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## o Introduction

I was 16 when I had to give a talk about Franz Kafka in front of my class in High school. Of course at this time I was more interested in hanging out with my friends than reading 'Das Urteil'. Fortunately Wikipedia was flourishing in Germany in this time. And because my teachers were pretty slow in getting along with the internet, we, as students, had an easy life for the next two years. It was the time when I copied all information from Wikipedia and probably stopped thinking myself. I still haven't read the short story yet, but a lot about it. Still I would be able to give a more or less detailed interpretation of 'Das Urteil'.

I got the impression that I can find every information on the web and I started trusting it because I had the feeling to be able to understand everything. And if I understand something, I feel so good about it that I just stop checking the information. The era of punditry began. For the time in High school that was enough. I was satisfied with what I got from the web. I have taken everything. In front of my eyes there was opening up a new world of knowledge and I just took it. It felt like by chance I was born into the right time - it has never been easier to inform yourself.

This was the time when I started looking up every information on the web. The web became this all-knowing machine to me. It seemed smarter than my father and so far I only met a few people who were smarter than my father. I believed in the idea that the web will revolutionize our politics, economy and society. I very much liked the idea of a self-sufficient society - an ideal society that Fred Turner describes in his book 'From Counter Culture to Cyberculture' (2006) as decentralized, egalitarian, harmonious and free. Furthermore I was fascinated by the possibility to communicate around the world and being able to express ideas. I thought that state borders and individual borders will disappear. I thought the internet will democratize the world, makes it a better place and make me a very smart person because it will answer all my questions.

But more and more I start realizing that the knowledge on the Web is very limited and I don't get my questions answered. Now, people comment articles, share data, exchange knowledge on blogs, Twitter and Facebook. I experience the Web as a structure where everyone is horizontally connected, where everyone can be a writer, an editor, a critics, an expert - and it annoys me and I don't trust the knowledge on the web anymore. My initially enthusiasm and my confidence in knowledge the web spits out has disappeared. I feel disappointed and I have the feeling that the web cheated on me because it didn't kept its promise. It is true that it has never been so easy to inform ourself but why do I have the feeling to live in a society that has never been so badly informed? What went wrong?

My aim is to answer the question why there is this disillusion of promises. I would like to find out where this promise, that the Web knows everything and will change everything has its origin and from whom I adapted this belief. What where the general expectations of the web, what did the web actually promise? What did we believe concerning the Web in the beginning, how did it change and where are we now? Which promises are fulfilled and which are not fulfilled?

It is two things I am fascinated by: The aim to create an universal library and therefor to bring together the knowledge of the world. And secondly the technical realization of this aim. Therefore the first part of my thesis deals with the history of the World Wide Web. I will illustrate the history of hypertext by focussing on for people and their inventions that move

forward the World Wide Web as we know it today. The second part deals with the idea of a world encyclopedia and the third part will be my argumentation why I have the feeling that the promises of the Web failed.

## **1 The history of hypertext**

### **1.1 Introduction**

First of all I want to say that this thesis is not claiming to write the truth about the history of the World Wide Web. During my research I found out that there are an incredible number of different versions and mythical stories about the Web genesis. I was willing to take some time to find out the truth but after a while I capitulated. If even Al Gore is calling himself the father of the internet - I have to admit that there is not THE father of the World Wide Web, but several dozen inventors of the Internet. This thesis examines four of them. Four fathers that identify four major trends in the development of the WWW. I adapted this idea Manuel Castells book 'The Internet Galaxy'.

- Vannevar Bush > Memex (1945)

- Douglas Engelbart > Online System including graphics interfaces and the mouse (1968)

- Ted Nelson > Computer Lib Manifesto and XANADU (1965)

- Tim Berners-Lee > World Wide Web

When I talk about the internet, I mean, like most people I guess, the World Wide Web as I got to know it in the mid 2000 (due to my age)- a hypertext system that I can enter by means of the internet. To be able to retrieve data from the internet I need a web browser that downloads the data I am asking for from a Web server and shows me on my screen in the form of a website.

The principle characteristics of the World Wide Web that I am so fascinated by is the organization of hypertext. To a hypertext you can link other hypertexts, images, videos, etc by hyper links. By following a link the underlying resource invokes. The user moves from document to document. This is the process we call surfing the process that I will investigate in the first part of my thesis.

### **1.2 Vannevar Bush > Memex (1945) „pioneer of the scientific calculating machine“**

Hyper-textual structures have been known for centuries, they are not an invention of computer technology. As a forerunner of todays digital hypertexts applies for example the book wheel of Agostino Ramellis that was developed in the 16th century, or the reading machine of Roussel, a kind of change wheel for notepads. In literature, Michael Joyce's ‚Afternoon‘ is considered to be the archetype hypertext book. And also Paul Otlet's Mundaneum (to whom I will come back later) is one of the most beautiful (because most complex and idealistic) concepts of creating an analogue hypertext system.

All these inventions were objects that should make it easier to reference between different sources. We also can find this idea in linear text. Actually any help to develop a linear text, such as indexes, cross-references and footnotes, are implementing the idea of hypertext.

The main difference between these analogue and digital hypertext systems is that the reference targets doesn't have to be on site and the tracking of references is not automated.

Vannevar Bush was in 1945 the first person who designed the concept of a digital hypertext system. In his legendary article 'As we may think' he writes about the Memex. The Memex would allow readers to create personal indexes to documents and to link passages from different documents together.

Vannevar Bush was one of President Franklin D. Roosevelts technology advisors during World War II. It was his job to make the knowledge of Roosevelt's scientist as effectively as possible for military use. He had the overview of all technology projects that were funded by the White House. It was him who gave Robert Oppenheimer the order to build a nuclear weapon as soon as possible.

But Vannevar Bush was also an aesthete whose mission was to increase the effectiveness of

human research. With his utopian idea of creating a knowledge management system, as the Memex was, he wanted to change the way people archive and document knowledge.

In Bush's mind the Memex looks like a desk on which two screens are mounted, each on one side. Inside the desk are electromechanical controls and microfilm equipment. The operator of this machine is allowed to input text and drawings through a photocopier which will be projected on the screens. This data is then stored in a microfiche filing system. With levers the operator can scroll back and forth between information, and save and recall documents. Also, there is the possibility to refer between different sites through links. Texts and extracts from texts can be stored and later linked to other information.

The memex encompassed data compression, information exchange and information exchange with other users

„Most importantly Bush introduced the notion of ‘associative indexing’, enabling the user to make trails through the mass of information and record those trails, which can be followed and annotated by other users. It is this capacity in particular that would later come to characterize the areas known as hypermedia and multimedia‘

Bush created the Memex to support the human brain, he wanted to encourage the associative thinking. He said „A memex is a device in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility. It is an enlarged intimate supplement to his memory.“

while Bush's description was purely speculative, he gave a brilliant and influential preview of some of the features Nelson would attempt to realize Xanadu

### **1.3 Ted Nelson > Computer Lib Manifesto (1965) envisioned a hypertext of interlinked information. He worked on XANADU, an open, self-evolving hypertext aimed at linking all the planet's information in the past, present and future**

In 1965 Ted Nelson a young sociologist, dreamed about the idea to link different publications together within a network. This idea has now become everyday life. In 1965, however it was an incredible idea. The Arpanet was not even developed!

In Computer Lib/Machine Dreams he introduces the idea of hypertext. An idea that he realized with XANDU. XANDU was a software framework, that would enable access to all the world's textual information and make it possible to link and examine texts in parallel and to produce new versions.

Xanadu is a global hypertext publishing system and a meritocratic forum for discussion and debate. By putting all information within reach of people, Xanadu was meant to eliminate scientific ignorance and cure political misunderstandings. Xanadu was supposed to save the world.

„Ted Nelson's Xanadu was supposed to be the universal democratic hypertext library that would help human life evolve into an entirely new form,

That Nelson's XANADU also wanted to revolutionize the question of copyright I mention here only for completeness. The idea was that every author who published hypertext via Xanadu, has to admit certain quotation rights, but the author can ensure the references to his authorship. For further exploitation the author gets paid automatically via a micro-payment system. But this debate is going on elsewhere and is beyond the scope of this thesis.

Actually Ted Nelson developed Xanadu for himself - to help himself. Nelson is a scattered man with a short attention span and an unfocused energy. He begins many things but never brings them to an end. To help himself, he wanted to design a computer program that could keep track of all the divergent paths of his writing and thinking. Even if his intention was very noble he could never manage to finish Xanadu.

### **1.4 Douglas Engelbart > Online System including graphics interfaces and the mouse (1968)**

Douglas Engelbart was highly influenced by Vannevar Bush's article „As we may think. Bush's idea left such a lasting impact on him that from now on he turned his whole life to the technical realization of the Memex.

Engelbart joined the Stanford Research Institute (SRI) in 1957 where he managed the Augmentation Research Center (ARC). At this center he invented „some of the most ubiquitous features of contemporary computers“ like the mouse the keyboard and CRT Terminal. But to me Engelbart is not interesting because off all this inventions that clearly shaped computer technology, he is interesting to me because he moved the WWW forward, since Vannevar Bush's idea wasn't put into practice yet.

Between 1966 and 68 ARC developed a collaborative office computing environment, called On-line System or NLS (we will work with NLS)  
NLS offered different users in different places to work on one document on the same time. The user were able to connect texts and text fragments via hyperlinks. Also they could create indexes of keywords that could be searched. It actually worked as a now a day intranet.

Actually the NLS was the technical realization of the Memex - it allowed the user to call up and manage information. And beyond that, it would allow the user to work simultaneously with other users on the same text. ARC elevated the process of collective feedback to a principle of social organization. In Engelbart's view, „each individual's comprehension would be increased by the participation of others through a process of collective feedback facilitated by the computer“.

For Engelbart the computer was a vision, a tool for collaboration, a communication device. He also saw the social potential in it.

„A system that would use cybernetic processes of communication and control to facilitate not only better office communication but even the evolution of human beings“

ARC was funded by ARPA. And ARPA was founded in 1958 with the aim to do research on defense-orientated technologies

In 1969 SRI had become one of the first four nodes of the ARPANET, what brings me to its development - the germ cell of the internet on the hardware site was born.

#### 1.4.1 ARPANET

With the ideas of Bush, Engelbart and Nelson the idea of the Internet was born long ago. But by the mid-60s a network in the sense of the word still couldn't be realized - this had to wait until the late 60s.

ARPA (Advanced Research Projects Agency) is now DARPA (Defense Advanced Research Projects Agency), in 1996 the „defense“ was added. The agency was founded in 1958 by president Dwight D. Eisenhower as a result to the Sputnik crises in 1957. ARPA initiated research projects to push the development of space technology and military technology. Only when the NASA undertake this task, ARPA concentrated on the exploration of computer technology.

The ARPA- or DARPA-Net was developed in 1967 of a small group of researchers led by the Massachusetts Institute of Technology (MIT) and the Department of Defense. It is considered as the first network in the sense of the word. In 1969 It connected the SRI with the University of Utah, University of California, Los Angeles and the University Santa Barbara. The compounds were made via telephone lines. This revolutionary decentralized concept already contains the basic aspects of today's internet.

It was Robert Taylor who was a researcher at ARPA at this time and supervises the ARPANet project who had the idea of connecting computers that they could transmit data not only between all ARPA computers but also from computers outside the pentagon, where is office was. Together with Larry Roberts, he developed the concept that the transmission of data should take place in data packages.

The transmission of data in chunks goes back to the idea of the engineer Paul Baran. In 1962 he wrote a paper concerning strategies for maintaining communication in event of a nuclear war. In the 60s, in the middle of the cold war, the fear of a nuclear threat felt very real in the United States. Due to this fear, Paul Baran had the idea to create a network that waive a center, so that should any part be destroyed, messages could continue to flow along other routes. His idea was to send data in small „chunks“ and to bring them together at their destination.

If the ARPANET used this chunk method because technology was driven by military needs as Charlie Gere describes in his book „Digital Culture“. Or if they worked in the spirit of Vannevar

Busch as Robert Taylor says in the film 'The Net': 'that they build the Arpanet to enable people in different places who had common interests to share those interests.' Or if it was built to finding a method to take advantage of the bare computing resources of the universities through better data exchange - It is one of the big myths around the internet.

#### 1.4.2 Counter Culture

The eternal question is: if computer technology only arose because of military needs? On the one hand computer technology, especially the development of the internet was driven largely by the needs of the Cold War. But to describe it as a product of war technology would probably only be half the truth. The other half, is the explanation why computer technology migrated from the military to civil life so fast. It is the story of technology as a product of the Counter Culture. The truth is, as usual, somewhere in the middle: The internet is a product of the intersection between science, military research and liberation culture. There intentions are according to their need of course different. The reasons range from war technology to the utopian idea of collecting the worlds knowledge.

A symbol of this accumulation of different ideologies and targets are Ted Nelson and Douglas Engelbart. The latter got called of for WW II in 1944. He was a GI when he first got in touch with the idea of hypertext when he read Vannevar Bushs 'As We May Think'. Later his ideas for graphic interfaces and the mouse were financed by the SRI and he worked on several projects together with Robert Taylor. Their projects at SRI were mainly financed by the government. But also, he was in touch with Stuart Brand, one of the leading figures for the technical driven Counter Culture. Brand attended Engelbart's Augmented Knowledge Workshop in 1968. Ted Nelson's urge toward global improvement was highly influenced by the Counter Culture and the Whole Earth Catalogue which led into the proclamation of a vision of the expanded possibilities of Computers in his book 'Dreams/Lib machines'.

The counter culture was maybe the reason why personal computing has gained wide acceptance in society for which the Whole Earth Catalog created the context. Gere goes even further and says that the counter culture took the military and technical aura from real time interactive computing and brought the cybernetic spirit to it. This idealism that they adapted of the Avant Garde.

To understand why computer technology became interesting for the society, we have to understand why a new way of thinking was established in this time. The atmosphere in the 60s in the United States was characterized by optimism and prosperity as well as the fear of nuclear terror, atomic weaponry, the invasion of American troops in Vietnam in 65, racial discrimination and the increasing pollution. One part of the society didn't want to ignore those issues anymore. The counter culture evolved in The USA and some parts of Europe. The movement was a white phenomenon that had a huge interest in the self-realization.

San Francisco became the place of pilgrimage for all those who behave and think differently. For those who wanted an alternative lifestyle. On the one hand the counter culture was anti technological because the movement wanted to focus on the true value of life and wanted to practice a back-to-the-basic lifestyle. But on the same time the movement was also facing technology. This is maybe due to the fact that Silicon Valley and San Francisco clashed in the 60s. 'New technology and counter-cultural thinking created the circumstances that produced the Personal computer and by extension much of current digital culture'. Exemplary for this clash of two very different worlds became The Whole Earth Catalogue of Stewart Brand. The Whole Earth Catalog (WEC) was a printed catalog that listed tools and ideas that were important for an alternative lifestyle. Among other things, the Catalog listed ideas of alternative thinking, sources for agricultural implements, building/craft tools, musical instruments, aids to physical and mental self-help, care of animals and philosophy. The Whole Earth philosophy was always to support the idea of community and to enable a free exchange of ideas through networks.

#### 1.5 Tim Berners-Lee > World Wide Web

Even if the internet was developed in theory already, what made it possible for the internet to conquer the world was the development of the World Wide Web. The World Wide Web is an information sharing application developed by Tim Berners-Lee in 1990 when he worked at CERN. He was the first one who made it possible to link up information sources via interactive computing. In cooperation with Robert Cailliau, he built a browser and named this hypertext

system World Wide Web.

This network program he wrote made it possible to access all documents from all computers within this network. The documents only had to be linked on hypertext sites, that were linked to other hypertext sites at other computers. What the program, the WWW, did was to display these hypertext sites. It was a method to display texts, images, video, animation and sound, so that this data could be viewed on any computer as long as it was both connected to the internet and had the right software.

His intention to build the WWW-project was to enable particle physicists to exchange data, news and documents without the loss of time. But from on the beginning his aim was to extend the WWW to other areas and to connect more servers to the network, servers that would bring in other information. This was the reason Berners-Lee called his program World Wide Web (first WorldWideWeb)

In August 1991 he invited the public to visit the first public Web server. So, the web as we know it now began. From then on it wasn't an intellectual game anymore as the Memex of Vannevar Bush, neither this esoteric always postponed promise of Nelsons Xanadu nor Douglas Engelbart's over ambitious NLS-project. From now on it was this existing system where you could attach to.

However, when CERN released their browser software, it wasn't such a success in the beginning because it was too difficult to use the software that was necessary to access the WWW. This has been changed when when Mosaic was developed in 1993 after a number of hackers started to develop their own browsers.

Mosaic (later Netscape) posted the first commercial browser, that was able to show not only text but interactive elements and graphics without loading them separately. Netscape posted on the Net the first commercial browser, Netscape Navigator (1994). In 95 they released the Navigator software over the Net, free for educational uses and for 39 \$ for business. So, by the mid 90s, the internet was privatized. It's technical and open architecture allowed the connection of all computer networks anywhere in the world. The WWW could function. From then on an adequate software and several user-friendly browsers were available for the public. So, for society at large, the internet was born in 1995.

## **2 Universal Library**

### **2.1 Intro**

Since the early 20th century the utopian idea of a universal library emerges again and again especially in science fiction literature. One of the science fiction pioneers (Wikipedia) H. G. Wells had the vision of the 'World Brain' that he describes as 'a new, free, synthetic, authoritative, permanent world encyclopedia that could help world citizens make the best use of universal information resources and make the best contribution to world peace.' The 'Idea of a permanent World Encyclopedia' is a collection, indexing, summarizing and release of knowledge by a centralized world organ working on a planetary scale to pull the mind of the world together. Also other science fiction authors such as Kurd Laßwitz who published a short story, called Universal Library or Douglas Adams The Hitchhiker's Guide to the Galaxy as well as Jorge Luis Borges short story 'The library of Babel' take up the question how a library, that consists of all existing books, looks like and also how they could be ordered to find them back.

But this was all utopia.

### **2.2 Paul Otlet**

Someone who was probably one of the first who translated this utopia into reality was Paul Otlet. His whole life Paul Otlet worked on a organizational and technical realization of documenting the world knowledge. He was busy with questions such as: what needs to be documented and how can the world knowledge be accessible for the public? He tried and developed the Mundaneum. Maybe his Mundaneum was the first search engine. The Mundaneum opened its doors in 1920 in Brussels. It was a mixture of a book museum and a meeting place for intellectuals. Otlet was convinced that the global spread of knowledge and the exchange of it would promote peace. His dream was to create an universal network that allows the distribution of knowledge without any restrictions.

It was his vision that the Mundaneum would cover all books that have ever been published. By means of an archiving system that was developed especially for the Mundaneum, all books were connect with each other. This storage system consisted of 16 million indexing card. Thus he invented a system to navigate through all books. It was already a hypertext system.

He racked his brain to find a solution how to reach a location independent access to knowledge. The Mundaneum worked as a paper Google. By mail or telegram users could do a request. The friendly women who were working at the Mundaneum would than search for the right answer to the request and get it back to the requester. However, this could take weeks. When in the 1930s the radio and Television were invented, he developed multimedia concepts to develop the cooperation opportunities for researchers. For example, Otlet developed multimedia furniture with file cabinets and telephones to achieve what now a days each computer can provide. Also he tried to replace books by other media. For example he prepared a lot of charts that he burned on microfilm. It was a method to universalize information- as diagrams are readable internationally. In addition information could be conveyed easier and faster via sound and film. Paul Otlet was a visionary who outlined the idea to transfer scientific conferences via phone. As soon as he had this idea he would ask himself if there is also a possibility to make a video transmission. There is this myth that he had the idea of mobile phones in 1907.

In the documentary 'Alle kennis van de wereld (Biography of Paul Otlet)' from 1998 the narrator Boyd Rayward, who is Otlets bibliographer says in the end: 'I could imagine Otlet on the one hand being rejoicing about the creation of the internet and the web and being terribly upset by the lack of organization of it on it and suggesting: we better have a classification system of this sort to avoid cyberspace debris'  
This is one of the biggest differences between Paul Otlets hypertext system and the World Wide Web.

Although Otlet was thinking about how corrections and comments can be made on his indexing cards. He was thinking about a system were knowledge is ordered hierarchically. Only a small group of scientists should work on the classification. Edits and comments should, unlike Wikipedia, not melt with the information but merely supplement them.

Otlets network was far more complex than the WWW. We can see him as the pioneer of the semantic web?

From on the beginning the idea of hypertext is very closely connected to the utopias of the universal libraries. Therefore it is no coincidence that the publisher of the Universal Classification Paul Otlet is considered as the first pioneer of hypertext. He wanted to use this 'universal language' to connect different nations. Therefore some people say he is one of the founders of the League of nations, the forerunner of the UNO.

### **2.3 Wikipedia** (coming soon)

### **3 Why did the Web fail?** (in keywords and german)

**to recap - these were the promises the hypertext made:**

- Memex would increase the effectiveness of human research
- Memex would change the way people archive and document knowledge
- Memex supports associative thinking
- Xanadu would eliminate scientific ignorance and cure political misunderstandings
- Xanadu was supposed to save the world
- NLS introduces the idea of collective feedback
- NLS would people enable to collaborate
- NLS = evolution of human beings
- idea of a universal library
- storing / representing the artistic and scientific legacy of humanity

### **Notes**

### **Lyotard**

- Wissen wechselt seinen Status in der Postmoderne.
- Wer entscheidet was Wissen ist, und wer weiß, was es zu entscheiden gilt? Die Frage des Wissens ist im Zeitalter der Informatik mehr denn je die Frage der Regierung. (p41)

### **Jaron Lanier**

- Reduktionismus im Web 2.0  
FB organisiert Menschen zu Multiple Choice-Identitäten zusammen (Individualität musste den templates weichen)
- Wenn die Kirche oder der Staat so etwas täte, empfänden wir das als autoritär –  
Technologie darf das (70)
- Bedeutung von Qualität vs. Quantität  
Verbreitete Annahme in der digitalen Welt, dass Qualität an einem bestimmten Punkt in  
Quantität umschlägt. Bsp. des Ochsen
- The wisdom of crowds  
Schätzungen funktionieren, weil sich die Fehler der einzelnen Schätzer ausgleichen. Gilt  
vielen als Grundlage für Marktwirtschaft / Demokratie  
Wann ist der Einzelne klüger als das Kollektiv?  
„Der Dschihad-Chat sieht genauso aus wie der Pudel-Chat“ (88)  
- Überall entscheidet eine Meute - entweder ist man dafür oder dagegen.
- Der Ausstieg des Internet in den 90ern erfolgte ganz ohne Führer, Ideologie, Kommerz  
Seither erleben wir ein unerschöpfliches Trommelfeuer utopischer Folgerung aus positiven  
Online-Erlebnissen (90)

### **Michel Serres**

- Technologie ist für Serres eine grundlegende Neuorganisation des kulturellen Netzwerks
- Wenn man in die Geschichte schaut, gab es diesen Wandel bereits zwei mal  
1 Übergang von oraler Tradition zu Schrift  
2 Übergang von Schrift zu mechanischer Reproduktion im Druck
- Wissen hat sich bis jetzt konzentriert (in Büros, Bibliotheken, Universitäten)
- Jetzt ist es umgekehrt: Das Wissen bewegt sich auf den Menschen zu: Wir befinden uns in  
einem Raum des verteilten Wissens
- Das Gedächtnis wird an das Speichermedium abgegeben
- Die Informationsgesellschaft in der wir leben wird zu einer pädagogischen Gesellschaft  
neuer Art, da sich das Netzwerk nicht mehr zentralisiert, sondern das Prinzip der variablen  
Topologie verfolgt.  
Kein paternalistisches Modell mehr, sondern ein Modell der Peripherie. (von jenen die  
bisher vom Wissen ausgeschlossen wurden)
- Die Dritte Welt wird sich nicht länger im Abseits halten lassen und die Zirkulation des  
Wissens durch Copyright nicht zu bändigen sein. Das technische Potential provoziert immer  
auch seine uneingeschränkte Nutzung. Nicht zuletzt durch Piraterie. Für die Serres jedoch  
großes Verständnis hat, weil ja schließlich der Götterbote Hermes auch die Diebe beschützt.
- Das globale Netzwerk des Wissens hat die Tendenz, die sozialen und politischen  
Ungleichheiten in der Verteilung von Wissen aufzuheben.
- Der Mensch ohne Fähigkeiten - die neue Technologie und die Ökonomie des Vergessens  
(2002)
- Die elektronischen Technologien verändern den gesamten Komplex der Aufnahme und des  
Empfangs, Aufzeichnung, Speicherung, Senden, Übertragen von Informationen.

- Diese Veränderungen betreffen Zeit, Raum und zwischenmenschliche Beziehungen. Wir speichern nicht mehr Dinge sondern Relationen
- Der Austausch relativiert das Speichern. Müssen wir den Kapitalismus überdenken?
- Wenn wir über Laptops / Mobiltelefone Zugang zu allen erdenklichen Gütern und Personen haben, sind wir nicht mehr so stark auf festgelegte Konstellationen angewiesen. Alles kann über beliebige Entfernung statt finden.
- Die Adresse war beispielsweise immer ortsgebunden, aber die Nummer des Handys bezeichnet keinen bestimmten Ort mehr.
- Wenn alle Punkte der Welt gewissermaßen gleichwertig sind, gerät das hier und jetzt in eine Krise.
- Internet = globales, enzyklopädisches, kollektives Gedächtnis der Menschheit
- Das Gedächtnis wird von den Trägermedien ersetzt
- Wir verlieren das Gedächtnis, weil wir zahlreiche Gedächtnisse konstruieren
- Das Internet ist nach dem Prinzip des Vergessens gestaltet: Die Enzyklopädie, deren weltweites Netz aus einer Unzahl einzelner Informationen besteht, hat unter dem Einfluss der neuen Befreiung ihr Paradigma gewechselt. Unser kognitiver Apparat befreit sich von möglichen Erinnerungen, um Raum für Erfindung zu schaffen.
- Regulierungsmechanismen für das Kollektiv. was passiert wenn, sich ein kollektiv zu schnell und kontrovers bewegt und die Schwankungen zu heftig sind für eine stabile Antwort? Dann wird eine Art Tiefpassfilter eingesetzt. Das heißt beispielsweise für Kapitalmärkte, dass automatische Handelssperren erlassen werden und für wikipedia heißt es, dass die Häufigkeit begrenzt ist, mit der eine einzelne Person textfragmente eines anderen Beitrags entfernen kann (p82)

### **Global Village**

- McLuhan: Barbrook schreibt in seinem Buch, dass unsere Gesellschaft so lange die limitation der repräsentativen Demokratie akzeptierten, so lange printing die Gesellschaft dominierte. Aber mit dem Ankommen der Neuen Medien verlangte die Gesellschaft mehr direkte Partizipation in political decision making. (eg online voting.) (Meine erste Wahl)
- New Information Technology lag einem neuen paradigma auf: the implosion of the social. When everyone across the world would watch the same programmes, national hatred and cultural differences would inevitably disappear.
- The wheel and the printing press had imprisoned individuals within nation states. TV's, telephones, computers were now linking the peoples of the world together. The electronic global network would create a global political system. The Web was about to unite a divided humanity into one.
- The technological convergence of TV, satellites and computers into the Net would create a signal social system for the whole of humanity and restore the intimacy of living in a tribal community. The rapid pace of technological innovation would lead to peace and prosperity for all. (Barbrook says that actually McLuhan believed that there were no technological fixes for the problems of this world)
- The convergence of TV, telecommunication and computing would create the new and much better social system of the Global Village. People would soon be living, thinking and working in a more equalitarian and participatory culture.