

The WWW – cool or hot?

An attempt to apply McLuhans vision to current media in an educational context

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The WWW as the current medium for communication

The World Wide Web (WWW) – a complex medium combining multimedia-based elements – is currently the prevailing medium for communication and has a rising significance for the transfer of information and knowledge in educational contexts. According to McLuhan’s claim „The medium is the message”¹ it is necessary to understand the character of the current media². How do we communicate and interact using the WWW? What impact do the rapidly developing new technologies have on the transfer and formation of knowledge? In which way is the society changing due to the spread of Internet-based applications and projects? As media are the basis of education – educational processes and also the corresponding learning processes can never be **immediate** – a very important question is how the WWW as one possible medium affects educational processes.

Marshall McLuhan’s concept of media

To find an answer to these questions it might help to have a close look at McLuhan’s distinction between “*hot*” and “*cool*” media. McLuhan established this (still) much discussed opposition in his book “Understanding Media” in 1964 analysing the character of television. As a basis for the differentiation of media I will roughly point out some central concepts by Marshall McLuhan.

1. Media are an extension of human senses.
2. The second idea is a result of the first one in that the basic assumption is that the medium itself and not the content is the message. Assuming that media do not only influence our senses in the second state but act directly as their extension McLuhan imagines an immediate impact of the media on the structures of reception.

¹ Marshall McLuhan: *Understanding Media: The Extensions of Man*, 1964. New Edition: Cambridge: McGraw-Hill (MIT Press), 1994.

² According to Torsten Meyer the digital information and communication media will be referred to as the “current media” instead of the widely held term “New Media”. See Torsten Meyer: *Aktuelle Kunst, aktuelle Medien und die Schule – 10 Thesen*. In: Siemens Arts Program (Eds.): *kiss - Kultur in Schule und Studium*, 2006 (not yet published manuscript).

3. Very closely connected to the prior ideas is McLuhan's belief of the phonetic alphabet and the typographic media as an extension of the visual sense. Thus the typographic culture, which also prepared the ground for the emergence of the machine age, bears a preference of the vision, which results in a fragmentary, isolating and distanced way of reception. For McLuhan the technological development of the multi-media based and interactive electronic media implicates a comeback of the integral perception. He claims the electronic media of his presence to be extensions of the human central nervous system. Thus for him this denotes a change from individualism back to collectivist society as it used to be in oral cultures before the invention of the phonetic alphabet.

The distinction between hot and cool media

Based on these concepts he develops the distinction of hot and cool media, stating his presence to be in the period of change from the hot era of the machine age to the increasingly hot era of electric media. But how does he determine a hot or a cool medium?

A hot medium is rich in detail and enhances only one single sense. This focus on one sense makes the recipient refer to his inwardness and thus separates him from the world outside. A cold medium in contrast lacks detail while demanding active attendance and a multi-sensory or synaesthetic preoccupation from the recipient. Two examples shall clarify this distinction – the radio as a hot medium and the television, which is pursuant to McLuhan a cold medium.

The radio only enhances the acoustic sense; the information perceived is rich in detail. Richness of detail does not refer to the content but to the form in which this content is communicated. Listening to the radio is characterized by a low involvement of the recipient.

It is hard to understand why television should be a cold medium. McLuhan consults two different attributes of this medium for his categorization. The first one – and also the less feasible one – is based on the technical form of presenting the data. He argues that the image format, made up of many single points, requires a high involvement to build a detailed image in mind. The second argument references to the function of community building. The multimedia-based reproduction of the information causes multi-sensory reactions and thus produces a collaborative community, the community of the senses. This collaboration provokes an activation of the recipient due to the use of many senses.

McLuhan associated this process with the social process of community building; he interpreted the television as a medium of collective participation and thus as a basis for change of society towards a collaborative community. This estimation was critically discussed and analysed amongst others by Neil Postman³ claiming

³ See p.e. Neil Postman: Amusing Ourselves to Death: Public Discourse in the Age of Show Business, 1985.

television rather only to be simulating community. Today's vision of television refers rather to theories that are along the lines of Postman's theory; the 'era of television' is over. But the potentialities McLuhan stated in the television could perhaps be transferred to the current Internet.

The Internet as a cool medium?

However, it is hard to categorize the Internet as one medium due to its hybrid character on the level of technology. The Internet is combined of different types of integrated media. Aspects of television, telephone, radio and also typographic media are involved, using the digital technology of the computer. This supports McLuhan's thesis that the content of a medium is always in reference to the older media. Therefore it is necessary not just to analyse the attributes of one medium but the relations between the media and the cultural practices of their use.

The use of the Internet happens through graphical user interfaces accessing the pages of the WWW using browsers. Hence in the first instance we perceive the information via a computer-monitor, which has technically the same process of image replication as television. Pursuant to McLuhan's argumentation this is the first hint that this part of the use of the WWW seems to be a cold one. But this is mainly in the field of interfaces.

Let's have a look at the integrative structure of the WWW. The individual pages do not stand alone but are integrated into a web of hyperlinks – internally as well as amongst each other. Jay David Bolter supports the thesis that its structure allows the Internet for taking over a community building function on the basis of the hypertext-structure: "Das Internet gestaltet die Gemeinschaft hypertextuell. Eine Netzwerk-Gemeinschaft ist ein Gewebe aus Links (...). Möglicherweise beginnen Individuen, die das Internet benutzen, sich selber als hypertextuell zu empfinden – als Summe der Links all der unterschiedlichen Gemeinschaften, denen sie zu einem bestimmten Zeitpunkt angehören."⁴

According to McLuhan text is a hot medium, rich of detail and focusing on the vision. But I am more concerned with the WWW without taking into account other fields of the Internet like the use of Email or Mailings lists, which are characterized by a more linear textual structure. Hence these parts of the Internet would be categorized as hot media. One of the main characteristics of the WWW as a network of different media is definitely the hypertext-structure. The non-linear structure of text can be seen as a cool implementation of a hot medium. Due to this structure the user of the Internet is highly involved in the exploration and perception of the medium – the Internet is a so-called pull-medium. This active participation led by the individual interest supports, in an educational context, a self-determined acquirement of knowledge – following the principles of constructivist epistemology. This brings forth the assumption that the WWW is a cold medium.

Still a close look at the other individual media integrated in the WWW shows their

⁴ Jay David Bolter: *Das Internet in der Geschichte der Technologien des Schreibens*, in Mythos Internet. Stefan Münker and Alexander Rösler (Eds.). Frankfurt a.M.: Suhrkamp, 1996, S. 45.

respective category. For instance what role do we assign to internet-radio? According to McLuhan the radio is a hot medium, rich in detail and concentrating on the acoustic sense. As the technological progress is highly advanced the resolution of acoustic transmission can be very high and thus also rich in detail. And neither can internet-radio necessarily be seen as a pull-medium, after tuning in it does not demand more active involvement than analogue radio. This makes internet-radio in accordance with analogue radio a hot medium.

The differentiation between television implementing the Internet or not is a bit broader. In contrast to radio there is no programme just to tune in, television in the WWW always requires active choice and involvement. But the character of television itself is already involving many senses and McLuhan describes it as a hot medium – which it is in my opinion also in the Internet. However, even if all media included in the WWW are of different character, the relation between them and the integration into the complex system of the WWW demand a high involvement of all senses. The hypertext-structure combined with the self-determined exploration of information and knowledge and the integration of different types of media makes it a cold medium.

The current tendency of the WWW acting more like a network of applications than a network or presentation – commonly described with the buzzword “web 2.0” – involves the user even more. The network is becoming more and more a social network; concepts of time and space are changing. McLuhan’s vision of a global village finally seems to become reality.

The cool WWW in an educational context

The practice of use reveals the fragmentary nature of the WWW. The information presented is poor in detail, only by active browsing through the different media and hyperlinks the user gets a more exhaustive impression of the medium. But still this impression remains fragmentary and poor in detail. As media are seen as extensions of our senses, they influence the formation of knowledge. Torsten Meyer states, following Lev Manovic⁵, an epistemological change due to this fragmentary way of perception – that definitely needs to be taken into consideration in educational processes⁶.

The Internet as a cold medium encourages the individual learner to focus on his or her interest. At the same time the collaborative aspect of the WWW and especially the so called tendency of web 2.0 – characterizing the internet more as an application than as a medium for presentation – strongly support collaborative structures also in educational processes. Due to these characteristic elements of the WWW’s structure a project-orientated learning process based on the interest and preferences of the learners themselves will probably soon be another very important element besides the present ex-cathedra teaching with a common focus

⁵ See Lev Manovich: *The Language of New Media*. Cambridge / London: MIT Press, 2001, 218ff.

⁶ See Torsten Meyer: *Wahn(-) und Wissensmanagement. Versuch über das Prinzip Database*, in: Pazzini, Karl-Josef; Schuller, Marianne; Wimmer, Michael (Eds.): *Wahn – Wissen – Institution. Undisziplinierbare Näherungen*, Bielefeld: transcript 2005, S. 221-246. Title of the English translation: *Sense-in-Sanity* (not published).

for all learners. Changes set on by the development of the WWW to the point of being the prevalent medium for communication will possibly strengthen the informal education. The currently prevailing form of education, the institutional education will more and more take a back seat.