)

structure (a "global state"), including global justice, global law enforcement, global rights and responsibilities for its citizens[69]. This in turn would also coincide with the creation of a "global economy", a market free of any borders. This line of thinking of establishing a global state and a global economy side-by-side with a global civil society seems to be consistent with the traditional view of balancing the three interdependent actors, and to some limited extent, all three are already existent at a global level. However, while at least the term "global civil society" commonly bears positive associations and hopes, the terms "global state" (or even "world government") and "global economy" will all too quickly result in a strong emotional backlash[70]. This fear can be explained by the fact that all historical attempts to unite the world under a single, universal ideology – from Alexander the Great to communism[71] to global jihadism – were based on forceful acquisition of territory, totalitarian ideologies or conquest in the name of religion. Because of this violence and the resulting damage on peoples' lives, institutions and ecosystems, all such attempts have failed.

Addressing such fears, the *World Social Forum* in its "Answer to the Global Crisis" states that "the majority of the world is unsafe and unhappy", and that "much more people now know that the system in which we are obliged to lived must be changed". It goes on to conclude that in order to overcome the global crisis, "we need another society, another economy, … and a more radical democracy". Another important point made by the *World Social Forum* is that one of the criticisms of civil society – the lack of unity and coherence – is actually one of its biggest strengths. This is exemplified by the Forum's report, which uses slogans such as "solidarity in diversity" or "disagreements are a virtue" [72].

The emergence of the global civil society has also affected international relations and decision-making processes. Concepts such as "new diplomacy" or "complex

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[69] See for example the Transnational Republic project (http://www.transnationalrepublic.org/), or the World Passport initiative (http://worldservice.org/docpass.html), which advocates the creation of a "global citizenship".

[70] See for example the controversial report (The Commission on Global Governance, 1995) which was heavily criticized for proposing to increase the political power of the United Nations. Interestingly, the report also proposes to increase the role of "international civil society" within the world's political system.

[71] Consider the political slogan "Workers of the world, unite!"

[72] See (World Social Forum, 2002)

multilateralism" have turned civil society into an established actor at international bodies and conferences, which are on one hand acknowledging the growing legitimacy of civil society to question governmental and economic policies, but on the other hand also its potential as a partner to advance international agendas. One challenge in such dialogue is the absence of a single definition and of a recognized structure of civil society. In other words, there is no single "Mr. or Mrs. Civil Society" which a government, international organization or corporation can interact with.

5.3. Surveillance, Manipulation, and the Need for Balance

The most critical requirement for the state, economy and civil society to work with each other in a beneficial way is balance. All three players in this system are in the ideal case equally strong, mutually benefit from each other, and guarantee a democratic and just society, however, each one has their own special interests, and therefore care must be taken when any one of them becomes too dominant. The state seeks to maximize power, the economy seeks to maximize money, and civil society may seek to maximize citizenship rights, which could lead to the undemocratic exclusion of non-citizens.

Many threats in this imperative quest to maintain balance between the three exist. One such threat is surveillance, i.e. activities that are dedicated to observing and studying individuals' behaviors. In the online world, an entire industry has emerged that has specialized in developing methods and technologies known as "data mining", which serve to extract useful patterns from the data individuals produce as they use online services[73]. Due to a high degree of centralization of ICT applications and services (see Section 2.2), every step we take online, every piece of information we type on the screen, and every mouse click we perform can potentially be observed by actors outside of our control. A multitude of algorithms exists not only for extracting basic information about individuals themselves (such as name or address), but also about their relationships,

[73] One example out of many in this growing industry is the company Wakoopa, which states that its software *"creates digital DNA of today's consumer"*. Another example is the well-funded and often criticized company Phorm, which produces software that is being used by Internet Service Providers all around the world today to analyze the entirety of data sent and received by their users. Yet another example is PeerIndex, which focuses on social networks.

social status, roles, group dynamics and power structures[74]. The amount of data that is being collected and analyzed is typically much larger than individuals would expect, and the perceived freedom and user-centricity that seem to be inherent to the way we have been educated to use the Internet can all too easily hide the fact that between individuals and governments or companies, there is almost always a huge imbalance of control over personal data in favor of the latter.

Data mining can be used for the advantage of individuals[75]. However, there is also a vast potential for abuse by actors outside of civil society. Such abuse is often based on the direct monetization of personal data by various means such as targeted advertising, but also goes beyond that. For example, some banks today are known to determine their customers' credit ratings based on their activities and friends in online social networks[76]. All the largest and most popular Internet companies – such as Google, Facebook, Twitter, and Youtube – are based on a business model of offering supposedly "free" services in exchange for collecting valuable personal data about their users[77]. These companies have often been criticized for lack of information and control over what kind of data is being collected and how it is used[78]. Despite this, senior executives seem to care little to hide the fact that their business models are based on treating their users' data in very unrestricted ways. For example, Facebook CEO Mark Zuckerberg states in an interview that

> *"People have really gotten comfortable not only sharing more information and different kinds, but more openly and with different people. That social norm is just something that has evolved over time."* [79]

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[74] For example, see (Danescu-Niculescu-Mizil, Lee, Pang, & Kleinberg, 2011)

[75] For example, sophisticated examination of personal data can help to customize the services we use, provide for a better overall online experience and potentially even mitigate the challenges posed by Information Overload (see Section 5.5).

[76] See (Jeffries, 2011)

[77] For a discussion on hidden costs behind seemingly "free" services, see (Krotoski, 2010)

[78] One initiative that has generated a lot of attention is "Europe vs. Facebook", which has successfully provoked a formal investigation against Facebook by the Irish Data Protection Commission.

[79] http://www.ustream.tv/recorded/3848950

Related to surveillance is the concept of manipulation, i.e. measures of state or economy actors not only for the study, but also for influence over behavior and political views of individuals, by altering what we see and do in the online public sphere. Seemingly independent initiatives appearing to be part of civil society may actually be driven by state or economic actors, for example, sometimes "fake" NGOs are intentionally set up by actors of the political or economic realm in order to create the illusion of civil society support for their respective intentions[80]. To identify such attempts, a critical discourse and a diverse set of communication channels can help. Another example for attempts of disguising political or economic interests as civil society initiatives is the concept of paid blogging, i.e. the spreading of favorable opinions via weblogs for money. This strategy has been used by the Chinese government to post comments favorable toward its policies, in an attempt to influence public opinion on the Internet[81]. In Nigeria, the Umaru Yar'adua regime has budgeted $5 million to sponsor pro-government websites[82]. Similarly, the government of Israel has enlisted bloggers speaking a second language, in order to represent the country's interests on "anti-Zionist" blogs[83]. Both in China and the United States, an entire industry has arisen that employs large numbers of people to manipulate social networks[84]. During the Afghanistan and Iraq conflicts, the United States military has started using specialized software that allows it to create multiple, fake online profiles, also known as "sock puppets" or "virtual armies" to sway public opinion, using tactics like posting fake comments on blogs[85]. And not only political actors, but also corporations are investing heavily in using social networks to extend their influence, which can range from individual companies to start their own Youtube

[80] This practice of giving the appearance of a "grassroots" movement is sometimes called "crowdturfing" or "astroturfing", in reference to the AstroTurf synthetic carpeting material which looks like natural grass.

[81] The online commentators engaged in this activity are sometimes called the "50-cent party". See (Bristow, 2008).

[82] See (Sahara Reporters, 2009)

[83] See (Liphshiz, 2009)

[84] See (Simonite, 2011)

[85] See (Olson, 2011)

channels, to the acquisition of entire social networking platforms by large media corporations[86].

Pointing out the risks which surveillance and manipulation in centralized communications systems poses to the balance that is so important for civil society, Eben Moglen of the FreedomBox Foundation states:

> *"Facebook holds and controls more data about the daily lives and social interactions of half a billion people than 20th-century totalitarian governments ever managed to collect about the people they surveilled."*[87]

The original emergence of civil society had deep roots in the desire to establish a context of autonomy and a private sphere beyond the reach of an overly powerful state[88]. When considering this, it becomes clear that the conflict between the desire for privacy as a fundamental human right (see Section 7.3), and incentives for governments and corporations to study and manipulate the behavior of individuals is much older than the emergence of modern ICTs, but has proven to be more relevant than ever before in a world that is increasingly more connected. With the increasing use of online service on mobile devices and the data that is generated by such use, this trend of surveillance of manipulation is likely continue and accelerate[89].

5.4. Personal Identity Online

"Identification, that's how it starts.
Then ends with being rounded up.
Experimented on, eliminated."

-- Magneto, from the movie X-Men First Class (2011)

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[86] See (Castells, 2007)

[87] This quote is from a hearing conducted in 2010 by a subcommittee of the United States House of Representatives.

[88] In the case of Eastern Europe, it was the experience of state activity penetrating into every aspect of social life, and the resulting non-existence of a private sphere, which has led to the rise of civil society and ultimately the 1989 revolutions.

[89] For example, see the „Reality Mining" project by the MIT Media Lab, which is aimed at collecting and mining data from individuals' cell phones: http://reality.media.mit.edu/

"For us anonymity will be the first line of defence."

-- Professor X, from the movie X-Men First Class (2011)

One central issue when considering surveillance and manipulation as threats to today's global civil society is the concept of personal identity online, which refers to the extent to which applications and websites such as Google, Facebook or Skype are able to distinguish one individual from another individual. Personal identity can be approached in an "anonymous" way (not being able to identify an individual), in a "pseudonymous" way (being able to identify an individual, but not knowing their real identity), and in a "veronymous" way (knowing the real identity of the individual).

In the original design of the Internet, no need for a universal mechanism for handling personal identity had been anticipated, and therefore it had not been built into the network's infrastructure. The most common approach of establishing personal identity involves registering with some kind of identifier (e.g. a username, or an e-mail address), and some way of proving ownership of the identifier. This process of proving one's identity is usually referred to as authentication and can involve secret knowledge (e.g. a password), a physical item (e.g. a USB device) or a personal feature (e.g. fingerprints). In other words, in the context of ICTs it is possible to prove who you are either through something you know, something you have, or something you are.

The question of how much personal identity should be revealed when using Internet applications and services is a political one that clearly impacts the nature of a global civil society. It is essentially a mirror of the age-old question of how much private sphere and how much state power is healthy for a democratic and peaceful society, and how the resulting conflict between freedom and security should be approached. Since the Internet has become widely available to mainstream society, the question of personal identity has continuously been the subject of heated discussions, and many initiatives, communities and even entire conferences are dedicated to this subject[90]. This ongoing debate is also known as "nymwars", and a wealth of proponents and arguments exist on both sides[91].

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[90] For example, the Internet Identity Workshop (http://www.internetidentityworkshop.com)

[91] „Nymwars" appears in Wikipedia – a test of usage in itself. See http://en.wikipedia.org/wiki/Nymwars

Arguments and statements for little or no personal identity (anonymity) include:

- Anonymity is the best guarantee for fundamental human rights such as privacy and free speech online, and may even be itself a human right (see Section 7.3).
- Anonymity can be a powerful asset for democratic processes, because it reduces one's inhibitions, and it enables one to freely voice opinions without the fear of consequences. This is most important in societies where governments are known to excessively monitor and restrict free speech and the free expression of opinions.
- The online activist / hacker group "Anonymous", which strongly advocates the right for anonymity online, and which has received a lot of media attention for its alleged actions against high-profile entities such as the IMF, the Pentagon, and the government of Iran, states in a video message:

  "We have the right to not be surveilled, not be stalked, and not be used for profit." [92]

- Social media researcher Danah Boyd says that anonymity provides protection for political dissidents, ethnic minorities and marginalized groups, and that members of such groups are most likely to rely on anonymity:

  "Real names policies aren't empowering; they're an authoritarian assertion of power over vulnerable people." [93]

Arguments and statements for much or full personal identity (veronymity) include:

- Anonymity can be abused for spam, defamation, propaganda and other malicious purposes, while the use of real names results in more trust, transparency and accountability, which are important foundations of a democracy.
- In addition, the use of real names would likely result in more security, facilitate law enforcement, and reduce criminal acts online (cybercrime).
- Facebook founder Mark Zuckerberg is known to be an advocate of the use of real personal identities online, stating for example in an interview:

[92] See (Gray, 2011)

[93] See (Boyd, 2011)

"Having two identities for yourself is an example of a lack of integrity." [94]

- His sister and Facebook's marketing director, Randi Zuckerberg, has argued that the use of real names prevents phenomena such as cyberbullying:

"I think anonymity on the Internet has to go away. People behave a lot better when they have their real names down. I think people hide behind anonymity and they feel like they can say whatever they want behind closed doors." [95]

- Former Google CEO Eric Schmidt is similarly arguing against anonymity online and has stated in an interview:

"If you have something that you don't want anyone to know, maybe you shouldn't be doing it in the first place." [96]

- On a different occasion, Eric Schmidt has also said the following:

"In a world of asynchronous threats, it is too dangerous for there not to be some way to identify you. We need a verified name service for people." [97]

- In the wake of terrorist attacks committed by right-wing extremist Anders Behring Breivik in Norway in 2011, German politician Hans-Peter Friedrich has demanded an end to anonymity:

"Normally, people account with their name for what they say. Why should this be different on the Internet?" [98]

Many examples exist where the question of anonymity has affected success or failure of Internet services. The social networking service Google Plus has been criticized for its initial „real name" policy, which has later been relaxed. In the case of online journalism, many media corporations are facing the challenge of whether to accept information from anonymous sources, and whether to allow interactive functionality such as commenting on their online content by anonymous visitors. Perhaps one of the best

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[94] See (Kirkpatrick D. , 2010)

[95] See (Bosker, 2011)

[96] http://www.youtube.com/watch?v=A6e7wfDHzew

[97] See (Kirkpatrick M. , 2010)

[98] See (Lischka, 2011)

known examples of the question on how much anonymity there should be on the Internet is the debate around the Wikileaks whistleblower platform, which has become famous for having released several high profile documents containing sensitive and secret materials, such as the "Collateral Murder" video or the "Afghan War Diary". Wikileaks undertakes great efforts both on the technological and political level to protect the anonymity of its contributors, and consequentially the service has become subject to a controversial debate on whether this anonymity is justified or not. While proponents argue that anonymity is necessary to protect the whistleblowers' identities as well as the freedom of the press, opponents state that the released information presents a danger to security[99].

5.5. Information Overload and Online Collectivism

"Where is the wisdom we have lost in knowledge?
Where is the knowledge we have lost in information?"

-- T. S. Eliot, Choruses from "The Rock" (1934)

"It's been my policy to view the Internet not as an 'information highway',
but as an electronic asylum filled with babbling loonies."

-- Mike Royko, Pulitzer Prize winner

Besides looking at the nature of personal identity, the nature of the actual discourse that takes place within the online public sphere has to be examined as well, when discussing the potential of ICTs for a beneficial global civil society. One well-known adverse phenomenon in this context is "information overload", which is a term that was coined before ICTs played a role as a mass medium and refers to a situation of being overwhelmed with too much information to handle[100]. It was originally used to describe technological change in general and has gained new relevance with the advent of the Internet on a large scale. One of the most-often cited advantages of modern ICTs – the possibility to quickly share and access a large amount of information – is therefore put into question. Information, which is traditionally seen as something positive, can

[99] See (Sifry, 2011)

[100] This term was popularized in (Toffler, 1970), which discusses social effects of change that happens too fast.

become a problem in itself if available in amounts too large to process and in a structure too hard to search. As Herbert Simon puts it,

> *"A wealth of information creates a poverty of attention."*[101]

Therefore, in an online public sphere, depending on how much information is produced, and on how much personal identity is associated with that information, the question to be raised is whether the discourse within the public sphere actually supports a healthy civil society, or instead perhaps rather resembles a state of anarchy or other organizational forms that ultimately contradict and hurt the nature of a democratic system. While ICTs definitely enable large numbers of individuals to exchange information and to communicate and collaborate in networked social structures, with every individual being able to participate in a roughly equal way, this ability and the resulting phenomenon of unstructured online collectivism can produce either a beneficial or a destructive outcome.

On one hand, online collectivism is often described in a positive way. The main arguments in this case are:

- Larger numbers of participants result in more opinions and more information, which in turn results in healthier democratic discourse.
- When information is aggregated by groups, content can be generated, and decisions can be made that are ultimately better than they could have been if they had been made by any single member of a group. In this sense, online collectivism can be compared to the economic concept of a free market which would regulate itself, find mistakes, and therefore improve incrementally. This phenomenon is sometimes described as "collective wisdom" or "swarm intelligence". Cognition, coordination and cooperation are the three main advantages of collective decision-making[102]. One example for this is the online encyclopedia Wikipedia whose quality is often said to rival that of professional encyclopedias such as the Encyclopedia Britannica.

On the other hand, there is also significant criticism of online collectivism:

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[101] See (Simon, 1971)

[102] See (Surowiecki, 2004)

- For example, computer scientist Jaron Lanier criticizes the blind fascination that is sometimes attributed to collective activities enabled by ICTs[103]. Just like proponents of online collectivism, he also uses the online encyclopedia Wikipedia as an example and states that he is not concerned with the knowledge itself that is being accumulated by collectivist processes, but rather with the trust that many people attribute to it, calling online collectivism a "fetish" to some. In addition, he warns of the emergence of any kind of system that claims universality even when based on collectivist principles. Finally, he also mentions that works created by collectives are devoid of any personality, and that any traits and voices of individual authors are lost.
- According to entrepreneur Andrew Keen, most of modern social culture has existed with specific intellectuals acting as gatekeepers whose purpose is to analyze, evaluate, filter and regulate information as it reaches the masses[104]. In a system where the construction and flow of information and knowledge are conducted in a very collectivist and egalitarian manner, these gatekeepers do not disappear, but they can be more easily circumvented. As a result, online collectivism might deliver superficial observations of the world rather than deep analysis, shrill opinion rather than judgment. Keen's conclusion is that "history has proven that the crowd is not often very wise", embracing unwise ideas like "slavery, infanticide, George W. Bush's war in Iraq, Britney Spears."
- Interaction on the Internet can actually serve to mostly reinforce existing beliefs and opinions, rather than enrich and broaden them. According to one study, people are likely to consume sources on the Internet that match their already existing views[105]. Also, the Internet makes it easier for us to find and join groups that we already agree with, which might, in turn, make our views more extreme[106].

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[103] See (Lanier, 2006)

[104] See (Keen, 2007)

[105] See (Hsu, 2009)

[106] See (Morozov, 2009)

- Another potential problem of online collectivism is groupthink, which is characterized by group pressure, a belief in the inherent morality of a group's decision, the illusion of unanimity, and barriers to voicing one's own, contradicting opinions (self-censorship). In online communication systems, where it is all too easy for large numbers of individuals to participate in group discussions, where messages and replies often appear in rapid, chaotic patterns, and where therefore the problem of information overload can make it hard to treat all given opinions with equal attention and consideration, perhaps the above mentioned phenomena associated with groupthink are even more likely to appear than in face-to-face interaction.

The lesson to be learned is perhaps that the goal in judging and addressing information overload and online collectivism should not be to aim for the availability of a maximum amount of information within the public sphere, but rather an optimum of information, which has to be operationalized in some way. For example, it could be the task of professional journalists to filter this wealth of information, to decide what is relevant and what is not, and to verify information from unreliable sources.

6. ICTs for a Global Culture of Peace

Related to the idea of establishing a global civil society to address problems shared by all of humanity, one promising and noble strategy to work toward the ideals of the United Nations charter has been and continues to be the concept of a "culture of peace", which embodies respect for cultural diversity, and aims to establish a culture in which dialogue leads to mutual understanding, tolerance and peace between cultures. Today, ICTs can offer the tools to establish such a culture of peace on the global level.

6.1. Culture, Identity and Peace

For the term culture, many possible definitions exist[107]. One way of describing it would be as the distinct set of behaviors, habits, rules, traditions, customs, attitudes, values and beliefs of an individual or a group of individuals. This definition can also include language, history, religion, ideology, cosmology, art and one's overall way of life. Elements of culture that are not so visible at first sight, but only unfold after some time of interaction, are sometimes referred to as "deep culture"[108]. According to the international organization most concerned with culture, UNESCO, culture is one's "way of looking at the world". Within a society, the world views embodied in the society's culture are expressed through laws, political policies and social norms.

The concept of culture is closely linked to that of identity. Our identity is what defines us as an individual. Identity is complex and always in transition. It can be defined by oneself, or it can be observed by others, and it exists on multiple levels. On the micro level, our personal identity includes features that are specific to us alone, such as our name, address, phone number, or our educational and professional curriculum. On a higher level, our social identity determines our role and position within a society. It includes our overall social roles and status, our friends, and our social responsibilities such as being a parent. Finally, on the macro level, our cultural identity determines cultural features that we embody within ourselves and share with others to a more or less extent.

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[107] For a long list of possible definitions, see (Kroeber & Kluckhohn, 1952)

[108] For achieving intercultural dialogue, the appreciation of this "deep culture" is especially important. See (Shaules, 2007)

Identity is the set of properties that distinguish us from others. In some interpretations, a culture can therefore only exist if it can differentiate itself from other cultures. From this point of view, it may be possible to define a measure of distance between cultures, and some cultures may be closer or more related to each other than others. Also, some cultures may be more "open" than others, i.e. better able to integrate new members.

Peace is similarly complex to define. In its strictest sense ("negative peace") it means the absence of war and violence. In a broader sense ("positive peace") it can encompass many more desirable conditions, e.g. spiritual, inner peace as well as happiness, a just social order, the absence of structural violence, a democratic political system, gender balance, the fulfilling of basic needs, and harmony with the environment ("gaia peace") [109].

One interesting question to ask is whether some cultures are inherently more peaceful or violent than others. Cultures may tolerate or encourage violence to a greater or lesser extent, in other words, the barriers to resorting to violence and war may be different in some cultures than in others. Also, the ways in which conflicts are perceived and handled (one party may not even acknowledge the existence of a conflict), and the ways in which peace and war are viewed, valued and conducted can vary between cultures. Cultures that are inherently peaceful may express themselves through the glorification of peace heroes in their narratives, through the erection of peace statues and monuments, through emphasizing peaceful events and periods in their history, or through the practicing of peace journalism in the media.

Based on a common understanding of the terms "identity", "culture" and "peace", a "culture of peace" is hereby assumed to refer to a set of values, behaviors and beliefs based on respect for life, nonviolence, tolerance, solidarity, cooperation, a guarantee for human rights, the peaceful settlement of conflicts, and beneficial dialogue between cultures.

6.2. Cultural Diversity and Intercultural Dialogue

In its constitution, UNESCO states:

[109] See (Galtung, 1996)

"Since wars begin in the minds of men, it is in the minds of men that the defenses of peace must be constructed."

This fundamental and well-known statement is deeply based on the concepts of identity and culture, the respect for cultural diversity, and the beneficial dialogue between cultures. Many conflicts between and within nations are in one way or the other rooted in cultural differences, the lack of respect for cultural diversity, and the resulting misunderstandings and tensions between peoples. If one's identity is threatened or denied legitimacy or respect, conflicts can quickly arise and become intractable. And since identity is a fundamental human need and an essential step of every individual's growth process, any deprivation of this need is likely to result in a strong, hostile response[110]. If such deprivation is not addressed appropriately, it can lead to polarization, stereotyping and dehumanization. This is true both in the interpersonal context and in a group context when a shared, cultural identity is threatened.

Keeping the importance of identity and culture in mind, the basic idea of preventing conflicts by promoting dialogue between cultures is at the same time noble, credible, and promising. If we know enough about each other, we are more likely to understand, respect, and perhaps even enjoy each other's identity, and less likely to engage in conflict and violence with each other. And if we recognize each other as humans instead of engaging in mutual processes of dehumanization, we will be able to solve conflicts before they unfold their destructive character. One historical example which is sometimes mentioned as "proof" for this approach to work is the Spanish city of Córdoba in the 10th century, when the city population was composed of people from all three Abrahamic religions, who not only lived together in peace, but also created a unique blend of culture and a level of development unparalleled in Europe at that time. The reason for this harmony and fruitful cooperation was the fact that Muslims, Christians and Jews simply knew everything about each other's beliefs and customs.

Prerequisites for a culture of peace are respect for cultural diversity, as well as attachment to one's own cultural identity. As one of UNESCO's most important documents, the *Universal Declaration on Cultural Diversity* was adopted soon after the 11

[110] See (Conflict Research Consortium, University of Colorado, USA, 1998)

September 2001 attacks, in order to reaffirm the conviction that intercultural dialogue is the best guarantee of peace. This declaration in its preamble mentions the significance of dialogue and cooperation between cultures:

> *"Affirming that respect for the diversity of cultures, tolerance, dialogue and cooperation, in a climate of mutual trust and understanding are among the best guarantees of international peace and security,"*

The same document in its Article 1 explicitly points out that cultural diversity is a desirable good that should be preserved:

> *Article 1: Cultural diversity: the common heritage of humanity*
>
> *"Culture takes diverse forms across time and space. This diversity is embodied in the uniqueness and plurality of the identities of the groups and societies making up humankind. As a source of exchange, innovation and creativity, cultural diversity is as necessary for humankind as biodiversity is for nature."*

Another important source is UNESCO's *Convention on the Protection and Promotion of the Diversity of Cultural Expressions*, which among other things states as an objective:

> *"… to encourage dialogue among cultures with a view to ensuring wider and balanced cultural exchanges in the world in favour of intercultural respect and a Culture of Peace."*

From these documents, it is important to remember the value of cultural diversity, as well as the beneficial potential of intercultural dialogue for a culture of peace.

6.3. Toward a Culture of Peace

Based on this simple understanding of the value of cultural diversity and of intercultural dialogue as a counter-concept to a perceived "culture of war" that has existed throughout human history, UNESCO has in 1992 started the *Culture of Peace* program under the leadership of David Adams[111]. The program's main scientific foundations were the *Seville Statement on Violence* of 1986, which states that violence and war are not

[111] See (Adams & True, 1997)

biologically part of human nature, and the *Yamoussoukro Declaration on Peace in the Minds of Men* of 1989, which calls for

> *"a new vision of peace culture based on the universal values of respect for life, liberty, justice, solidarity, tolerance, human rights and equality between women and men."*

Following UNESCO's lead, in 1998 several noteworthy resolutions of the UN General Assembly have dealt with the culture of peace idea, its importance, and its implementation:

- Resolution 52/13 was the first major general resolution on a *Culture of Peace*.
- Resolution 52/15 proclaimed the year 2000 as the *International Year for the Culture of Peace*.
- Resolution 53/22 proclaimed the year 2001 as the *United Nations Year of Dialogue among Civilizations*. It emphasizes

  "the significant role of dialogue as a means to reach understanding, remove threats to peace and strengthen interaction and exchange among civilizations"
- Resolution 53/25 proclaimed the decade 2001-2010 as the *International Decade for a Culture of Peace and Non-Violence for the Children of the World*. It points out the fundamental importance of a culture of peace for core values of the United Nations, by stating that

  "the task of the United Nations to save future generations from the scourge of war requires transformation towards a Culture of Peace, which consists of values, attitudes and behaviours that reflect and inspire social interaction and sharing based on the principles of freedom, justice and democracy, all human rights, tolerance and solidarity, that reject violence and endeavour to prevent conflicts by tackling their root causes to solve problems through dialogue and negotiation."

Finally, in 1999, the United Nations General Assembly passed Resolution 53/243, the *Declaration and Programme of Action on a Culture of Peace*. This document is often considered one of the great documents ever produced by the United Nations, on a par with the *Universal Declaration of Human Rights*, and directed toward the organization's primary goal to abolish war.

6.4. Global Culture of Peace

Having examined the values of identity, cultural diversity and intercultural dialogue, as well as the core concept of a culture of peace, this section attempts to examine the role of ICTs in working toward the goal of establish a culture of peace on a global scale. Cultures emerge, evolve and interact with each other over time. With this interaction comes the potential both for connecting and for separating. Today, with the widespread availability of ICTs such as the Internet and mobile phones, it appears that the potential for such interaction is now greater than ever before. Modern communication technologies are a powerful asset for fruitful dialogue between cultures.

UNESCO's *Universal Declaration on Cultural Diversity* contains a statement on the influence that the development of ICTs has on cultural diversity and intercultural dialogue.

> *"Considering that the process of globalization, facilitated by the rapid development of new information and communication technologies, though representing a challenge for cultural diversity, creates the conditions for renewed dialogue among cultures and civilizations,"*

Within this last sentence lie both risk and opportunity: The spreading of ICTs and the resulting globalization process can on one hand lead to threats cultural conflicts, cultural imperialism and cultural homogenization, and on the other hand to beneficial intercultural dialogue. This declaration is accompanied by a 20 point Action Plan, whose points 9, 10, 11, 12, 16 and 17 specifically address the topics of cultural diversity and dialogue in global information networks, stating for example the following as an important objective:

> *"Encouraging the production, safeguarding and dissemination of diversified contents in the media and global information networks …"*

UNESCO's website on the *Culture of Peace* program mentions (as one of the cornerstones of the program) the need to:

"Support participatory communication and the free flow of information and knowledge." [112]

Elise Boulding, whose research has served as a significant inspiration to the *Culture of Peace* program, mentions that in peaceful cultures,

"Secrecy and control of information by those in power is replaced by the free flow and sharing of information among everyone involved." [113]

Following the establishment of the *Culture of Peace* program, several reports have been published during the course of the *International Decade for a Culture of Peace*:

- A 2005 report describes the Internet as a useful tool for promoting the idea and values of a culture of peace[114].
- A 2010 report states:

"With access to the Internet and greater global movement people are connected with different cultures, ideologies, ethnicities, etc. that helps break down barriers." [115]

According to the *Global Movement for a Culture of Peace* website started by *Culture of Peace* architect David Adams,

"Early on, we recognized that Internet could play an important in the development of a global movement." [116]

He also states that an early draft declaration and programme of action on a culture of peace mentioned that

"[The media's] technological advances and pervasive growth have made it possible for every person to take part in the making of history, enabling for the first time a truly global movement for a Culture of Peace."

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[112] http://www.unesco.ca/en/interdisciplinary/peace/default.aspx

[113] See (Boulding, 2008)

[114] See (Foundation Culture of Peace, 2005)

[115] See (Foundation Culture of Peace, 2010)

[116] http://www.culture-of-peace.info/

6.5. Cultural Violence, Conflicts, Imperialism, and Homogenization

Despite the potential of ICTs for a global culture of peace, various threats exist as well. One such threat is increased cultural violence, which refers to direct or structural violence that is committed and justified by aspects of culture such as religion or traditions[117]. This process may lead to the glorification of one group and the devaluing of another, based on their cultural differences[118]. The suppressor might even appear generous and charitable, therefore rationalizing the unequal relationship with the suppressed. In today's globalized world in which cultures interact in highly dynamic ways, there might be an increased risk of processes of cultural violence.

Another threat is that the ongoing globalization process enabled by ICTs may intensify competition and conflict between cultures instead of encouraging dialogue and understanding. As a consequence, new conflicts can arise based on cultural differences, misunderstandings and intolerance. Cultural and religious identities can be seen as major sources for conflict[119]. In fact, culture can often be a much stronger source of conflict than of synergy[120]. ICTs definitely offer new ways for conducting such cultural conflicts, for example, Evgeny Morozov states[121]:

> *"If you had to choose one weapon for fighting the next religious war, you could do worse than to pick an iPhone."*

In a more and more interconnected world, some cultures may have far higher numbers of adherents than others, and "larger" cultures may have the resources and will to dominate "smaller" ones, and to impose their cultural identity onto others, leading to cultural imperialism. This phenomenon is often observed in the field of post-colonial studies and described as an effective way of enforcing political power, dependency and hegemony.

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[117] See (Galtung, 1990)

[118] See (Skutnabb-Kangas, 1998)

[119] See (Huntington, 1996)

[120] See (Hofstede, 2001)

[121] See (Morozov, God Bless This Gadget, 2009)

A related phenomenon – communication imperialism – refers to a process in which the ownership and control over the hardware and software of mass media as well as other major forms of communication in one country are singly or together subjugated to the domination of another country with deleterious effects on the indigenous values, norms and culture[122]. In other words, control over ICT infrastructure by members of one culture can provide effective means to spread and impose this culture's particular traditions, beliefs and values, and therefore result in cultural imperialism. Communication imperalism is not specific to modern ICTs. In 1980, a UNESCO commission published a report that identified inequalities in global media infrastructures and unsuccessfully proposed steps to establish a *New World Information and Communication Order*, in other words, make global media representation more equitable and therefore reduce the potential for communication imperialism[123].

When individual, less dominant cultures get assimilated into others, this can lead to a reduction of diversity and in its extreme form to the establishment of a single "world monoculture" in which little distinction exists. The emergence of regional or even global cultures that incorporate elements from many other cultures is not necessarily a bad thing – on the contrary, over the course of time, it has always been a natural process for cultures to evolve, interact and mix with each other. However, it is also important to remember that one's ability to adapt to new cultural realities is limited, and that processes of homogenization run contrary to the value that is inherent to cultural diversity, and therefore contrary to intercultural dialogue.

6.6. Social and Cultural Identity Online

Since the concepts of culture and identity are interdependent and influence each other, one key question in exploring how ICTs can help to promote a global culture of peace must therefore be how identity is established and communicated via the Internet and other ICTs. Since the medium properties vary a lot, the way identity works also varies and depends on the concrete application being used, e.g. identity on Facebook is

[122] See (Lee, 1988)

[123] See (International Commission for the Study of Communication Problems, 1980)

different from identity on Skype. It is useful to distinguish between personal, social and cultural identity, and to examine how they are expressed online.

When it comes to social identity, it is of course social networking services such as Facebook or Google+ that attempt to incorporate it as well as possible. These applications are designed to model relationships between people, to accumulate and share data such as personal profiles, messages and photos, and to provide a set of additional information and communication services based on the participating individuals and relationships between them.

Social networking services try to model our social identity online, however, they can only express it to a limited extent. While they allow individuals to share information, they do not typically incorporate support for the different roles that one might have in society. For example, on Facebook, one cannot behave differently in one's role as a "father" from one's role as a "co-worker". Instead, there is only a single "account" which is used for all activities. Also, relationships between individuals are often not accurately represented, for example the single possible relationship "friend" on Facebook is a drastic simplification of the great variety of relationships that actually occur between people. From this perspective, Google+ is an improvement over Facebook insofar as it provides at least basic support for a more advanced notion of social relationships through its "circles" functionality.

Similar to social identity, cultural identity is also expressed only in limited ways by today's popular ICT applications and services. On social networking services, cultural identity transcends all our activities. For example, parts of one's cultural identity such as traditions, religious views or ethnicity are of course reflected in how we use social networking services, in the messages we post, and in the photos we upload. From this perspective, cultural identity is implicit and affects all our activities and behavior both offline and online.

Despite this implicit cultural identity, as of today, no online social network services or other ICT applications have an explicit notion of cultural identity. For example, it is not possible in Facebook or similar services to systematically express a person's traditions, religious beliefs or ethnicity. If such an accurate expression of cultural identity existed, then for example, it would be possible for a social networking service to suggest new relationships or enable other functionality based on cultural similarities or differences.

Such functionality could potentially support beneficial intercultural dialogue and therefore contribute to a global culture of peace.

Beyond introducing such a notion of cultural identity, it will also be necessary to design ICT applications in ways that are as culturally open as possible. Instead of heavily basing them on Western values, in particular on individualism, self-expression and maximizing personal choice, one should keep in mind that there are many ethnic groups that favor community over individualism, and values such as order over choice[124]. Communication technologies that are meant to empower a global culture of peace should take this diversity of values into account and should offer not only tools that support individualist word views, but that also place a central emphasis on alternative social structures.

[124] See the "Cultural Map of the World" in (Inglehart & Welzel, 2005, p. 64)

7. ICTs and Human Rights

In light of multiple challenges around the use of ICTs, and in light of the many different ways in which humans interact with each other online, human rights transcend many of the topics presented in this thesis, and should provide a framework and supreme set of guiding ideas, always affirming the equal dignity and value of all human beings, and telling us what should be done and what should not be done. In modern communication environments that are highly dynamic and interconnected, such guiding ideas are especially important. In the best tradition of the ethic of reciprocity of human rights (the "Golden Rule"), a system of freedoms and obligations for a prosperous and just information society is needed, in which we all do (not) to others what we (do not) want others to do to us.

Many initiatives and organizations exist that try to apply human rights principles to ICTs. The *Global Network Initiative*[125] (a coalition of ICT companies, civil society organizations, investors and academics) dedicates itself to protecting and advancing freedom of expression and privacy in ICTs. The *Internet Rights & Principles Coalition* (a multi-stakeholder network of people) is working on a *Charter of Human Rights and Principles for the Internet*[126]. And the United Nations have placed a special focus on social media during their *Human Rights Day* in 2011[127].

7.1. Right to Access to Information

The ability for individuals to access information through the use of ICTs is the most fundamental prerequisite for benefiting from their potential. While the ability to access and use communication technologies is certainly not as essential as other basic rights and needs such as water, shelter or physical security, it is still a key requirement for participating in today's highly interconnected world and might therefore be considered a human right. There are however also opposing opinions, arguing that there is a very

[125] http://www.globalnetworkinitiative.org/

[126] http://internetrightsandprinciples.org/node/367

[127] http://www.un.org/en/events/humanrightsday/2011/

high bar for something to be considered a human right, and that technology can only ever be an enabler of rights, rather than a right in itself[128].

Article 19.2 of the *International Covenant on Economic, Social and Cultural Rights* mentions the

> *"… freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of his choice."*

While this article does not explicitly mention a human right to access to ICTs, it could be interpreted to imply such a right, given today's importance of these technologies.

The *Tunis Commitment* of the *World Summit on the Information Society* in its Article 9 affirms this importance of access to ICTs:

> *"We reaffirm our resolution in the quest to ensure that everyone can benefit from the opportunities that ICTs can offer, by recalling that governments, as well as private sector, civil society and the United Nations and other international organizations, should work together to: improve access to information and communication infrastructure and technologies as well as to information and knowledge."*

And according to a report by the *Office of the High Commissioner for Human Rights (OHCHR)*,

> *"Given that the Internet has become an indispensable tool for realizing a range of human rights, combating inequality, and accelerating development and human progress, ensuring universal access to the Internet should be a priority for all states."* [129]

Several countries have included an explicit right to access to the Internet in their domestic legislation, for example Spain guarantees their citizens the right to broadband Internet access at any location for a fixed price[130]. Similar rights also exist in Estonia, France, Finland and Greece.

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[128] See (Cerf, 2012)

[129] See (United Nations High Commissioner for Human Rights, 2011)

[130] See (Morris, 2009)

It should also be pointed out that a right to access to ICTs does not only concern the basic availability of infrastructure, but also the degree by which they are in practice accessible for use by all people, irrespective of education, social status, or disabilities. In other words, even in situations where ICT infrastructure is sufficiently available, full accessibility for everyone is not necessarily guaranteed. Article 9 of the *Convention on the Rights of People with Disabilities* lays out the right to accessibility and makes specific references to ICTs:

> *"State Parties shall also take appropriate measures to:*
>
> *g. Promote access for persons with disabilities to new information and communications technologies and systems, including the Internet;"*

7.2. Right to Freedom of Expression

Another key topic to consider when looking at the intersection of ICTs and human rights is freedom of expression, which is related to the right to basic access to ICTs. As a concept that has a long history in traditional media, the right to freedom of expression has gained new relevance with the widespread availability of the Internet, especially with regard to censorship and oppression online (see Section 4.1). Several high-level politicians from Joe Biden to Vladimir Putin have stated that the freedom of expression on the Internet should not be compromised[131].

The *Universal Declaration of Human Rights* in its Article 19 says:

> *"Everyone has the right to freedom of opinion and expression."*

This is further repeated and reaffirmed in the *International Covenant on Economic, Social and Cultural Rights*, which in its Articles 19.1 and 19.2 says:

> *"Everyone shall have the right to hold opinions without interference."*
>
> *"Everyone shall have the right to freedom of expression."*

In a similar way, the topic of freedom of expression is also covered by the *European Convention on Human Rights* in its Article 10.1, as well as by the *Charter of Fundamental Rights of the European Union* in its Article 11.1:

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[131] See (Radio Free Europe Radio Liberty, 2012) and (Reuters, 2011)

"Everyone has the right to freedom of expression. This right shall include freedom to hold opinions and to receive and impart information and ideas without interference by public authority and regardless of frontiers."

In Article 4 of the *Tunis Commitment* of the *World Summit on the Information Society*, this right is explicitly put into the context of ICTs:

"We recognize that freedom of expression and the free flow of information, ideas, and knowledge, are essential for the Information Society and beneficial to development."

7.3. Right to Privacy

Just like freedom of expression, a right to privacy (the ability to selectively seclude information about oneself) is an old and broad concept that has gained new, special relevance with the rise of ICTs, especially with regard to surveillance and manipulation online (see Section 5.3). Numerous references to privacy can be found in the relevant human rights documents.

The *Universal Declaration of Human Rights* in its Article 12 says,

"No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence."

This wording – explicitly mentioning "correspondence" – should be broad enough to cover many privacy risks in the context of ICTs, considering that for example e-mails or messages within social network services are also a kind of correspondence.

The *International Covenant on Economic, Social and Cultural Rights* in its Article 17 makes an almost equivalent statement to the one above:

"No one shall be subjected to arbitrary or unlawful interference with his privacy, family, home or correspondence, nor to unlawful attacks on his honour and reputation."

In a similar way, the topic of privacy is also covered by the *European Convention on Human Rights* in its Article 8, as well as by the *Charter of Fundamental Rights of the European Union* in its Article 7:

"Everyone has the right to respect for his or her private and family life, home and communications."

The *Charter of Fundamental Rights of the European Union* even goes one step further by explicitly mentioning the "protection of personal data" and stating in its Articles 8.1 and 8.2:

> *"Everyone has the right to the protection of personal data concerning him or her. Such data must be processed fairly for specified purposes and on the basis of the consent of the person concerned or some other legitimate basis laid down by law. Everyone has the right of access to data which has been collected concerning him or her, and the right to have it rectified."*

In reference to the fact that privacy concerns online are to a large part based on the fact that most of today's popular ICT applications rely on centralized network structures (see Section 2.2), it has been argued that the *4th Amendment of the United States Constitution* implies a technology architecture that keeps personal data within our homes, where an individual's protections against unreasonable search and seizure are strongest[132]. And regarding the discussion on personal identity online (see Section 5.4) and its implications on privacy, it has been suggested to even consider anonymity an explicit human right[133].

7.4. Right to Communicate

As early as 1967, director of the *United Nations Radio and Visual Services Division* Jean D'Arcy suggested that earlier human rights such as the freedom of expression and privacy would have to be re-evaluated in the context of global, interactive communication, and that an explicit human right to communicate should be recognized.

The EU's *High Representative of the Union for Foreign Affairs and Security Policy* Catherine Ashton said

> *"The right to communicate freely is a key part of basic human rights. The Internet and social media have become an important way of promoting freedom of expression."*

[132] See http://www.youtube.com/watch?v=QOEMv0S8AcA

[133] For example by Austrian privacy expert Hans Zeger, see (Apfl, 2011)

The World Social Forum in 2011 has issued a *Declaration of the Assembly on the Right to Communication*, stating

> *„We declare that the right to communicate is a fundamental right and a common good of humanity."*

And according to the *Centre for Communication Rights*[134],

> *„Communication rights encompass freedom of expression, freedom to seek, receive, and impart information and knowledge. But they add to these freedoms, both for individuals and communities, the concepts of accessibility, participation, and cultural diversity."*

[134] http://centreforcommunicationrights.org/

8. The Peace Box

The Peace Box is a proposed electronic device with a unique combination of hardware and software that is specifically designed to support the different lines of thought on how ICTs can promote peace. The Peace Box extends a project called Freedom Box, which is a software project initiated by Columbia University law professor Eben Moglen, who has frequently criticized the Internet's ability to monitor people's behavior. The Freedom Box aims at giving Internet users more control, freedom and independence in their information and communication needs[135]. Its specific goals are:

1. Email and telecommunications that protects privacy and resists eavesdropping.
2. A publishing platform that resists oppression and censorship.
3. An organizing tool for democratic activists in hostile regimes.
4. An emergency communication network in times of crisis.

While the ideal of freedom is clearly important and related to peace, and the above stated goals of the Freedom Box are to be encouraged and supported, the idea of the Peace Box is that the potential of ICTs for promoting peace goes beyond simply ensuring the free and unrestricted flow of information. Therefore, in the same way as the concept of peace extends that of freedom, the Peace Box extends the Freedom Box.

8.1. Objectives

The primary objectives of the Peace Box beyond of the core goals of the Freedom Box are:

- Use for development, education, and crisis management (see Section 3)
- Use by revolutionary movements against authoritarian regimes (see Section 4)
- Support of a global civil society (see Section 5)
- Support of a global culture of peace (see Section 6)
- The promotion of human rights online (see Section 7)

[135] http://freedomboxfoundation.org/

Besides having the potential to achieve these goals, other objectives for the Peace Box include that it must be simple to set up and use, provide a fun and encouraging experience to its users, and be an overall realistic project to implement with reasonable time and resources. Its targeted audiences include professional peace workers who use it to support their important work, political activists, and idealistic individuals in general who share a desire to contribute to building a better world.

8.2. Design

On the hardware side, the Peace Box can theoretically be installed on any laptop, server, or other "regular" computer hardware, however, it is specifically designed to be deployed on so-called "plug computers", which are small and cheap computers that can simply be plugged into a power socket and be used immediately.

		
GlobalScale GuruPlug	GlobalScale DreamPlug	Marvell Smile
Various "plug computers" that can serve as the basis for a Peace Box		

For example, in the case of the GlobalScale GuruPlug, the hardware specifications are as follows: Marvell Kirkwood 6271-1.2GZ central processing unit (CPU), 512MB 16bit DDR2 RAM, 512MB NAND Flash, Wi-Fi 802.11 b/g, Gigabit Ethernet Port, USB 2.0. With this hardware, the Peace Box is able to run a wide range of different applications and services. By itself, it does not offer a large amount of storage space for documents such as PDF files, photos or video files, however, storage space can be greatly increased by simply plugging a USB flash drive or external hard drive into the Peace Box. After the Peace Box is plugged into a power outlet, it turns on automatically and starts the system. The Peace Box consumes only a minimal amount of power and is therefore suited for being always turned on. It can also be operated by battery power for a limited time.

One of the paramount goals of the Peace Box is security. A Peace Box is designed for use by multiple individuals, each one of which has an associated private cryptographic key for authentication and encryption purposes. The goal is to encrypt all communication, and to employ a social key management technique for key recovery, which means that your cryptographic key is split into multiple parts which are then distributed among a set of trusted friends. No single friend can impersonate you, but in the event you lose your key, it can be re-assembled if all your trusted friends collaborate with you. In fact, not only your key, but also backups of your personal data can be distributed among your friends, so that even in the event of a complete loss of your Peace Box, you can re-populate a new one with all your data. For optimal security, encryption of the entire data stored on the Peace Box is also a goal, although there are several challenges to be solved to achieve this.

8.3. Peace Network

One primary function of the Peace Box will be to connect to other Peace Boxes, therefore forming a communications structure called "Peace Network". The Peace Network can be established in part via traditional Internet infrastructure. It would be possible to connect the Peace Box to an existing (wireless or wired) home or office network. The Peace Box can also utilize alternative communication technologies such as so-called mesh networks, which are able to dynamically form connections on the fly without the need for central coordination[136].

This Peace Network will be designed in a fully distributed manner and be independent from any centralized component (see Section 2.2). As has been argued several times in this thesis, in order to promote peace, the network architectures to be favored are distributed ones that are based on privacy and independence rather than strong centralization of control. As James Vasile, executive director of the FreedomBox Foundation states in a presentation,

> *"Having one place where we do all our communication leaves us at the mercy of the policies of the people that control the infrastructure that we are chained to."*[137]

[136] See for example the Freifunk network in Germany, or Funkfeuer in Austria.

[137] http://wahltotal.at/swf/flowplayer-3.2.1.swf?config=http://wahltotal.at/embed_v_id/1332.js

and

> *"As we enter a new age of increased activism, of increased activity, social activity, the need for a lot of this privacy stuff becomes clearer."*

For nonviolent, revolutionary movements against authoritarian regimes (see Section 4), the Peace Network therefore offers resilience against censorship and infiltration, as well as capabilities to respond to disruptions, and to rapidly adapt to new organizational challenges. The network is designed to dynamically adjust its internal technical structure to the needs of the movement that uses it. As early as 1969, Carlos Marighella hinted at the strengths of distributed forms of organization by stating that an urban guerrilla group should seek to avoid centralization, and to avoid looking like the enemy (i.e. the strictly hierarchical police)[138].

For the establishment of a beneficial global civil society (see Section 5), the Peace Network's main function is to provide privacy and therefore the necessary balance between the state, economy, and civil society. Unlike most of today's popular ICT applications and services, which are operated by for-profit entities, and could therefore be considered to be in violation of this balance, the Peace Network's decentralized, dynamic, and self-organizing technical network architecture does itself directly mirror the organizational form of the global civil society it will support. In other words, for a global civil society to truly work, the technical structures of its communication channels must be based on civil society principles themselves.

Beyond the obvious effect of giving individuals control over their personal data and communication, the Peace Network will also enable a set of powerful new possibilities which can truly serve the participants' communication needs, and which are able to dynamically adapt to arising challenges and opportunities. This will be an approach which does not simply re-create and re-enforce old communication channels, but which is instead flexible and courageous enough to also offer new patterns of exchanging ideas and thoughts. On a fully distributed network, communication may follow a more random rather than static and predictable pattern, good ideas may be emphasized that would normally have been discarded, malicious messages may be sorted out, trust may be

[138] See (Marighella, 1969)

established in ways that are unknown in today's centralized networks, and decision making processes may be facilitated in intelligent ways. The Peace Network therefore not only ensures independence and prevents surveillance and manipulation, but also helps to enhance the necessary interconnectedness across borders, the free flow of ideas directly between individuals, the dynamic exchange of thoughts, and consensus building processes which are the backbone of a civil society of global scope. It is these properties, which will have the potential to create a well-functioning global civil society, a global public sphere that is able to effectively host the necessary discourses to approach and solve the big global problems of our time.

For supporting a global culture of peace (see Section 6), the distributed nature of the Peace Network will also be advantageous. Due to its lack of central authority, it will be designed to help avoid problems such as cultural violence, cultural conflicts, cultural imperialism, and cultural homogenization, by preventing malicious external interference, and by providing participants with highly increased levels of trust and control over their communication.

What French philosopher Frantz Fanon, known for his work on decolonization and his influence on national liberation movement leaders from Malcolm X to Ernesto Che Guevara, once said about colonialism also holds true in the quest to finding the right communication technologies for establish a truly free global civil society and a global culture of peace:

"A community will evolve only when a people control their own communication."

While it may be (or may not be) an exaggeration to compare today's ubiquitous centralized network architectures with the age of colonization, the lesson to be learned is that the ability for people to communicate freely between each other is an important prerequisite for their overall freedom and peace.

8.4. Peace Apps

During the last few years – or to be more precise, since the introduction of a new generation of mobile phones such as Apple's iPhone – the field of software development has seen the advent of a new paradigm known as "Apps". Apps are small pieces of software, which offer useful applications and services to the user of a mobile phone or other electronic device. Their functionality can be very diverse, however, what they have

in common is usually that they are easy to use as well as easy to acquire through some kind of distribution platform ("App Store"). This highly successful concept will also be used for managing software on a Peace Box. In other words, with this paradigm, the Peace Box becomes a multi-purpose platform on which a variety of "Peace Apps" can be installed and configured depending on a user's needs and on the specific environment where it is used. Therefore, a Peace Box with its different possible configurations can be useful for development work, crisis management, political activism, civil society organizations, or simply for average individuals interested in peace-related topics.

The following is a partial list of Peace Apps, which enable the Peace Network and provide functionality for crisis management, revolutionary movements, a global civil society, and a global culture of peace:

Tor – http://www.torproject.org/
Tor has been used extensively during both the Tunisian and Egyptian revolutions in 2011[139]. It allows participants to transmit messages and access websites in an anonymous way, by disguising and sharing their communication with other participants in a distributed network.
Psiphon – http://psiphon.ca/
Psiphon is a so-called proxy server software, which enables users to access censored websites by establishing connections through an intermediate, non-censored system. The project views the Internet as a "global commons" that should not be contested.
Commotion – http://tech.chambana.net/projects/commotion
The Commotion wireless project specifically references the protests in Tunisia, Egypt and Libya, and argues that "democratic activists around the globe need a secure and reliable platform to ensure their communications cannot be controlled or cut off by authoritarian regimes".
Serval – http://www.servalproject.org/

[139] According to (Niiler, 2011), downloads of the Tor software have increased significantly when Egypt's Internet connectivity was shut down.

The serval project ("uniting the world through communication") goes as far as stating that communication should be a human right. It focuses on mobile phones and tries to develop software that makes them work under any circumstances and without infrastructure.
OpenBTS and Asterisk – http://openbts.sourceforge.net/
OpenBTS in conjunction with the Asterisk open-source software can enable classic telephone devices to function in an environment where no commercial, centralized infrastructure is available.
Diaspora – http://joindiaspora.com/
Diaspora is a decentralized social networking software that tries to provide Facebook-like functionality without being dependent on a single entity which controls all participants.
Tonika – http://5ttt.org/
Tonika promises social networks based on principles that human societies implement organically in daily life, with robust security, anonymity, resilience and performance.
Bambuser – http://bambuser.com/
Bambuser is a set of software tools that enable users to stream video to an audience in real time. For example, this can enable activists to broadcast live images from their cell phone or webcam directly to social networking services.
Ushahidi – http://ushahidi.com/
Ushahidi (Swahili for „testimoy" or „witness") is a software for crisis mapping, which offers functionality for a population affected by a crisis to report and access up-to-date information about local events and developments, enabling relief workers to respond effectively.
FrontlineSMS – http://frontlinesms.com/
Instead of requiring an Internet connection, FrontlineSMS provides messaging services via SMS and can help to meet communications needs for NGOs for purposes such as election monitoring, providing security alerts, the exchange of agricultural market

information, organizing protests, citizen journalism, etc.
GlobaLeaks – http://globaleaks.org/
GlobaLeaks is a whistle blowing software framework, which empowers anyone to easily set up and maintain a whistle blowing platform. It can help many different types of users: media organizations, activist groups, corporations and public agencies.
Crabgrass – http://crabgrass.riseuplabs.org/
Crabgrass is software designed for social networking, group collaboration and network organizing. Its goal is to create communication tools that are tailored specifically to meet the needs of bottom up grassroots organizing. Crabgrass is a secure alternative to for-profit social networking and organizing platforms.
Global Voices – http://globalvoicesonline.org/
Global Voices provides a so-called bridge-blogging service where volunteer authors, translators and editors attempt to provide reports from a local perspective that cannot normally be found in the mainstream media, therefore raising awareness and cross-cultural understanding. For example, on this platform it is possible to read English translations of Egyptian blog posts that had originally been written in Arabic.
Soliya – http://www.soliya.net/
Soliya is software which allows participants to engage in a moderated video conference, discussing specific topics, posing questions, and exchanging personal views, ideas and opinions. It is specifically designed for promoting respect for cultural diversity and beneficial intercultural dialogue.

The list of such projects that can be used as „Peace Apps“ is growing, as is public awareness of the general potential of modern ICTs for positive change. Political, financial and academic resources are also more and more devoted to such efforts, for example by the *New America Foundation*[140], which supports projects to build technology for a distributed, open-source telecommunications system, by the Massachussetts Institute Of

[140] http://newamerica.net/

Technology's *Center for Civic Media*[141], which researches and invents "new technologies that support and foster civic media and political action", by the European Commission's *No Disconnect Strategy*[142], by the University of Toronto's *Citizen Lab*[143], or by the Harvard Berkman Center for Internet & Society's *Internet & Democracy project*, an initiative with an explicit focus on the Middle East[144].

[141] http://civic.mit.edu/

[142] http://blogs.ec.europa.eu/neelie-kroes/no-disconnect/

[143] http://citizenlab.org/tag/internet-freedom/

[144] http://cyber.law.harvard.edu/research/internetdemocracy

9. Conclusion

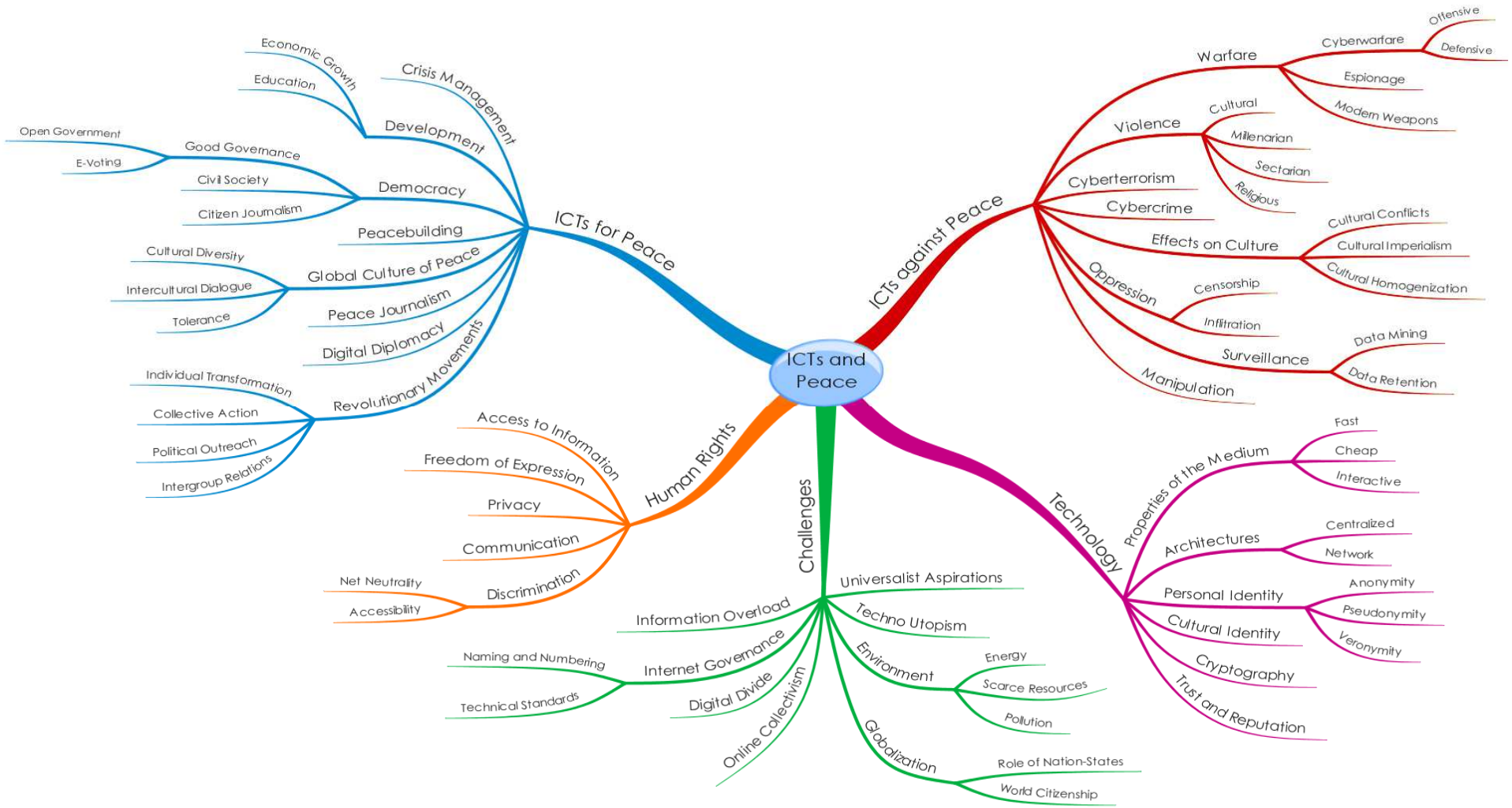
Despite many different ideas on how ICTs can effect positive change, it should be noted that the idea of establishing and maintaining peace through technology in general, and through a global communications system in particular, is not new. With the introduction of the telegraph 200 years ago, as well as with the introduction of the communications satellite 50 years ago, there was a general sense that such technologies would overcome barriers of space and time, and therefore enable all peoples of the world to communicate with each other at a new level, which would avoid conflicts altogether and lead to a perpetual peace[145]. In both historic cases, politicians and academics alike have envisioned a "death of distance", a vastly improved capability for people around the world to efficiently communicate with each other. The extreme utopian vision back then was that if all people could simply talk to each other without the obstacles of space and time, this would solve all of the world's problems and conflicts – an idea strikingly similar to what we are all too often hearing today from techno-libertarian Internet visionaries. It is obvious that as of today, this vision has not yet come true, and the reality remains that in our present time we continue to face a large amount of conflicts and other challenges.

Much has been said about the potential threats and opportunities of modern communication technologies, and about whether they provide a liberating potential at the human level, or whether they constitute yet another mechanism for reinforcing old structures and for transferring wealth from the poor to the rich. In *Time for Outrage! (Indignez-vous!)*, Stéphane Hessel (born 20 October 1917), a former diplomat, ambassador, writer, concentration camp survivor, French Resistance fighter, against social injustice, capitalism and human rights violations, issues the following warning in his last paragraph:

> *"… we continue to call for 'a true peaceful uprising against the means of mass communication that offers nothing but mass consumption as a prospect for our youth, contempt for the least powerful in society and for culture, general amnesia and the outrageous competition of all against all.'"*

[145] See (Standage, 1999)

Based on the topics outlined in this thesis, the following mind map summarizes various ideas on how ICTs can work for and against peace, as well as what technological considerations, challenges, and relevant human rights issues exist.



In conclusion, it is not clear whether the introduction of modern ICTs has contributed more to peace than it has to conflict and violence. Despite this uncertainty and justifiable doubts, it is the view expressed in this thesis that ICTs – if used correctly – can be powerful assets to work toward the ideals of peace, democracy, freedom, justice, and human rights.

The concrete ICT applications and services for achieving these goals are diverse. The proposal of this thesis is to bundle fundamental design criteria, network architectures, and concrete software into a simple electronic device called a Peace Box. The Peace Box is cheap, easy to set up, and easy to use. It provides a wide range of Peace Apps and can form connections to enable a global Peace Network, which can be used for communication between Peace Boxes. Through these capabilities, it gives participants independence and control over their communication, and it enables new patterns of exchanging thoughts and ideas on a global scale. Therefore, besides offering functions to support revolutionary movements against authoritarian regimes, as well as to help with development, education, and crisis management, the core promise of the Peace Box is to provide the foundation for a global civil society and global culture of peace, which might be able to contribute to solving some of the big threats for peace we are facing today.

10. Bibliography

Adams, D., & True, M. (1997, March). Unesco's Culture of Peace Programme: An Introduction. *International Peace Research Newsletter, 35*(1).

Aday, S., Farrell, H., Lynch, M., Sides, J., Kelly, J., & Zuckerman, E. (2010). *Blogs and Bullets: New Media in Contentious Politics.* United States Institute of Peace.

Apfl, S. (2011, August 17). *Die Anonymität muss aus dem Netz verschwinden!* Retrieved from falter.at: http://www.falter.at/web/print/detail.php?id=1466

Baran, P. (1962). *On Distributed Communications Networks.* Rand Corporation.

BBC NEWS. (2008, February 4). *Colombians in huge Farc protest .* Retrieved from BBC NEWS: http://news.bbc.co.uk/2/hi/americas/7225824.stm

Benedict XVI. (2009). *Caritas in Veritate. Encyclical letter on integral human development in charity and truth.*

Bosker, B. (2011, July 27). *Facebook's Randi Zuckerberg: Anonymity Online 'Has To Go Away'.* Retrieved from The Huffington Post: http://www.huffingtonpost.com/2011/07/27/randi-zuckerberg-anonymity-online_n_910892.html

Boulding, E. (2008). Peace Culture. In L. Kurtz (Ed.), *Encyclopedia of Violence, Peace and Conflict* (2nd ed., pp. 1452-1465). Amsterdam: Elsevier.

Boyd, D. (2011, August 4). *"Real Names" Policies Are an Abuse of Power.* Retrieved from Danah Boyd: http://www.zephoria.org/thoughts/archives/2011/08/04/real-names.html

Brinkley, D., & Hackett, C. (Eds.). (1991). *Jean Monnet: The Path to European Unity.* London: Macmillan.

Bristow, M. (2008, December 16). *China's internet 'spin doctors'.* Retrieved from BBC News: http://news.bbc.co.uk/2/hi/asia-pacific/7783640.stm

Burkhart, G., & Older, S. (2003). *The Information Revolution in the Middle East and North Africa.* Rand National Defense Research Institute.

Castells, M. (1997). *The Information Age: Economy, Society and Culture: The Power of Identity* (Vol. 2). Oxford: Backwell.

Castells, M. (2000). *The Information Age: Economy, Society and Culture: The Rise of the Network Society* (2 ed., Vol. 1). Cambridge, MA.

Castells, M. (2007). Communication, power and counter–power in the Network Society. *International Journal of Communication, 1*, pp. 238-266.

Cerf, V. G. (2012, January 4). *Internet Access Is Not a Human Right.* Retrieved from The New York Times: http://www.nytimes.com/2012/01/05/opinion/internet-access-is-not-a-human-right.html

Conflict Research Consortium, University of Colorado, USA. (1998). *Denial of Identity.* Retrieved from http://www.colorado.edu/conflict/peace/problem/denyid.htm

Council of Europe. (1950, November 4). *European Convention on Human Rights.* Retrieved from http://conventions.coe.int/treaty/en/Treaties/Html/005.htm

Danescu-Niculescu-Mizil, C., Lee, L., Pang, B., & Kleinberg, J. (2011). Echoes of power: Language effects and power differences in social interaction. Cornell University Library.

Demchak, C. C., & Dombrowski, P. (2011, Spring). Rise of a Cybered Westphalian Age. *Strategic Studies Quarterly*.

Dubai School of Government. (2011). *Arab Social Media Report Issue 2.*

Edwards, M., & Gaventa, J. (2001). *Global citizen action.* Boulder, CO: Lynne Riener.

European Convention. (2000, December 7). *Charter of Fundamental Rights of the European Union.* Retrieved from http://www.europarl.europa.eu/charter/pdf/text_en.pdf

Foundation Culture of Peace. (2005). *Civil Society Report at midpoint of Culture of Peace Decade.* Foundation Culture of Peace.

Foundation Culture of Peace. (2010). *Report on the Decade for a Culture of Peace.* Foundation Culture of Peace.

Freedom House. (2011, April 18). *Freedom on the Net: A Global Assessment of Internet and Digital Media.* Retrieved from http://www.freedomhouse.org/images/File/FotN/FOTN2011_Handout.pdf

Galtung, J. (1990). Cultural Violence. *Journal of Peace Research, 27*(3), 291-305.

Galtung, J. (1996). *Peace by Peaceful Means: Peace and Conflict, Development and Civilisation.* London: Sage.

Gray, R. (2011, August 9). *Anonymous Wants To Destroy Facebook .* Retrieved from The Village Voice Blogs: http://blogs.villagevoice.com/runninscared/2011/08/anonymous_wants.php

Habermas, J. (1962). *Strukturwandel der Öffentlichkeit. Untersuchungen zu einer Kategorie der bürgerlichen Gesellschaft.* Frankfurt: Suhrkamp.

Held, D., Kaldor, M., & Quah, D. (2010, February 28). *The Hydra-Headed Crisis.* Retrieved from Global Policy: http://www.globalpolicyjournal.com/articles/global-governance/hydra-headed-crisis

Hofstede, G. (2001). *Culture's Consequences: Comparing Values, Behaviors, Institutions,.* Thousand Oaks, CA: SAGE Publications.

Hsu, J. (2009, June 7). *People Choose News That Fits Their Views.* Retrieved from LiveScience: http://www.livescience.com/3640-people-choose-news-fits-views.html

Huntington, S. (1996). *The Clash of Civilizations and the Remaking of World Order.* New York: Simon & Schuster.

Inglehart, R., & Welzel, C. (2005). *Modernization, Cultural Change and Democracy.* New York: Cambridge University Press.

International Commission for the Study of Communication Problems. (1980). *Communication and Society Today and Tomorrow, Many Voices One World, Towards a new more just and more efficient world information and communication order.* London: Kogan Page.

Jeffries, A. (2011, December 13). *As Banks Start Nosing Around Facebook and Twitter, the Wrong Friends Might Just Sink Your Credit.* Retrieved from BetaBeat: http://www.betabeat.com/2011/12/13/as-banks-start-nosing-around-facebook-and-twitter-the-wrong-friends-might-just-sink-your-credit/?show=all

Kaldor, M. (2003). *Global Civil Society. An Answer to War.* Malden, MA: Blackwell.

Kanalley, C. (2011, January 27). *Egypt's Internet Shut Down.* Retrieved from The Huffington Post: http://www.huffingtonpost.com/2011/01/27/egypt-internet-goes-down-_n_815156.html

Keane, J. (2003). *Global citizen action.* Cambridge: Cambridge University Press.

Keen, A. (2007). *The Cult of the Amateur: How Today's Internet is Killing Our Culture.* Crown Business.

Kirkpatrick, D. (2010). *The Facebook Effect: The Inside Story of the Company That Is Connecting the World.* Simon & Schuster.

Kirkpatrick, M. (2010, August 4). *Google CEO Schmidt: "People Aren't Ready for the Technology Revolution".* Retrieved from ReadWriteWeb: http://www.readwriteweb.com/archives/google_ceo_schmidt_people_arent_ready_for_the_tech.php

Kroeber, A., & Kluckhohn, C. (1952). Culture: A Critical Review of Concepts and Definitions. *Papers. Peabody Museum of Archaeology & Ethnology, Harvard University*.

Krotoski, A. (2010, February 12). *Virtual Revolution: The Cost of Free.* Retrieved from The Guardian: http://www.guardian.co.uk/technology/blog/2010/feb/12/virtual-revolution-bbc-aleks-krotoski

Lanier, J. (2006, May 30). *Digital Maoism: The Hazards of the New Online Collectivism.* Retrieved from http://www.edge.org/3rd_culture/lanier06/lanier06_index.html

Lardner, D. (1850). *Railway Economy.* London.

Lee, S.-N. (1988). Communication imperialism and dependency: A conceptual. *Gazette: The International Journal of Mass Communication Studies*(41), 69-83.

Liphshiz, C. (2009, January 19). *Israel recruits 'army of bloggers' to combat anti-Zionist Web sites.* Retrieved from Haaretz: http://www.haaretz.com/print-edition/news/israel-recruits-army-of-bloggers-to-combat-anti-zionist-web-sites-1.268393

Lischka, K. (2011, August 7). *Die Ignoranz der Mehrheit.* Retrieved from Spiegel Online: http://www.spiegel.de/netzwelt/netzpolitik/0,1518,778988,00.html

Marighella, C. (1969). *Minimanual of the Urban Guerrilla.* Retrieved from http://www.marxists.org/archive/marighella-carlos/1969/06/minimanual-urban-guerrilla/index.htm

Meadows, D. L., Meadows, D. H., Randers, J., & William, B. W. (1972). *The limits to growth: A report for the Club of Rome's Project on the Predicament of Mankind.* New York: Universe Books.

Mesarovic, M., & Pestel, E. (1974). *Mankind at the Turning Point. The Second Report of the Club of Rome.* New York: Dutton.

Miszlivetz, F. (2010). We are in the situation of relative free will. An interview with Immanuel Wallerstein. In *Society and Economy* (Vol. 32, pp. 137-148). Budapest: Akadémiai Kiadó.

Miszlivetz, F., & Jensen, J. (2006). Global Civil Society: From Dissident Discourse to World Bank Parlance. In P. Wagner (Ed.), *The Languages of Civil Society* (pp. 177-205). Berghan Books.

Morozov, E. (2009, March/April). *Does the Internet spread democracy.* Retrieved from Boston Review: http://bostonreview.net/BR34.2/morozov.php

Morozov, E. (2009, July 18). *God Bless This Gadget.* Retrieved from Newsweek: http://www.newsweek.com/2009/07/17/god-bless-this-gadget.html

Morozov, E. (2010, February 20). *The Digital Dictatorship*. Retrieved from http://online.wsj.com/article/SB10001424052748703983004575073911147404540.html and http://www.youtube.com/watch?v=i4U_fqAZE2g

Morozov, E. (2011, February 10). *Internet in Iran.* Retrieved from Youtube: http://www.youtube.com/watch?v=glSIoRrMr1g

Morris, S. (2009, November 17). *Spain govt to guarantee legal right to broadband.* Retrieved from Reuters: http://www.reuters.com/article/2009/11/17/spain-telecoms-idUSLH61554320091117

Negroponte, N. (1995). *Being Digital.* Hodder & Stoughton.

Nerfin, M. (1987). *Neither prince nor merchant: Citizen - An introduction to the third system.* Development Dialogue.

Netburn, D. (2011, Oktober 6). *Facebook's Mark Zuckerberg up for the Nobel Peace Prize?* Retrieved from Los Angeles Times: http://latimesblogs.latimes.com/technology/2011/10/will-mark-zuckerberg-win-the-nobel-peace-prize.html

Niiler, E. (2011, February 1). *Egypt's Internet Block Incomplete But Damaging.* Retrieved from Discovery News: http://news.discovery.com/tech/egypt-internet-online-protesters-110201.html

O'Brien, D. (2011, January 5). *Tunisia invades, censors Facebook, other accounts.* Retrieved from Committee to Protect Journalists: http://cpj.org/internet/2011/01/tunisia-invades-censors-facebook-other-accounts.php

Olson, P. (2011, May 17). *Anonymous, The Military And Fake Virtual Armies.* Retrieved from Forbes: http://blogs.forbes.com/parmyolson/2011/03/17/anonymous-the-military-and-fake-virtual-armies/

Powell, W. (1990). Neither Market Nor Hierarchy: Network Forms of Organization. In *Research In Organizational Behavior* (Vol. 12, pp. 295-336).

Radio Free Europe Radio Liberty. (2012, January 8). *Biden Calls On World Governments To Back Open Internet.* Retrieved from Radio Free Europe Radio Liberty: http://www.rferl.org/content/london_conference_on_internet/24378026.html

Reporters Without Borders. (2011, January 6). *Tunis-based netizens Slim Amamou and Azyz Amamy arrested.* Retrieved from Reporters Without Borders: http://en.rsf.org/+tunis-based-netizens-slim-amamou+.html

Reuters. (2011, September 1). *Putin says state should not control Internet.* Retrieved from Reuters: http://www.reuters.com/article/2011/09/01/russia-internet-putin-idUSL5E7K11BA20110901

Sahara Reporters. (2009, June 16). *Umaru Yar'adua Regime Launches $5 Million Online War.* Retrieved from Sahara Reporters: http://saharareporters.com/news-page/umaru-yar%E2%80%99adua-regime-launches-5-million-online-war

Shannon, C., & Weaver, W. (1963). *The Mathematical Theory of Communication.* Urbana, IL: University of Illinois Press.

Sharp, G. (1973). *The Politics of Nonviolent Action.* Porter Sargent.

Shaules, J. (2007). *Deep culture: The hidden challenges of global living.* London: Multilingual Matters Ltd.

Sifry, M. L. (2011). *WikiLeaks and the Age of Transparency.* Berkeley, California: Counterpoint.

Simon, H. (1971). Designing Organizations for an Information-Rich World. In M. Greenberger, *Computers, Communication, and the Public Interest.* Baltimore: The Johns Hopkins Press.

Simonite, T. (2011, December 13). *Das Geschäft mit dem Crowdturfing.* Retrieved from Heise Online: http://www.heise.de/tr/artikel/Das-Geschaeft-mit-dem-Crowdturfing-1394104.html

Skutnabb-Kangas, T. (1998). Human rights and language wrongs - a future for diversity. *Language Sciences, 20*(1), 5-27.

Standage, T. (1999). *The Victorian Internet: The Remarkable Story of the Telegraph and the Nineteenth Century's On-line Pioneers.* New York: Walker and Company.

Stauffacher, D., Drake, W., Currion, P., & Steinberger, J. (2005). The Role of ICT in Preventing, Responding to and Recovering from Conflict. *Information and Communication Technology for Peace*(198).

Surowiecki, J. (2004). *The wisdom of crowds.* Random House.

The Commission on Global Governance. (1995). *Our Global Neighborhood.* Oxford: Oxford University Press.

Toffler, A. (1970). *Future Shock.* New York: Random House.

United Nations. (1948). *Universal Declaration of Human Rights.* Retrieved from http://www.un.org/Overview/rights.html

United Nations. (1998, January 15). *52/13. Culture of Peace.* Retrieved from http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N98/760/15/PDF/N9876015.pdf

United Nations. (1998, January 15). *52/15. Proclamation of the year 2000 as the International Year for the Culture of Peace.* Retrieved from http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N98/760/27/PDF/N9876027.pdf

United Nations. (1998, November 16). *53/22. United Nations Year of Dialogue among Civilizations.* Retrieved from http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N98/776/11/PDF/N9877611.pdf

United Nations. (1998, November 19). *53/25. International Decade for a Culture of Peace and Non-Violence for the Children of the World (2001–2010).* Retrieved from http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N98/776/41/PDF/N9877641.pdf

United Nations. (1999, October 6). *53/243. Declaration and Programme of Action on a Culture of Peace.* Retrieved from http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N99/774/43/PDF/N9977443.pdf

United Nations Educational, Scientific and Cultural Organization. (1986, May 16). *Seville Statement on Violence.* Retrieved from http://portal.unesco.org/education/en/ev.php-URL_ID=3247&URL_DO=DO_TOPIC&URL_SECTION=201.html

United Nations Educational, Scientific and Cultural Organization. (1989). *Yamoussoukro Declaration on Peace in the Minds of Men.* Retrieved from http://www.unesco.org/cpp/uk/declarations/yamouss.pdf

United Nations Educational, Scientific and Cultural Organization. (2001, 11 2). *Universal Declaration on Cultural Diversity.* Retrieved from http://unesdoc.unesco.org/images/0012/001271/127160m.pdf

United Nations Educational, Scientific and Cultural Organization. (2003, October 15). *Charter on the Preservation of Digital Heritage.* Retrieved from http://portal.unesco.org/en/ev.php-URL_ID=17721&URL_DO=DO_TOPIC&URL_SECTION=201.html

United Nations Educational, Scientific and Cultural Organization. (2005, October 20). *Convention on the Protection and Promotion of the Diversity of Cultural*

Expressions. Retrieved from http://portal.unesco.org/en/ev.php-URL_ID=31038&URL_DO=DO_TOPIC&URL_SECTION=201.html

United Nations High Commissioner for Human Rights. (1966, December 16). *International Covenant on Civil and Political Rights.* Retrieved from http://www2.ohchr.org/english/law/ccpr.htm

United Nations High Commissioner for Human Rights. (1966, December 16). *International Covenant on Economic, Social and Cultural Rights.* Retrieved from http://www2.ohchr.org/english/law/cescr.htm

United Nations High Commissioner for Human Rights. (2011). *Report of the Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression, Frank La Rue.* Human Rights Council.

United States Institute of Peace. (2011, 11 22). *A Bad Year for Bad Guys: How to Topple a Dictator – TED.* Retrieved from PeaceMedia: http://peacemedia.usip.org/resource/bad-year-bad-guys-how-topple-dictator-%E2%80%93-ted

World Social Forum. (2002, February 5). *Porto Alegre II: Call of social movements.* Retrieved from http://links.org.au/node/91

World Summit on the Information Society. (2005, November 18). *Tunis Agenda.* Retrieved from http://www.itu.int/wsis/docs2/tunis/off/6rev1.html

World Summit on the Information Society. (2005, November 18). *Tunis Commitment.* Retrieved from http://www.itu.int/wsis/docs2/tunis/off/7.html

York, S. (Director). (2002). *Bringing Down a Dictator* [Motion Picture].

Zuckerman, E. (2011, January 14). *The First Twitter Revolution?* Retrieved from Foreign Policy: http://www.foreignpolicy.com/articles/2011/01/14/the_first_twitter_revolution