Klaus Sachs-Hombach   Digital Images
in Mobile Communication
as Cool Media

Introduction

According to Marshall McLuhan, cultural development is primarily influenced by the media a society engages. This does not only apply to media in a narrow sense like print or television, but in particular to the technological underpinnings of the media, i.e., to physical gadgets like radios, computers or mobiles. In his assessment of these various media, McLuhan has favoured the so called cool media of "low definition", e.g., telephone or television. Whereas most researchers nowadays would not agree with his preference of television, there is some dispute about the question whether the internet might better epitomize the influential role McLuhan has reserved for television. And since mobiles have increasingly turned into sophisticated computers equipped with cameras and internet access, it is not an outlandish assumption that – under the premises of McLuhan's media theory – mobiles are the actual agents within our accelerated cultural changes.

In this paper, I would first like to present McLuhan's media theory, particularly his distinction of hot and cool media. Before applying it to mobile communication, I consider it important to determine the genuine advantages and disadvantages of visual representations in the framework of a general science of images in order to clarify whether mobiles are able to adequately integrate them. Mobiles have certainly become hybrid media combining telephone with photography and even television in a near future. But since quality and size of mobile displays are rather limited, visual mobile communication might be just an accidental by-product remaining less important compared to the verbal mode of information exchange. On the other hand, it can be argued that digital images within mobile communication are able to create novel functions like a particular authentic mode of visually presenting a state of affairs in real-time. In order to decide on these alternatives, in my opinion a media-theory assessment of mobiles has to consider the different possibilities from the point of

view of the most advanced standards that a modern science of images can offer us.

The Media Theory of Marshall McLuhan: Hot and Cool Media

If one would like to make sense of the often-quoted but rather cryptic statement by McLuhan that the media is the message, one has to concentrate on the social effects that are caused by the introduction of new (media) technologies. McLuhan is certainly right to emphasize the importance of technological changes for society, but this does not contradict the assumption that the content of media (e.g., the content of *The Communist Manifesto* by Marx) influences society and history as well. Technologies, like steam engines or computers, for example, have certainly shaped our modern working conditions in a drastic way independent of the particular contents or products that these technologies help to produce. Therefore, McLuhan's general thesis seems fairly plausible within the history of technology, but it is rather doubtful whether it can be properly applied to communicative media, like film or mobiles.

The argument McLuhan offers for giving priority to the technical forms and effects, as opposed to the content, of media, derives from the following assumptions: First, social changes are mainly caused by changes in our perceptual system, and secondly, media are primarily responsible for these changes in our perceptual system. The latter assumption, which is often taken to express a technological determinism, arises from the thesis that media are extensions of our senses. According to McLuhan we are able to enhance our perceptual as well as our bodily and mental systems by the use of media. But in turn, this causes profound changes in the relations between the single senses. That is particularly important since McLuhan presupposes an original equilibrium of the different senses that has been lost in western societies by the dominance of the visual sense.

For this rather negative development McLuhan mainly blames the introduction of the alphabet and finally of print.[1] Oral societies were able to keep an inner equilibrium and, due to this ability, also some kind of a metaphysical unity with the universe by imaginative powers, whereas the modern, visual age forces everybody into fragmentation and alienation. McLuhan's assessments of various media must be seen relative to this historical picture. A media is evaluated as politically and socially valu-

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[1] Marshall McLuhan, *The Gutenberg Galaxy: The Making of Typographic Man*, Toronto: Toronto University Press, 1962.

able to the extent it contributes to restoring the lost equilibrium. Such a return was enabled by the invention of electricity and by all the devices working under the principle of electricity. Contrary to mechanics, electricity is supposed to form cycles and nets. Therefore, McLuhan regards it as an extension of our central nervous system. This final extension completes the alienation in western societies on the one hand, but also creates the means to ease the dominating grip of the visual sense. Epitomized by television, people are now encouraged to engage more than one single sense and to participate while using media.

In this context, and relevant to the science of images, McLuhan's distinction between hot and cool media is of special interest since it groups the different media in an unusual way. Within the framework of the theory I am attempting to develop, it is more relevant to distinguish between arbitrary and perception-based media, e.g., verbal and pictorial signs. But, according to McLuhan, written language and perspectival pictures are both hot media, and much more similar to each other than to cool media like oral speech, cubist paintings or telephones. The former, belonging to the Gutenberg Galaxy, force a strictly determined view upon the recipient, the latter have tactile qualities, asking for participation and thus turning them into cool media.

However, McLuhan's definition of hot and cool media is somewhat blurry. There are mainly three relevant criteria:[2] first, hot media are characterized by "high definition", that is, they are intensified by a high degree of information density. One might call this the redundancy condition. Secondly, hot media normally engage one single sense, whereas cool media ask for two or more senses. This might be called the uniform reception condition. Thirdly, there is the participation condition: Cool media require a higher degree of participation than hot ones. The different criteria are somewhat related: since hot media are very intense, there is some kind of an information overflow that concentrates on a single transmitting sense and does not need any special participation to fill in missing information.

McLuhan's distinction is stimulating, but also highly controversial. As an example, he considers film as hot media, but there are surely two senses engaged: eye and ear. Television on the other hand is mainly regarded as cool media because it needs completion. The reason McLuhan is giving for this assumption is rather curious: The TV image is supposed to be built up on the screen by electrical impulses and therefore to have the more

[2] Marshall McLuhan, *Understanding Media: The Extensions of Man*, New York: McGraw-Hill, 1964, pp. 22–23.

tactile quality of sculpture than that of a picture so that the viewer "re-configures the dots into an abstract work of art".[3] If one does not find this assumption convincing – and I do not – one can either claim that McLuhan was mistaken in this example, but can be backed up if one substitutes internet or, even better, mobile communication for television (and I am going to do this in the last part of my paper), or one could claim that being cool or hot is not a property of media but of how media are used in relation to a given cultural standard (see for example the discussion by Sandbothe[4]). It is of course helpful for the understanding of media to know the specific context and the way media are used, but this then would decrease the value of media analysis, since every media could produce any effect, if only the forms of use matter. If one thinks it is reasonable to determine properties of particular media and evaluate them according to the likely effects these properties are responsible for, then one should find a more solid approach for distinguishing the different media, which I am going to try in the next part of my paper.

Pictures as Perception-Based Signs

From my point of view, pictures are perception-based media.[5] This formula should make both indicated conditions of the concept "picture" explicit, namely the medial character and the perceptual basis of pictures. It argues that the term "picture" should only be used to refer to such phenomena that have at least some content and that are interpreted according to standards of perception. The medial and perceptual aspects provide two components that, by themselves, are not special to pictures: they also appear in contexts that do not refer to pictures. However, together they constitute a network of perception-based references. Thus picture use is only given if the two components appear together. As an important research topic, the analysis of the different types, functions and usages of pictures should then include an analysis of the variable combination of the two components. There are some types and some functions of pictures (namely the immersive pictures) that rely stronger on the perceptual basis than others.

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[3] *Ibid.*, p. 313. McLuhan's characterization of television is also rather strange. See for example: "TV will not work as background. It engages you. You have to be *with* it", *ibid.*, p. 312.

[4] Mike Sandbothe, *Pragmatische Medienphilosophie: Grundlegung einer neuen Disziplin im Zeitalter des Internets*, Weilerwist: Velbrück 2001, pp. 152–162.

[5] Klaus Sachs-Hombach, *Das Bild als kommunikatives Medium: Elemente einer allgemeinen Bildwissenschaft*, Köln: Herbert von Halem Verlag, 2003, pp. 73–99.

Central to this suggestion is the concept of the medium. In its relevant meaning here, the concept designates the physical vehicles of a sign system. The concept "media", like the concept "sign", can then be split up into the concepts of the linguistic and the visual media (among others). However, it is helpful for our understanding if, initially, arbitrary media are distinguished from perception-based media. The class of perception-based media should be subdivided according to the different perception modalities. Within the scope of such a structure it becomes clear that it is solely the sign aspect which suggests the orientation towards semiotics, whereas, to differentiate the system of visual media from the multitude of other media, the perceptual basis serves as a specific difference. It is important to note that the concept of perception-based media does not only imply that a medium is perceived in the process of communication, since this condition generally applies to media usage. At least some aspects of meaning conveyed by perception-based media have to be motivated by the structure of the medium itself, while media of arbitrary signs normally do not indicate the relevant meaning.

Relative to the two sources relevant in pictures, different levels of meaning can be distinguished: content, reference, symbolic meaning and communicative meaning. Pictorial content is what somebody sees in a picture. Content is created from the visual properties of the picture vehicle, sometimes depending on context and on how typical the represented characteristics are, but mainly due to specific mechanisms of perception. This does not, as fictional pictures show, coincide with the picture referent nor is a referent required. Because different objects can generate the same perception under a certain perspective, the reference of a picture is always, and in principle, uncertain. To determine it, the content provides only a necessary condition that has to be specified by the context of use and is, thus, always a contextually anchored function. A third important phenomenon of meaning is the symbolic meaning, that is, what a picture "alludes" to. It is attributed to a picture or to an element of a picture by means of the content, but an understanding of the symbolic meaning asks in addition for a sophisticated knowledge about the social and cultural context the picture is used in. Finally, the communicative meaning has to be differentiated. It consists of the "message" that the picture is to carry or of its intended purpose. In addition to content and context, the communicative meaning is influenced by a complex net of communicative maxims.

Pictures and Mobiles

Having now introduced some of the fundamental distinctions that I find helpful within the theory of images, let us finally come to the assessment of digital images in mobile communication. McLuhan would certainly regard mobiles as cool media and would praise them accordingly. As telephones, mobiles are already cool media. Since they nowadays have additionally built-in cameras and also facilities for watching TV, they even combine different cool media: telephone and TV. Internet is certainly the next cool media that will be integrated into mobiles. Therefore, I assume that McLuhan would have considered mobiles as the final breakthrough abandoning the Gutenberg Galaxy.

Interestingly, if one starts the evaluation from the specific theoretical approach that I have outlined, the picture looks similar, although I would not agree with the arguments McLuhan is giving. According to my analysis, it is essential for pictures to be concrete and specific, which renders them more suitable for some functions than for others. A great advantage of pictorial communication is certainly that they can convey information in a dense and direct way. Therefore, they are particularly helpful for generating sensations close to experience (e.g., film or virtual realities) and for quickly accessing complex matters (e.g., maps or graphs). This is due to the fact that pictures possess a multitude of relevant dimensions like colour, form, relative position of single elements or thickness of lines. These visual variables facilitate the efficient simultaneous presentation of data for orientation or structuring.

On the other hand, this efficiency leads to the disadvantage of a limited expressive scope. Compared to language, it is for example harder to express conditionals or logical relations such as negation. In addition, it is more difficult to visually integrate meta-communicative elements like illocutionary indicators. Furthermore, pictures are rather underdetermined in respect to reference and communicative meaning.[6] Therefore, with pictures we tend to communicate more implicitly than with language, presupposing either an established context or the heavy use of communicative maxims for inferring the pictorial message.

Looking now at the various functions pictures are used for within mobile communication, one can roughly distinguish between immersive picture uses and indicative pictures uses. The former is to convey details close

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[6] Wittgenstein had this in mind when he wrote that the same picture of a boxer might be used in order tell somehow how to stand or how not to stand or how someone had stood, and so on (*Philosophical Investigations*, Part I, § 22).

to perception, the latter is mainly to indicate a certain state of affairs, as photographs are traditionally said to do. Since the displays of mobiles are rather limited, immersive pictures – and these are roughly the sort of pictures McLuhan would consider as hot media – do not work properly on mobiles. At least they will not have the immersive effects we experience with film or VR. In connection with the internet, e.g. with YouTube, television or video-streaming might become a familiar feature of mobiles, but then they would not serve the same purpose. Watching a video on a mobile in low resolution and with a quite blurry quality creates a certain distance and is rather alluding to a state of affairs than actually presenting something vividly. Therefore, the perceptual component of visual representations (i.e., the pictorial content) is less important in mobile communication. In turn, these pictures then need more conventional forms of representation and socially established contexts of use in order to function properly.

I assume that indicative pictures, like snapshots, are more likely to become a standard of mobile communication, because those functions of pictures where the perceptual involvement is rather low are more suitable for the technical features of mobiles. As one might observe with the phenomenon of "happy slapping", the fact that a certain action took place is more relevant than having the details of the action. This, of course, presupposes that the recipient still feels justified in making referential inferences. Since the average recipient has meanwhile adopted a more sceptical attitude towards photography, being aware of how easily it can be manipulated, it is astonishing that the referential aspect in mobile communication is nevertheless trusted upon. I suppose that the reason for this can be seen in the fact that mobile communication is – different to mass media – still a kind of a face-to-face communication between members of the same social group, guaranteeing a certain standard of trust.

In conclusion, it can be said that McLuhan's distinction between hot and cool media is likely to turn out valid and at least still helpful despite his unconvincing arguments for it. But in general, one should develop a better theoretical account of pictures and, in particular, substitute mobiles for television. Mobiles are certainly better candidates to illustrate his media theory since the features of visual representations in mobile communication seem to be exactly the ones that McLuhan had misleadingly ascribed to television.