The World in Transition: The Early Beginning of the World Wide Web

“*The Internet has made me very casual with a level of omniscience that was unthinkable a
decade ago.  
I now wonder if God gets bored knowing the answer to everything.*”

Douglas Coupland

The Internet (originally: Interconnected network) was founded as a global interactive
communications structure consisting of several networks, which allow to transfer data all over
the world. It also enables the using of several Internet services like e-mail, FTP, Usenet,
Telnet, file transfer or WWW. Meanwhile the Internet services are covering radio, phone and
television as well. The terms WWW and Internet are often used synonymously even though
both structures are not identical (cf. Cerf, Dalal, Sunshine 1974).

The Internet’s origin was the so-called ARPANet, which was established in 1969 during the
Cold War as a project of the Advanced Research Project Agency (ARPA) by the US Ministry
of Defense. The purpose of the project was to use the computing capacities of the US
effectively, based on the operation system UNIX and the communication protocol TCP/IP.
According to a widespread legend, the Internet was used as a “secret weapon” of the Cold
War to maintain the military communication in case of a nuclear war between the US and the
USSR. In fact, the purpose of the ARPANET was rather reserved for civilian projects even
though most of them have been directly financed by the ARPA (cf. Leiner, Clark, Kahn
1997).

The most important application of the Internet since 1971 was the e-mail service, which
covered a larger data volume than all the other service like FTP or Telnet. In the year 1990 the
National Science Foundation (NSF) decided to use the Internet for commercial purposes, which effected that it became public at the universities. In 1989 Tim Berners-Lee developed the basics of the World Wide Web (WWW) with the first hypertext language at the European Organization for Nuclear Research (CERN) in Switzerland (cf. Berners-Lee 1991).

The final breakthrough of the Internet was reached by the release of the first web browser called “Mosaic”, which was offered as a free download to the public in 1993 and allowed even amateur users to browse the sources on the World Wide Web without any special technical knowledge. The web browser was therefore often called the “killer application” of the Internet and served as a catalyser of the Digital Revolution.

The enormous growth of the Internet has meanwhile reached a huge variety of online services like IP telephony, groupware like wikis, blogs, broadband accesses, peer-to-peer-networking, file sharing or online gaming. Therefore it seems to be only a question of time when the current Internet has to push its own limits (cf. RFC 4984 Report 2007). This is the reason why researchers have already started to develop the so-called “Future Internet” whose basics have already been tested by the National Aeronautics and Space Administration (NASA). In 2010 a computer in space was connected to the terrestrial Internet for the very first time (cf. Heise Online 2010).

The current data volume of the Internet (2012) of all public accessible cable networks is about 26,7 exabyte (26,7 x 10^{18}) of data transfer per month. The data volume of 1 exabyte can be compared with 2500 times of the data volume of all books ever published around the world. Until the year 2015 the data volume will increase up to 60 exabyte per month. More than 50% of this volume will be covered by video-on-demand services (cf. Cisco Visual Networking Index 2012).

Electronic Agora, Escape Velocity or Agony of the Real? – The Intellectual Controversy about the Impacts of Cyberspace

“Have you ever had a dream, Neo, that you were so sure was real? What if you were unable to wake from that dream? How would you know the difference between the dream world and the real world?”
Memorable quote of the movie “Matrix”

After the collapse of the Cold War system and the establishment of the new global information society through the Internet, a controversial debate occurred among social scientists and philosophers about the impacts of the new and forthcoming digital world. The main focus of this debate was the question if the new digital society would change or preserve the current socio-political situation of the current world society. The “mainstream” of the Silicon Valley computer technology industries who endorsed the so-called “dotcom neoliberalism” with its new characteristics of individualism, libertarianism combined with neoliberal economy and techno-utopianism, were heavily criticised as the so-called “Californian Ideology” by Richard Barbrook and Andy Cameron (cf. Barbrook, Cameron 1996). Both authors characterised this new post-technological ideology as a strange mixture of “Hippie”-beliefs of the 60ies (personal freedom) and the “Yuppie”-beliefs of the 80ies (individual success). The core idea of the Californian Ideology is that the new information and communication technologies (ICTs) could establish a new kind of “Electronic Agora” where its members would be able to promote and to share their opinions without any fear, suppression or censorship. These new achievements would be able to undermine the current power structures and to guarantee individual freedom for the people. Barbrook and Cameron were criticising that the current high-tech-elites were unable to articulate a clear socio-political position and that their promoted “Electronic Agora” would also be insufficient to solve the problems of the modern societies (cf. Barbrook 2000). In fact the “Electronic Agora” would rather be replaced by an “electronic marketplace” of the new “virtual class” influenced by neo-liberal techno-determinism (cf. Telepolis 1997).

Barbrook’s and Cameron’s critique on the “Californian Ideology” was not the only one. Mark Dery, an US-American author and cultural critic, and French Post-structuralists like Paul Virilio or Jean Baudrillard have been criticising the new neo-liberal techno-determinism as well. Mark Dery was emphasising that the new cyberspace ideology that is existing since the beginning of the 90ies might be described as an “escape velocity”, which means a transcendental escape from terrestrial matter by high speed resulting in the wish for overcoming of natural limits and death (cf. Dery 1996).

The French philosopher Paul Virilio referred to Albert Einstein, who was convinced in the early 50ies that the post-industrial society is threatened by three bombs: The first one is the
atomic bomb, which has already been exploded; the second one is the information bomb and the third one is the world population bomb that will explode in the 21st century. Therefore, the information bomb is currently exploding. According to Einstein’s hypothesis Paul Virilio comes to the conclusion that the explosion of the information bomb will result in the so-called “zero time”, which means the time difference in between all events in cyberspace is becoming shorter and shorter caused by the light speed of information transmission. This means that all events in cyberspace are happening at the same time and result in a paradoxical phenomenon, which Virilio has called “racing standstill” (cf. Virilio 1998).

The French philosopher and Post-structuralist Jean Baudrillard criticizes that within cyberspace the “real” would be increasingly replaced by “simulation”, which means that within virtual worlds any reference to reality would get lost. Furthermore the simulation is tending to become a perfect copy of reality and a construction of illusion. He calls this phenomenon the “agony of the real” (cf. Baudrillard 1978, Rötzer 2002). Achim Bühl has stressed another critique on the currently used cyber-terminology like „data highway“, „cyberspace“, „virtual community“, „global village“, „virtual marketplace“ or „city of bits“. In his analysis he comes to the conclusion that the “virtual society” is characterised by the partial substitution of real production, distribution and communication of reality, but in the end the real world cannot be replaced by virtualization in total. The result of this transformation process would therefore be a virtual “parallel society” coexisting with reality (Bühl 1997: 39-59).

Another interesting approach that accompanied the digital transformation process of the world society as well as the academic discussion since the beginning of the 90ies was Neo-Gramscianism that referred to Gramsci’s concept of “hegemony”. According to Gramsci’s classic approach, the dominant classes of a society would constitute “historical blocks”, which are able to convince the dominated class to share the cultural values and to universalize the common standards. Neo-Gramscianism tries to shift this concept of hegemony on a global scale and argues that currently the neo-liberal dominance tries to reach a global “cultural hegemony” according to Gramsci. The Neo-Gramscianists Robert W. Cox und Stephen Gill argue that currently the “transnational capitalist class” or the “transnational managerial class” represents the new “historical block”. Furthermore, the current cultural hegemony of neo-liberalism has failed and is based on enforcement since it has not reached a social consensus on its own values among the civil society so far (cf. Cox 1987, Gill 1990). Ernesto Laclau and
Chantal Mouffe have refined this Neo-Gramscian concept of “cultural hegemony” towards a conception of “radical democracy” (a democracy based on the difference of entities and pluralism) that would be required to challenge the current dominance of neo-liberalism. (cf. Laclau, Mouffe 1985).

In this point of view, the digital information society can also be interpreted as challenging the dominance of the neo-liberal discourse of the “Californian School” and as a struggle for hegemony in cyberspace. In this sense, the civil society has become a battleground of the struggle for hegemony against the dominant political sphere of the world information society.

**Living in a Global Village? The Global Internet Usage and the Digital Divide**

„Cause I can see the future
and it's a place - about 70 miles east of here.
where it's lighter.“

*Laurie Anderson, Let X=X*

The expansion of the Internet since its existence was overwhelming: The World Wide Web reduplicated its size every two months. Since 1988 the total size of the Internet reduplicated its size every year. But this enormous expansion of the global data highway is illusive: According to the German media sociologist Jörg Becker, new media are attended by the dynamics of economy, which means that new media do not always have a social integrating effect but can also cause social disintegration, especially for social minorities, older people or women. Thus the gap between the “information poor” and the “information rich” might become deeper (Becker 1998: 6)

Uwe Afemann focused on the precarious situation of the so-called “offlines” (people without an Internet access) in the development countries, who are much more representative for the “digital divide” in our world society than the “onlines”. At the turn of the millennium 80% of the world population did not have a telephone connection, which was basically required for an Internet access at this time. Furthermore, there still exists a technological gap between the urban and the rural areas. 50% of the telephone connections are located in the capitals of Africa, although only 10% of the African population lives there. Another problem of
development countries is the electric power supply, which is unavailable for 70% of the African population in the countryside. The per-capita consumption of electricity in industrial countries is ten times higher than in development countries and hundred times higher than in least development countries (cf. Afemann 2001: 108).

Currently it is impossible to determine the exact number of Internet users since the new mobile-based Internet communication (iPad, iPhone, etc.) is characterized by the circumstance that mobile Internet users are temporary accessing or leaving the global data network. Therefore only the cable network based Internet users can be statistically captured. According to the Internet statistics of 2011 the highest share in the worldwide Internet usage has got Asia with 44,8% of the world population, Europe with 22,1%, North America with 12,0%, Latin America and the Caribbean with 10,4%, Africa with 6,2%, the Middle East with 3,4% and Australia with 1,1%. But the first view on this regional world distribution is deceiving since the Internet penetration rate (rate of users in relation to the regional population) shows different facts: Therefore the highest Internet penetration rate has got North America with 78,6%, followed by Australia and Oceania with 67,5%, Europe with 61,3%, Latin America and the Caribbean with 39,5%, the Middle East with 35,6%, Asia with 26,2% and Africa with 13,5% (cf. Internet World Stats 2011).

Who shall rule the Information Society? The Struggle for Hegemony between the US Government and the Global Civil Society

“The new source of power is not money in the hands of a few, but information in the hands of many.”

John Naisbitt

Although the number of Internet users has been dramatically increasing, the statistic above shows that the main concentration of information dissemination and consumption is still located in the developed nations of the world society, which is the main indicator of the global digital divide. Another indicator for the gap between the “information rich” and the “information poor” is the technical structure of the Internet that is worth to be analyzed in detail.
The principal technical administration of the Internet is coordinated by the Internet Corporation for Assigned Names and Numbers (ICANN), which is a private non-profit organization located in California. It consists of several stakeholders of technical, economic and academic sectors that are directly responsible to the US Department of Commerce. The ICANN is controlling the assignment of IP addresses and Top Level Domains (TLDs), the Domain Name System (DNS), and the so-called “root” that serves as the backbone of the Internet. The majority of root-servers are located in the US, the rest is split up in “anycast nodes” around the world, which are all attached to the root servers in the US. Therefore the ICANN is widely considered as the “world governance of the Internet”. The circumstance that the Internet is structured very centralistic-hierarchically and also mainly governed by the US was the cause for an international controversy at the WSIS-Conference (World Summit on the Information Society) in Tunis/Tunisia.

The former UN Secretary General Kofi Annan who criticised the current circumstance that the Internet is ruled by the US only initiated the WSIS. According to Annan the WSIS should serve the purpose to close the digital divide and to disseminate the freedom of speech. During a preparation conference for WSIS the European Union (EU) suggested that the Internet should be ruled under the patronage of the United Nation; a suggestion, which was harshly rejected by conservative members of the US government who claimed that the Internet should still be controlled by the US. The background of this resistance was that the US seemed to be more interested in e-commerce than in global democracy and human rights aspects of the Internet community.

The WSIS conferences consisted of two parts: WSIS I took place in Geneva/Switzerland in 2003. The main topics of WSIS I were the closing of the digital divide, a common sense about the information society, the establishment of a universal and equal information access, the maintenance of linguistic and cultural diversity, technical education and training programmes, intellectual property and information sharing, data protection, protection of privacy, the human right to communication, Internet security and e-government (cf. Kleinwächter 2004).

The follow-up conference WSIS II took place in Tunis/Tunisia in 2005 and focused on four core topics: The first one, the so-called Political Chapeau, had the ambitious aim that in the 21st century the Internet should primarily serve the human mankind and that 50% of the world population should be able to participate in the information society until 2015. The second one
focused on the establishment of a Digital Solidarity Fund (DSF) to close the gap of the digital divide. The third one was concerning the “Internet governance”, which was the most critical part since it stressed the question who should rule the core resources of the Internet (“root”). Last, but not least the fourth one dealt with the follow-up conference of the WSIS II conference (cf. Kleinwächter 2005).

Since the US government still refused to share the Internet governance with the rest of the world community, the only chance to solve this conflict was to find a compromise. For this purpose Kofi Annan suggested to establish a task force named Working Group on Internet Governance (WGIG), which should clarify the role of the civil society and the part of the development countries concerning the participation in the information society. The reaction of the US Senate to this Annan’s suggestion came immediately: US Senator Norm Coleman published an article in the Wall Street Journal, which expressed his doubts very harshly:

“An anonymous group of international technocrats holds secretive meetings in Geneva. Their cover story: devising a blueprint to help the developing world more fully participate in the digital revolution. Their real mission: strategizing to take over management of the Internet from the U.S. and enable the United Nations to dominate and politicize the World Wide Web. Does it sound too bizarre to be true? Regrettably, much of what emanates these days from the U.N. does.” (Coleman 2005)

The title of the article was named “Beware a Digital Munich” and referred to the historical Munich Agreement of 1938 were the Allies agreed with Hitler that the Sudeten territories should be integrated to the German Empire to keep the peace in Europe. Therefore it would be the duty of the US not to repeat such a historical mistake. Coleman’s distrust expressed the US government’s fear that Annan’s suggestion could become an invitation for “rogue states” to mistreat the Internet for political propaganda or for censorship like in China. After a long controversial debate in International Herald Tribune, New York Times and Wall Street Journal the controversy finally came to a compromise, which was the Internet Governance Forum (IGF).

The result of this compromise was that the core resources of the Internet will still be controlled by the ICANN but this control shall be embedded into a framework of political principles suggested by the IGF. Therefore the role of the IGF should be the one of a
“watchdog”. Furthermore the IGF should be based on a multi-stakeholder principle that allows the civil society to influence the future development of the Internet. Most of the initiators of the IGF were satisfied with this compromise although some of them were disappointed about the fact that the IGF should only have a consulting function without any legally binding enforcement.

Kofi Annan initiated the first IGF meeting in Athens/Greece in 2006. The four core principles of the meeting were “Openness”, “Security”, “Diversity” and “Access”. Furthermore the IGF shall reflect the principles of both WSIS conferences in the past. After the first meeting the IGF has been taking place in Rio de Janeiro/Brazil (2007), Hyderabad/India (2008), Sharm el Sheikh/Egypt (2009), Vilnius/Lithuania (2010), Nairobi/Kenya (2011) and Baku/Azerbaijan (2012).

Big Brother in Cyberspace: How 9/11 has enforced a Digital Hegemony in the Global Information Society

„Have you ever felt oppressed or manipulated through technology?“
Slogan of the AT&T „You Will“-campaign

„War is Peace
Freedom is Slavery
Ignorance is Strength”
George Orwell - 1984

Immediately after the 9/11 terror attacks on the World Trade Center and the Pentagon several Internet providers have been visited by the FBI to implement a data observation system called “Carnivore”. The purpose of this system was to filter the national and global data flow of Internet communication by several keywords. The data observation tool was immediately implemented in public domain providers like Microsoft Network (MSN) or Earthlink (cf. Corinth 2002). “Carnivore” was not the first data observation system to take control over the Internet communication initiated by the United States. The parent information system for data observation was “Echelon” initiated by the National Security Agency (NSA), which has been using several interfaces of telephony, mobile phone and the Internet to spy on the global Internet traffic. The only issue of this system was that it worked too sufficient since it filtered
thousands of terabyte of data every day, which could not been evaluated for the suppression of terrorism. At this time the European Union developed a pendant to Echolon called “Enfopol” and which intended to serve a similar purpose like the US-American counterpart (cf. Rötzer 2002). Meanwhile the data filtering methods of such observation tools could be improved with neuro-linguistic programs, which are not only able to analyse the Internet communication by certain keywords but also by its linguistic context. The software industry has been massively researching on the decryption of the meaning of digital messages during the past years including the interpretation of human language, gesture and facial expression (cf. Sagatz 2001).

As a consequence of the 9/11 terror attacks the US Congress adopted the “Patriot Act” as well as the “Homeland Security Act”. Both acts authorised the US justice for comprehensive measures of observation and data storage. One of the first actions of the US Ministry of Justice was a system called Terrorism Information and Prevention System (TIPS). The idea behind this system was to observe the privacy of suspect persons and to store their personal information in an extensive database. The US government also adopted the Cyber Security Enhancement Act to intensify the punishment concerning computer criminality (cf. Rötzer 2002).

After the foundation of a special department called Defense Advanced Research Projects Agency (DARPA) whose purpose served to develop new strategies for forensic data analysis and terror suppression, a new experimental prototype for global data observation named Total Information Awareness (TIA) came into being that intended to gather enormous data on a global scale using data mining technologies to collect, to analyse and to store information of potential terrorists all over the world. This global “Big Brother in Cyberspace” was heavily criticised because of its totalitarian character and its logo. The official logo of TIA showed an eye on the top of a pyramid, which inspired some conspiracy theorists that the project might be associated with the Illuminati (cf. Rötzer 2012). In 2003 the TIA project was renamed as Terrorist Information Awareness to avoid any suspicion that it might observe US American citizens only. After a few months the TIA project was replaced by a follow-up system named ADVICE (Analysis, Dissemination, Visualization, Insight, and Semantic Enhancement), which served the same purpose as TIA did before (cf. Heise 2007).
9/11 did not only have an impact on the US in this sense but also on the European Union. After the terror attacks in Madrid (11th of March 2004) and London (7th of July 2005) the Europeans decided to implement observation mechanism such those in the US, as well. On 15 March 2006 the European Union adopted the so-called “Data Retention Directive (2006/24/EC)” that required the EU member states to track and trace the source and destination of communication and to identify the date, type, duration and location of (mobile) communication. The official legitimisation of this directive was to fight organised crime, illegal propaganda and terrorism on the Internet. The majority of the EU member states have transposed the notorious directive although many civil society organisations claimed that mandatory data retention was an fundamental violation of the right to privacy and the protection of personal data. Furthermore critical members like Sweden, Germany, Czech Republic and Romania had to bow to the pressure of the European Court of Justice although their constitution courts claimed that the infamous data retention would be inconsistent with their national constitution or with the principles of the European Declaration on Human Rights (Legile Internetului 2009).

**Fighting the Governmental Hegemony: The Struggle against Opinion Leadership and Censorship**

“We are Anonymous.
We are Legion.
We do not forgive.
We do not forget.
Expect us.”

*Anonymous – Message to Scientology Video*

The struggle against governmental opinion leadership has a long tradition since the early beginning of the Internet. One of the first web based human rights initiatives supported by the Internet community was the anti-globalisation campaign of Subcommandante Marcos, an associate professor of philosophy and spokesman of the Zappatista Army of National Liberation (EZLN), at the mid of the 90ies. Marcos advised the web community to the precarious situation of the indigenous people in the province of Chiapas/Mexico after the country has joined the North American Free Trade Association (NAFTA). Marcos’ intellectual essays on human rights and cultural diversity have been spread all over the
Internet (Subcommandante Marcos Tribute Page 2012). At the same time, Ken Saro-Wiwa, leader of the Movement for the Survival of the Ogoni People (MOSOP), initiated another human rights campaign, which was highly recognised by the net community as well (Remember Saro-Wiwa campaign 2012). Saro-Wiwa revealed the schemes of the former Nigerian dictatorship, the exploitation of the Ogoni region by the Shell oil company, and the human rights violation in Nigeria and was finally on death row for his human rights activism.

After the turn of the millennium several “whistleblower”-campaigns reached the public interest through the Internet. One of them was WikiLeaks, an organisation that published hundred thousands of top secret CIA documents through its web portal and also revealed a disturbing video showing a “collateral murder” caused by an air strike on Baghdad during the Iraq War in 2007. The WikiLeaks’ spokesman Julian Assange was highly persecuted for his campaign and asked for political asylum in several countries since he is afraid of being accused of high treason in the US. (Zeit Online 2010). Meanwhile the domain of the WikiLeaks website has been banned from the net and is only reachable on several Internet mirrors.

One of the most notorious whistleblower-campaigns in Internet history is “Anonymous”. The information dissident network started its early actions with hacker campaigns against the practices of the Scientology Church (“Project Chanology”). Meanwhile one of the main goals of Anonymous is the fight against Internet censorship and the protection of whistleblower web portals (“Operation Payback”). Furthermore, Anonymous supported a worldwide campaign against the Anti-Counterfeiting Trade Agreement (ACTA) that aimed the protection of intellectual property and international copyrights. Critics of ACTA like Amnesty International claimed that this agreement would affect the freedom of opinion and the privacy of Internet users as well as the access to vitally important medicaments for development countries (Amnesty International 2012). The Anonymous campaign caused demonstrations and petitions against ACTA all over the world. Although the international agreement has already been signed by the US, Canada, Australia, New Zealand, Morocco, Japan, South Korea, and some EU member states the European Parliament rejected the agreement by an overwhelming majority of 478 votes against the treaty on 4th of July 2012 (Whittaker 2012).
Conclusion: Struggling for Hegemony and the Future of the Information Society

"Information can tell us everything. It has all the answers. But they are answers to questions we have not asked, and which doubtless don’t even arise."

Jean Baudrillard – Cool Memories

After the establishment of the World Wide Web and its enormous expansion during the 90ies, it was unclear for the “Generation X” if the participation in the global information society by the new social movements would be useful or harmful. Adherers of the “Californian School” and techno-eschatologists reinterpreted the well-known post-Maoist parole “long march through the institutions” by the APO spokesman Rudi Dutschke as a “long march through the cyberspace”. On the other hand, the techno-cultural pessimism of the French Post-structuralists also influenced the sceptics among the new social movements. Apart from this controversial debate, many peace movements, NGOs and grassroots of the 70ies and 80ies have been attracted by the potentials, which the WWW had to offer: It is basically flexible, open to many people and cheap as well to promote the intentions of small organizations, movements and grassroots whose ideas and work have been commonly unknown to the public. In this respect, especially peace related movements and institutions tried to expose themselves through the Internet, most of them from the mid of the 90ies.

Most of the peace movements in the US and other continents have unionised in the Usenet (e.g. alt.peace or alt.peace-corps), which was a parent communication platform of the Social Networks. One of the first peace education related networks was Communication for a Sustainable Future (CSF) at the University of Colorado. This network published a catalogue of all peace study programs worldwide. In Europe Transnational Foundation for Peace and Future Research (TFF) became one of the most important and independent information providers during the wars in former Yugoslavia or in the Caucasus.

One of the first peace research institutions in Germany that joined the WWW was the PRIF (Peace Research Institute Frankfurt), which did not only promote its aims and perspectives but also offered several publications to download (“PRIF report”, “Friedensgutachten”). In UK it was the Department of Peace Studies at the University of Bradford who allowed the first Telnet-access to their library catalogue. In 1996 the Austrian Study Center for Peace and Conflict Resolution (ASPR) launched its first website, offering news and articles, research and conference reports, training course programmes and publication archives for the public.
Its partner institution European Peace University, formerly called European University Center for Peace Studies (EPU) was the first organisation in continental Europe, which presented an MA Program in Peace and Conflict Studies to students from around the world. Later, in 2010, the EPU re-launched its website after becoming a private university and introduced a “Virtual Campus” covering an online catalogue of the peace library, an intranet for the students and a huge publication archive of the UNESCO-Chair on Peace, Human Rights & Democracy. After the emergence of the so-called “Web 2.0” most of the institutions mentioned above also joined the new Social Networks like Facebook or Twitter to connect with international peace movements.

Since the early beginning and establishment of the Internet not only the global society has been in transition but also the Internet itself. The first version of the WWW was mainly a passive information medium whose purpose primarily served to inform the “information rich” and an elite of technocrats. Although the digital divide still exists the expansion of the net has meanwhile spread all around the world and the number of participants has been dramatically increasing. Furthermore the so-called “Web 2.0” has also changed the quality of the net. By the establishment of the “Social Networks” like Facebook, Twitter, Xing or Google+ that cover nearly one billion of participants, the Internet is no longer a passive information medium anymore but became more flexible and mobile in terms of interactive communication and sharing of interests. The third stage of the net is the “Web 3.0” that is also known as the so-called “Semantic Web”. This means that not only passive information or interactive communication and sharing will be provided in the future. “Semantic” means furthermore that the Web 3.0 will be able to identify correlations and relationships of data, which have not been transparent before. This implies that passive databases will serve as multiple information clusters in the future. This circumstance has an enormous potential for the civil society, especially for the future peace and conflict studies. The “Semantic Web” could be useful for conflict transformation, early warning systems, crisis prevention and new interdisciplinary peace and conflict research.

It is hard to predict how the information society will develop in the future. The web might be increasingly used for common goods of the world population like democratic participation, human rights, crisis management or political change. But it might also be misused for monopolistic opinion leadership, information warfare, violating the privacy, as well as for suppression, exclusion or censorship of the freedom of speech.
However, one thing is certain: The digital divide and the power monopoly of the US government, which both still exist are symptomatic for the circumstance that the struggle for Neo-Gramscian “Hegemony” and the quest for “Radical Democracy” within the information society is still going on and the net community with its “Netizens” will remain the battleground of this struggle.
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<tr>
<th>Abbreviation</th>
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<tr>
<td>ACTA</td>
<td>Anti-Counterfeiting Trade Agreement</td>
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<td>ADVISE</td>
<td>Analysis, Dissemination, Visualization, Insight, and Semantic Enhancement</td>
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<td>APO</td>
<td>Außerparlamentarische Opposition</td>
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<td>ARPA</td>
<td>Advanced Research Project Agency</td>
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<td>ASPR</td>
<td>Austrian Study Center for Peace and Conflict Resolution</td>
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<td>CERN</td>
<td>Conseil Européen pour la Recherche Nucléaire/European Organization for Nuclear Research</td>
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<td>CIA</td>
<td>Central Intelligence Agency</td>
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<td>CSF</td>
<td>Communication for a Sustainable Future</td>
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<td>DARPA</td>
<td>Defense Advanced Research Projects Agency</td>
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<td>DNS</td>
<td>Domain Name System</td>
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<td>DSF</td>
<td>Digital Solidarity Fund</td>
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<td>EPU</td>
<td>European Peace University/European University Center for Peace Studies</td>
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<td>EU</td>
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<td>EZLN</td>
<td>Ejército Zapatista de Liberación Nacional/Zapatista Army of National Liberation</td>
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<td>FBI</td>
<td>Federal Bureau of Investigation</td>
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<td>FTP</td>
<td>File Transfer Protocol</td>
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<td>ICT</td>
<td>Information and Communications Technology</td>
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<td>Internet Governance Forum</td>
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<td>Microsoft Network</td>
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<td>NAFTA</td>
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<td>National Security Agency</td>
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<td>NSF</td>
<td>National Science Foundation</td>
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<td>PRIF</td>
<td>Peace Research Institute Frankfurt (Hessische Stiftung Friedens- und Konfliktforschung)</td>
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<td>TFF</td>
<td>Transnational Foundation for Peace and Future Research</td>
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<td>TCP/IP</td>
<td>Transmission Control Protocol/Internet Protocol</td>
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<td>TIA</td>
<td>Total Information Awareness/Terrorism Information Awareness</td>
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<td>TIPS</td>
<td>Terrorism Information and Prevention System</td>
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<td>TLD</td>
<td>Top Level Domain</td>
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</table>
**UN** United Nations (Organisation)

**US** United States (of America)

**UNESCO** United Nations Educational, Scientific and Cultural Organization

**USSR** Union of Soviet Socialist Republics

**WGIG** Working Group on Internet Governance

**WSIS** World Summit on the Information Society

**WWW** World Wide Web

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