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Flusser's Take on Media Pedagogy

Mediality and Media Pedagogy

Ever since Plato's cave parable it should have been clear to us that we have no way of proving that our perception was immediate instead of somehow coded. But even traditional epistemology treated our sense organs, our proverbial doors of perception, as if they were media. Marshall McLuhan turned this upside down and considered media protuberances, corporal protheses.

However, Vilém Flusser's thoughts on the dialogical medial creation of our realities exceeds this, and even radical constructionists' epistemologies, by far. According to Flusser, the production of world can only take place by means of an appreciative dialogue, which always depends on a medium and a code. "According to Flusser, communication always depended on the media, and perhaps the greatest discovery made by him was to perceive that any media had its own logic, that is, the media transmit information on reality in accordance with their own laws. If we change the media structure, we also change the information and, thereby, reality as it is perceived."¹

There is a far-reaching and growing consensus on the mediality inherent in the way we produce reality, at least since the medial or mediatic turn. So, for several decades there should have been a general awareness that it is material (hardware) and immaterial (codes) media systems that pre-figure and shape our construction of reality. In retrospect, it is surprising that the mediatic turn seemed like such a big revolution. After all, it had been prefigured in Immanuel Kant's thinking, almost up to the term "mediality". In his excellent overview "What does 'media philosophy' mean and why do we practice it?", Reinhard Margreiter explains: "It is the crucial thesis of Kantian transcendental philosophy that there can be no immediate and absolute cognition, as it is always necessarily based on a medium of limited functionality, the capacities of perception, mind and reason. Thus, Kant takes the first step toward a medial turn. However, the concept of mediality is still restricted to conceptual, theoretical thought. Still, thinking is no longer thought to relate to a reality as such. [...] In empirical analyses of phenomena, there is a distinction between techniques and types of culture along the lines of the media used, be they language, writing, the book, image or the computer. This leads to the concept of historically relative media apriori. Not just the new media but also "old" ones like orality, literality, print – or, to be more exact, the respective constellations

¹ Hanke, Michael: Vilém Flusser Nucleus Research Group. in: Flusser Studies 02, May 2006, 3.

of interacting media - are to be understood as such apriori, and functionally described accordingly. So, media philosophy turns out to be much more than a niche philosophy. Mediality is not a peripheral but the central determination of the human mind.”²

There is no perception that is not medial. Apart from some archaic exceptional situations, there is no uncoded communication, no non-medial public sphere. There is no experience or feeling independent of mediated, coded conditions. Without mediality, reality would prove to be an impossible challenge. “There is no way we can undo the insight into the fundamental mediality of thinking – that thinking and everything referred to as mind is conveyed to us by material media, that the ways and the form of thinking is influenced by media. What and how we think is on principle dependent on the functionality of the media at hand.”³

Mediality remains. It is the space in between that cannot be circumvented. It is the realm in which the senses and the mind highlight their capacity for the world, in which they represent the world. We have to sketch a draft in order to understand.⁴

Being human is being medial. We always depend on mediation. Ever since >the technical medium has penetrated reality, we have had to innervate the apparatus, if we still want to see the world.⁵ The ways and means in which this apparatus works and the coding of the information it conveys strike straight back at the way we are in the world. This is what media anthropologists

² „Es ist die entscheidende These der kantischen Transzendentalphilosophie, daß es keine unmittelbare und absolute Erkenntnis geben kann, weil diese sich unvermeidlich als und über ein funktional begrenztes Medium vollziehen muß: nämlich über die „Vermögen“ von Anschauung, Verstand und Vernunft. Hier, bei KANT, wird der erste Schritt in Richtung auf einen medial turn unternommen, wobei das Konzept von Medialität freilich noch ganz auf den Bereich begrifflich-theoretischen Denkens eingeschränkt bleibt. Doch wird das Denken nicht mehr so verstanden, als bezöge es sich auf eine Realität an sich. [...] Die – in empirischen Phänomenanalysen zu treffende – Unterscheidung eines sprach-, schrift-, buch-, bild- und rechnergestützten Denk- und Kulturtypus führt zwangsläufig zum Konzept eines (geschichtlich relativen) Medien-Apriori. Nicht nur die Neuen Medien, sondern auch die „alten“ Medien Oralität, Literalität und Buchdruck – genauer: die jeweilige historische Konstellation interagierender Medien – sind als dieses Apriori zu begreifen und funktional zu beschreiben. Medienphilosophie stellt somit weitaus mehr dar als eine sogenannte Bereichsphilosophie, denn Medialität ist nicht eine periphere, sondern die zentrale Bestimmung des menschlichen Geistes.“

Margreiter, Reinhard: Was heißt und zu welchem Ende betreiben wir „Medienphilosophie“? in: Jörg Albertz (ed.): Anthropologie der Medien – Mensch und Kommunikationstechnologien. Schriftenreihe der Freien Akademie, vol. 20, Berlin 2002, 42-46. Transl.: AS.

³ „Hinter die Einsicht der grundlegenden Medialität des Denkens, daß Denken und alles was Geist genannt wird, durch materielle Medien vermittelt wird, daß die Form, die Art und Weise des Denkens durch Medien beeinflusst wird, darf nicht mehr zurückgegangen werden – was und wie wir denken, ist grundsätzlich durch die Funktionalität und von den zur Verfügung stehenden Medien abhängig.“

Fiala, Erwin: Mediale Mechanismen der Individualisierung und Sozialisation. in: Jörg Albertz (ed.): Anthropologie der Medien – Mensch und Kommunikationstechnologien. Schriftenreihe der Freien Akademie, vol. 20, Berlin 2002, 75. Transl.: AS.

⁴ „Es bleibt Mediales, der unhintergehbare Zwischenraum, in dem die Sinne und der Geist ihre Befähigung zur Welt darstellen, also Welt darstellen. Man muß sich einen Entwurf machen, um zu verstehen.“

Faßler, Manfred: Im künstlichen Gegenüber/Ohne Spiegel leben. Kommunikations- und kulturwissenschaftliche Annäherungen an Interfaces. in: Manfred Faßler (ed.): Ohne Spiegel leben. Sichtbarkeiten und posthumane Menschenbilder. Wilhelm Fink, München 2000, 103. Transl.: AS.

⁵ „das technische Medium die Wirklichkeit durchdrungen hat, muß, wer die Welt sehen will, die Apparatur innervieren“ Bolz, Norbert: Die Schrift des Films. in: Friedrich Kittler, Manfred Schneider and Samuel Weber (eds.): Diskursanalysen 1. Medien. Westdeutscher Verlag, Opladen 1987, 29. Transl.: AS.

largely agree on: “From the beginning, man has defined himself along media. In order to turn himself, his world and his existence into an object, he needed a carrier system for his articulations. Man’s expressions are not only a specific content but also a specific medial disposition. [...] We can say that it is the creation of the mediate that makes human beings human beings. And only the instances of the mediate can shape behavior in an ideational way and establish ideational bonds of values.”⁶

From very early on, in a text of 1972, Vilém Flusser relates the necessity of a valid code in a society to potential ramifications of both social and epistemological kind, should we lose this overarching reliability. The real, he writes, “is not something objectively given, but always given through the mediation of some intersubjective model. The intersubjectivity of the models is the result of a consensus which made it possible to codify the aesthetic messages used as models for the experience of the >real<. In fact, in the last analysis, this is what every consensus that establishes codes is about: an agreement as to what will be considered >real< by a given society at a given moment. (This is what assigning significations to symbols means at the bottom.) The decay of consensus therefore implies the loss of agreement as to what is >real<, (collective and individual alienation).”⁷ Flusser conceives of society and reality as interdependent. They produce one another. In case one begins to crumble, the other one will follow suit.

Image and Pedagogy

In Flusser’s thought, the media or, more specifically, the apparatus-operator-complex spreads the fiction that a non-medial experience and life are possible. This exemplifies the perfidy and perfection of apparatus discourse and the enormous danger of totalitarianism wrought upon us by apparatus, “because the way we think and feel, what we wish for and how we act, even our perception and imagination are to a large extent formed by the structure of the code through which we experience the world and ourselves”⁸. “This is, in brief, the >lie< of techno-images: They work as if

⁶ „Der Mensch hat sich von seinen Anfängen an über Medien bestimmt. Er benötigte, um sich, seine Welt und seine Existenz zum Gegenstand machen zu können, ein Trägersystem für seine Artikulationen. Was der Mensch zum Ausdruck bringt, ist nicht nur ein bestimmter Inhalt, sondern zugleich auch eine bestimmte mediale Anlage. [...] Wir können sagen, daß erst die Hervorbringung des Mittelbaren den Menschen zum Menschen macht. Und erst die Instanzen der Mittelbarkeit vermögen Verhalten in einer ideellen Weise zu formen und ideelle Wertbindungen zu schaffen.“
Wiegerling, Klaus: Medienethik und die mediale Ordnung der Welt. in: Jörg Albertz (ed.): Anthropologie der Medien – Mensch und Kommunikationstechnologien. Schriftenreihe der Freien Akademie, vol. 20, Berlin 2002, 101. Transl.: AS.

⁷ Flusser, Vilém: On the Role of Art in the Present Situation (Notes for a Lecture Held at „Institut de l’Environnement“, Paris, During a Round-table on „Art and Communications“ in December 1972). unpublished typescript, 7.

⁸ „weil unser Denken, Fühlen, Wünschen und Handeln, ja sogar unser Wahrnehmen und Vorstellen, in hohem Grad von der Struktur jenes Codes geformt werden, in welchem wir die Welt und uns selbst erfahren“
Flusser, Vilém: Krise der Linearität. ed. G.J. Lischka. Benteli, Bern 1992, 7. Transl.: AS.

they were traditional, magical images. This is why we do not believe we have to read them: We fall for them and take them for traditional images, which we have learned to read.”⁹

Any attempt to fight the power of apparatus and its technical images historically as in a political revolution is doomed to fail, because such an endeavor could only take place within the historical, linear world of texts. It would only create new raw material to feed the apparatus with. It would simply be re-coded into a TV-program or something like that and deprived of its historicity and potential for any impact. Therefore, any effective strategy against the apparatus must be based on something that cannot be processed into an image, from beyond the realms of traditional images and texts. Up to this point, I have tried to work out Flusser’s central theses. Henceforth, I am going to try and apply them to some urgent questions of pedagogy today.

The ramifications of the above diagnosis are drastic. They not only call for a different way of thinking but also demand a masterful command of cultural techniques still unfamiliar to most of us today. And that is exactly why the line of arguments above must have severe consequences for the education of future generations – in other words, for pedagogy. The need of the hour, therefore, is competence that exceeds by far what is usually called >media literacy<, a simple alphabetization for the deciphering of media. “In the future, it will be crucial to program people not for the application but for the analysis of information, for >system analysis< and for the programming of apparatus. In other words, structural disciplines – like informatics, cybernetics, decision and game theory – will become much more important than object-related ones.”¹⁰

Pedagogy needs to be also media pedagogy. However, the overall reaction to the question of how exactly the media should be dealt with in pedagogy is still cluelessness. And that is a good illustration of the impossibility of a pedagogy free of ideology. It also points out the necessity of coming up with and accounting for a clearer image of man this pedagogy is based on – knowingly or unknowingly. But it is not only their objects the actors of any urgently needed media pedagogy are struggling with. On top of that, an effective education for a responsible use of the media is made more difficult by a media theory that has always remained unclarified: “‘Media theories’ exist only as a plural at this point. This results in confusion. Many authors use the same term in very

⁹ „Darin besteht, kurz gesagt, die ‚Lüge‘ der Technobilder: Sie funktionieren, als wären sie traditionelle, magische Bilder. Und darum glauben wir, sie nicht lesen zu müssen: Wir gehen ihnen auf den Leim und halten sie für traditionelle Bilder, die wir ja zu lesen gelernt haben.“

Flusser, Vilém: Umbruch der menschlichen Beziehungen? in: Vilém Flusser: Kommunikologie. eds. Stefan Bollmann and Edith Flusser. Bollmann, Mannheim 1996, 150. Transl.: AS.

¹⁰ „Künftig wird es darauf ankommen, Menschen nicht für die Anwendung, sondern für die Analyse von Informationen, für „Systemanalysen“ und für die Programmierung von Apparaten zu programmieren. Mit anderen Worten, strukturelle Disziplinen – wie Informatik, Kybernetik, Entscheidungs- und Spieltheorie – werden für Menschen weit wichtiger werden als gegenstandsbezogene.“

Flusser, Vilém: Nachgeschichte. Eine korrigierte Geschichtsschreibung. Stefan Bollmann and Edith Flusser (eds.). Bollmann, Bensheim and Düsseldorf 1993, 111. Transl.: AS.

different ways. Therefore, it is often left unclear what it means in a given case.”¹¹ “In Germany, media theory exists only in a very ideological sense. On the one hand, it is a label for some culture pessimistic slang that only complains about the effects of media (corrupts the youth). This kind of media theory is blind for anything but semantics and perhaps frequencies (too much TV and video games, too many channels). It comes from a conservative, culture pessimistic tradition, even if many liberals may agree. On the other hand, there is a different, more >serious< media theory which takes nothing into account but hardware. Everything else is but a semantic hallucination. Serious academics have no interest in hallucinations except to devaluate them as such or to use them as examples to show how the hardware works. So, this theory does not really need semantics.”¹²

Traditional media theorists often came from a communication science they interpreted as the science of journalism. These media theorists – like, in Germany, Werner Faulstich – spent many years fighting an uphill battle against the more fashionable, philosophical and especially epistemological variant of a media theory that did not always behave academically. As a consequence, it was denied seriousness. It was a long, tough war, and in the end the traditionalists were bound to lose it. Yet, they kept denouncing the alternative to their confirmed, well-established academic discipline as a conglomerate of fiction, philosophy and other approaches.

The acquisition of media literacy, of the skills needed to deal with the media and its codes, is often looked upon with mixed feelings. On the one hand command of the codes of communication and new cultural techniques is a desirable educational goal. On the other hand, there is resistance to the early teaching and learning of such skills – explicitly or implicitly because of the fear that such a competence will only further accelerate the decline of reading and writing, our still dominant code. In theory, the acquisition of media literacy is welcomed. But its practical implementation usually exposes common prejudices. In addition, media pedagogy is often accused to be not more than hidden advertisement for technology.

¹¹ „Medientheorien‘ gibt es gegenwärtig nur im Plural. Die Folge ist Unübersichtlichkeit. Da viele Autoren dasselbe Wort auf je ganz eigene Weise verwenden, bleibt häufig unklar, was im konkreten Fall darunter zu verstehen ist.“

Lagaay, Lauer: Einleitung - Medientheorien aus philosophischer Sicht. in: Alice Lagaay and David Lauer (eds.): Medientheorien. Eine philosophische Einführung. Campus, Frankfurt and New York 2004, 8. Transl: AS.

¹² „Medientheorie gibt es in Deutschland immer nur in einem sehr ideologischen Sinne. Entweder kommt unter diesem Namen ein kulturpessimistischer Slang daher, der sich ausschließlich über die Effekte von Medien beschwert (verdirt die Jugend). Diese Medientheorie sieht nur Semantiken und allenfalls noch Frequenzen (zu viel Fernsehen und Computerspiele, zu viele Kanäle) und kommt aus einer rechten, kulturpessimistischen Tradition (auch wenn viele Linke sie teilen). Eine andere, „seriösere“ Medientheorie sieht die Medien nur als Hardware, alles andere seien nur semantische Halluzinationen (da seriöse Wissenschaftler sich für Halluzinationen nicht interessieren, allenfalls um sie als solche eben abschreiben zu können oder als Beispiele für die Funktionsweise der Hardware, kann diese Theorie weitgehend ohne Semantik auskommen).“

Diederichsen, Diederich: Medien? Theorie? in: Agentur Bilwet: Medien-Archiv. Bollmann, Bensheim and Düsseldorf 1993, 7. Transl.: AS.

Even Heiner Müller, the famous playwright, argued in this vein: “Increasingly, the kids grow up with images replacing objects. The kids familiarize themselves with virtual reality before they get acquainted with real reality. The first is always the more real. Television is the dead grandmother telling cruel stories. Thus, they also become virtual reality themselves so that even the most normal human reflexes become absent.”¹³

What is so striking about this statement is not so much its anti-tech tendency but the fact that the grandmother’s narrations are granted a reality status fundamentally different from that of television, a quasi non-mediality.

Media Pedagogy? Generic Pedagogy?

What once used to be a >general< pedagogy has dissolved into countless isolated and special pedagogies. However, each of those should somehow thematize and deal with the media. How could a pedagogy be based on a world view that in principle excludes the media? Are media not a part of this world? Do we have to keep adolescents away from them?

Each and every kind of serious pedagogy, independently of how general or >special< it may be, must be based on a world view that includes the fact that media are a part of our world and that they are a requirement shaping our experience in their respective and specific way. Depending on our notion of reality, we must also add the insight that media depict, structure, constitute, construct or generate the world. Be that as it may, in all those instances the medial part of our world should – from a pedagogical point of view – attract at least as much attention as the allegedly non-medial part. Therefore, pedagogy must always be media pedagogy, too. Media pedagogy is the default and normal case of whatever >general< or >special< pedagogy there may be. “If we tentatively assume that the media are ‘the historical grammar of our interpretation situation’[...] media education can no longer be just a sub-part of education. Rather, we then have to ask how education can be usefully thought of and modelled without media.”¹⁴

¹³ „Die Kinder wachsen immer mehr damit auf, daß Bilder Gegenstände ersetzen. Die Kinder werden früher mit virtueller Realität vertraut als mit wirklicher Realität. Das erste ist immer das Wirklichere. Das Fernsehen ist die tote Großmutter, die grausame Geschichten erzählt. Dadurch werden sie selber auch virtuelle Realität, so daß die normalsten menschlichen Reflexe nicht mehr da sind.“

Müller, Heiner im Gespräch mit Frank Raddatz: Für immer in Hollywood. Oder: In Deutschland wird nicht mehr geblinzelt. in: *Lette International*. vol. 24, Berlin 1994, 6. Transl.: AS. Vilém Flusser made a very similar remark – albeit without Heiner Müller’s posture of dismay: „For the kids, television replaces the workshop and the grandparents“ (Flusser, Vilém: *Vom Subjekt zum Projekt. Menschwerdung*. Stefan Bollmann and Edith Flusser [eds.]. Bollmann, Bensheim and Düsseldorf 1994, 79. Transl.: AS.)

¹⁴ Hug, Theo: *Media Pedagogy under the Auspices of the Mediativ Turn – An Explorative Sketch with Programmatic Intention*. in: Hug, Theo (ed.): *Mediale Wende – Ansprüche, Konzepte und Diskurse/Mediativ Turn – Claims, Concepts and Discourses*. *Siegener Periodicum zur Internationalen Empirischen Literaturwissenschaft*. Year 25, vol. 1. Peter Lang, Frankfurt/Main 2006, 131.

Media pedagogy is subject to the same criteria, goals and problems as its respective ‘mother pedagogy’. It would be naïve to assume a space free of ideologies here. If media pedagogy turns out as a special case, it is not because of its methods or its objectives but exclusively because of its object.

The whole purpose of pedagogy is to enable children and adolescents to deal with the world in a sensible way. Like any other constructive dialogue, this interaction should be seen as an example of Hegel’s unhappy consciousness: somewhere in between the world and the self, between radically changing the world and total self-adjustment. Media are not only an essential part of the world but also the channel through which we perceive it. Except for a few islands of virgin nature, the world has been made by human beings. Its nature is medial. This is no less true of a city’s architecture than it is of cyberspace or a park. The individual encounters the world as environment within a medium. A media pedagogy that cares for the fate of both the individual and the world should prepare the individual to turn this confrontation into a useful, potentially meaningful dialogue. This requires some interest in the content as well as a few formal skills.

The individual is always tempted to merely adapt, be it to culture, the medial and significant world, or to nature. Paradoxically, the temptation posed by culture seems to be more powerful. Should a man-made environment not ostentatiously call for active co-designing? This effect is probably due to processes of socialization and acculturation and to the shiny temptations of a perfect design. After all, that is the whole purpose of user interfaces: They are designed to eliminate any possible obstacle. However, media are, like all culture and technology, objects, obstacles that stand in our way and need to be dealt with. They are facts, not data: They have been made, not given. Therefore, they can – and urgently need to – be altered all the time. Media pedagogy has an obligation to foster the awareness for this task. It should help to improve critical abilities but also the self-consciousness and the technical skills needed for interventions meant to shape and co-determine the world.

Towards a Visual ‘Literacy’

For centuries, the paradigmatic cultural technique of the so-called civilized world has been reading and writing. According to Flusser, the technique of reading sequences of discrete letters resulted in our notion of linearity as the foundation of how we think of history. The finality of a grammar that reveals a message at the final point, the full stop of a sentence, and the causality with which B follows from A within a written line are figures of our way of thinking that have become so fundamental, so taken for granted and thus invisible that we are no longer aware of them. Criticism

itself depends on the evaluation and potential falsification of what is encoded in lines. It takes a well-trained, sophisticated critical ability to be able to read between the lines.

Images, however, are received in a different way. Here, the glance does not follow any line. Rather, it meanders in largely unpredictable ways from one element of the image to another, driven by the beholder's interests. This resembles more a synopsis rather than a logical conclusion. Images do not lend themselves to criticism as we know it. At the same time, they tend to be more persuasive than texts. They seem more credible and are less often put into question than writing. This is especially true of technical images. They do not exude the subjectivity of a brush stroke. Instead, they claim the 'objectivity' of an apparatus. In German, a camera lens is even called an 'Objektiv'. Human beings tend to trust nothing more than what they think they see with their own eyes.

Literacy programs and the alphabetization of large swaths of the population have always been considered education for (and enabling of) democracy. Today, an increasing part of social, cultural and political life are communicated visually. Shouldn't this result in visual education programs? There is a general agreement that reading and writing need to be acquired. But unfortunately, there is little acceptance for the fact that seeing – as in the critical perception of technical images – is a skill that has to be learned, too. And of course, asking for general or more wide-spread access to and participation in the production of those images would be the next necessary level of cultural techniques. But this exceeds general understanding by far.

The new media are tempting and misleading, because they are structurally complex yet functionally simple. Their structural complexity conceals their functional simplicity. They disguise their technological provenance and the algorithms and programs they are based on. They hide the ideology frozen in them behind the appearance of authenticity and easy manageability. But even if they claim otherwise, technical images do not mean reality. Instead, they refer to texts that in turn refer to images, replications of the world. Any potential glimpse of >reality< is blocked off by these third-degree representations or constructions.

Of course, both the correlation between media usage and critical ability and the varying credibility of different media has often been examined. In the early 1990s, for example, the British psychologist Richard Wiseman could show that false reports were most likely to be believed if distributed by television rather than by the radio or newspapers.

The combination of the outstanding perfection of technical images and the stunning credibility of those images makes it enormously urgent and important to instigate an education that helps to see through those images and to understand the workings of technical visual media and their manipulative power. As long as an open, democratic society remains our objective, we have to help as many people as possible to actively participate in its discourses. However, that requires visual >alphabetization< and a widespread command of the respective codes.

Bertolt Brecht had already anticipated some of Flusser's central arguments in his speech on the function of the radio in 1932. The radio "is purely an apparatus for distribution, for mere sharing out. So here is a positive suggestion: change this apparatus over from distribution to communication. The radio would be the finest possible communication apparatus in public life, a vast network of pipes. That is to say, it would be if it knew how to receive as well as to transmit, how to let the listener speak as well as hear, how to bring him into a relationship instead of isolating him."¹⁵

It is striking, how similar Flusser's argument sounded half a century later – especially, if you just replace >distribution apparatus< by >discursive structures< and >communication apparatus< by >dialogical structures<. And the use of the term >relationship<, of course, seems to allude to Martin Buber.

Because of their feasibility for interaction, there is a potentiality of grassroots democracy and subversion inherent in the new media. Marshall McLuhan noted that the xerox machine turned every author into a publisher. Likewise, the internet and interactive and public channels have made program directors out of spectators – granted this is not only technically feasible but also politically tolerated and more often than not an unrealized potential.

More knowledge is required: Flusser warned that society might decompose into programmers and the programmed - just like it has already been split up in writers and readers - but this time around with even more dire consequences. Therefore, as many people as possible should learn to code and program. And everybody should be enabled to criticize, to understand the programs that are trying to manipulate them. There needs to evolve an awareness that every perception is subjective and indirect, and that this medial trait of our perceptions may surrender us to programs and programmers alike. It can be tedious and challenging to acquire visual distrust. "Flusser's arguments can be taken as a plea for a radically different kind of education in which the domination of technical images must be counter-balanced by a critical program of education on image-programming. Education is challenged, both to continue the struggle against illiteracy and also to uphold the warning – proclaimed in the 1920s by Moholy-Nagy – that those who are ignorant in matters of photography will be the illiterates of tomorrow."¹⁶

If the technique of writing strikes back at the content of what is written, we must not accept the implicit values, judgements, limitations and rules hidden behind user interfaces without question.

¹⁵ „Der Rundfunk ist aus einem Distributionsapparat in einen Kommunikationsapparat zu verwandeln. Der Rundfunk wäre der denkbar großartigste Kommunikationsapparat des öffentlichen Lebens, ein ungeheures Kanalsystem, das heißt, er wäre es, wenn er es verstünde, nicht nur auszusenden, sondern auch zu empfangen, also den Zuhörer nicht nur hören, sondern auch sprechen zu machen und ihn nicht zu isolieren, sondern ihn in Beziehung zu setzen.“ Brecht, Bertolt: Der Rundfunk als Kommunikationsapparat. Rede über die Funktion des Rundfunks. in: Brecht, Bertolt: Schriften zur Literatur und Kunst, vol. 1. Suhrkamp, Frankfurt/Main 1967, 134.

¹⁶ Amelunxen, Hubertus von: Afterword. in: Flusser, Vilém: Towards a Philosophy of Photography. Reaktion, London 2000, 90.

Word processing programs for instance have icons. Does that have an impact on the way we see the world? Could it be possible that we now sometimes tend to think of it as a surface with discrete, discontinuous icons and boxes that offer themselves for anything possible inside the program and perhaps in this sense also for all options of human action and behavior? Do we really keep putting in question the way the program structures the world we dive into whenever we use it? Are we always able to keep its inherent way of organizing and thinking apart from the world outside this program, a world in which our maturity and dignity depend on our ability to make our own rules and reflect on them?

Source codes and operating systems are not ideologically neutral. Their producers go out of their way to make them inaccessible for their users and, yes, victims. Without a doubt, even simple text processing programs - and thus the corporations who make them – define and specify an order of things, a certain structure of reality. This should give us a reason to worry, especially if inclined to constructivist approaches.

What will become of our schools?

Since the digital revolution has trickled down to consumers, we have been – and probably so for the first time in history – in the strange situation that it is the adults who learn the use of a technology from their children instead of the other way around. However, the mere command of the technique is no guarantee for a desired critical attitude as described above. Rather, on the contrary: the fact that children grow up with a certain technology as if it were a given may foster an uncritical adaption and want of distance. The core of the problem is not computers as living environments and socializers. Rather, it is the unreflected access, the casualness of handing oneself over to programs, apps and games that are often taken as givens but actually require pedagogical care or supervision. An often-mentioned side effect could also, of course, be a more limited interaction, in quantity or quality, with other kids, in case a relevant amount of leisure time is spent with a pseudo-dialogue with a programmed machine instead of humans.

Flusser's line of argument does not originate from the situation or needs of adolescents or from their personality development. Rather, his perspective is from a utopian cultural point of view more interested in a future society: "In contrast to artificial memory human memory as a useful tool for the present culture has to take a back seat. Human intelligence should be focused on the manipulation of artificial intelligence. We have to take a step back from cultural information to cultural systematics. No longer should the school be considered a place for the transmission of information but rather as a place of system analysis and system synthesis. [...] The difference between the classic and the new school is that form (information) is no longer regarded as immutably

timeless but rather as changeable and inventible. The goal of education is not to create contemplative philosophers but active creators of new information, active participants in the increase of culture.”¹⁷

This situation results in a pedagogical task that schools today hardly ever live up to. The challenge is usually not even recognized as such. Whenever new developments are interesting to them, children and adolescents teach themselves the necessary skills outside the school. If young people really wanted to be taught such social skills at school, they would be up for an unhappy youth.

However, learning a cultural technique like reading, writing or manipulating user interfaces does not necessarily lead to the acquisition of media literacy and certainly not to a critical, reflected attitude or awareness of social responsibility. There is certainly a chance in an uncontrolled, free acquisition of these techniques outside the institutions of school or family and unaccompanied by pedagogy. In the best possible outcome, it will lead to a more spontaneous, original and unfettered personal style and expressivity. More likely than that, however, it will run the risk of an unreflected, socially unintegrated and uncritical command of merely technical strategies. The effect would be equal to giving up on any kind of education or care or support of adolescents. “When it comes to dealing with the technology and knowing what is out there, children and adolescents are superior to most educators anyway. They have developed their own strategies for the perception and processing of media content and design tools. These skills need to be unfolded and further developed in a pedagogic tackling of the issue.”¹⁸

As long as adults agree on the principle of education in general, they should not exclude a crucial part of it just because they have their own problems dealing with technical media. However, today it is obviously the adults who have difficulties learning the new skills, not so much their kids who just have to pay the price for the incapability and failures of the older generation who often prefers to leave adolescents to fend for themselves, especially with this formative part of reality

¹⁷ „Das menschliche Gedächtnis ist als ein für die gegenwärtige Kultur kompetentes Instrument zugunsten künstlicher zurückzustellen, und die menschliche Intelligenz ist auf das Manipulieren von künstlichen zu konzentrieren. Ein Schritt zurück aus den Kulturinformationen in die Kultursystematik ist zu leisten. Die Schule ist nicht mehr als ein Ort von Informationsübermittlung, sondern als ein Ort der Systemanalyse und Systemsynthese zu sehen. [...] Der Unterschied zwischen der klassischen und der neuen Schule ist, daß die Formen (Informationen) nicht mehr als zeitlos unveränderlich, sondern als veränderbar und erfindbar angesehen werden. Nicht kontemplative Philosophen, sondern aktive Erzeuger neuer Informationen, also aktiv an der Mehrung der Kultur Beteiligte sind das Ziel der Erziehung.“
Flusser, Vilém: *Ästhetische Erziehung*. in: Zacharias, Wolfgang (ed.): *Schöne Aussichten? Ästhetische Bildung in einer technisch-medialen Welt*. Klartext, Essen 1991, 125 f. Transl.: AS.

¹⁸ „Kinder und Jugendliche sind in der Handhabung der Technik und der Kenntnis der Angebote den meisten Pädagoginnen und Pädagogen sowieso überlegen, sie haben aber auch eigene Wahrnehmungs- und Verarbeitungsstrategien entwickelt, was Inhalte und Gestaltungsmittel von Medien betrifft. Diese Fähigkeiten müssen in der pädagogischen Auseinandersetzung mit Medien entfaltet und weiterentwickelt werden.“
Schell, Fred: *Keine Chance für Miesmacher*. in: *Erziehung und Wissenschaft* 11, 1996, 24. Transl.: AS.

that is so hard to figure out – be it because they are too scared or too lazy to acknowledge technical media as an essential part of the realm of our experiences.

An education towards an active and critical use of new, technical, visual media is necessary to protect the majority of users and consumers from manipulation by the small elite of programmers and producers who have no democratic legitimization for their factual power monopoly. Also, this education has to take place in schools unless we want to render that place of education obsolete, irrelevant and finally altogether useless. As long as we find schools relevant for adolescence, for the education and for the socialization of children, we should not allow this institution to be stripped of a task as crucial as the acquisition of the most important cultural techniques and the ability to understand and critique them. When we were living in the Gutenberg Galaxy, we would hardly have accepted kids going to school but having to learn how to read and write, the dominant cultural technique of the time, somewhere else and by themselves without guidance.

It probably does not help to expect teachers to provide skills they themselves do not have. So, there are two ways out of this dilemma. First, media literacy among the teachers could be improved by appropriate training measures or by accordingly extended curricula during their own education. Second, it would be a beginning, if teachers were just aware of the limitations of their own media literacy and its pedagogical relevance and scope. The point is not so much to teach the subtleties of programming languages or the latest morphing programs to their students. Rather, they should be empowered to a critical attitude, at least as a first step. Whoever has turned the handles of an old-fashioned image viewer already knows about the principle of editing. Hence, they have at least the chance of watching an action movie with a different glance than that of a rabbit vis a vis a snake.

There is really not so much of a difference between this passive kind of media literacy and the traditional learning content of English class. However, this is a huge lesson to be learned, for as simple as this kind of transfer may seem – it is not too often done in practice. Still, the image suggests objectivity, whilst the word exudes something poetry.

At least for some decades, English class has attempted to turn students into critical readers, to educate them for critical ability in general and teach them how to read between the lines. Perhaps this can be a starting point, possibly in collaboration with art education, to take a step toward making visible what programs lie behind images: elucidation and enlightenment in the traditional sense. Commercials and advertisement, be they visual or verbal, political speech and film posters have all been subjected to structural analyses at school for a long time. In fragments and humble beginnings, all these approaches have been around for decades; but not much has been achieved. It is not a bad idea to start media pedagogical work in the classroom with commercials. The advantage: There can be no doubt about the sender's intentions. It is always the incentive to buy.

This obvious intention makes it easier to structurally analyze the visual rhetoric, the manipulative potential of the visual language: What is the effect achieved? How is it achieved? It is only a small step from analyzing a commercial billboard to the examination of the visual composition of documentary or artistic photographs on the one hand or to a shot-by-shot-analysis of a TV commercial on the other. This can be followed by analytical exercises on film editing or the effect of film music – or even hands-on-workshops on digital image editing.

An esthetic education [...] would be a school for dialogical (and thus democratic) creation. [...] The current separation of our culture in unconnected subcultures is a threat to its further existence. But by means of an esthetic education based on the new technologies it can be remedied. Esthetic education in this sense would aim at the education of ‘uomini universali’ in a new, ‘higher’ meaning and thus open new horizons to our culture.¹⁹

The new schools will be political spaces, republics behind the backs of privatizing apparatus. At the same time, they will be theoretical spaces, places for thoughtful consideration, because art is eminently theoretical. In the new schools, apparatus society will turn into a form of society not yet conceivable, one of human beings who dialogically program the apparatus.²⁰

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¹⁹ „Die ästhetische Erziehung [...] wäre eine Schule für dialogisches (und in diesem Sinn demokratisches) Schaffen. [...] Die gegenwärtige Trennung unserer Kultur in miteinander nicht kommunizierende Unterkulturen bedroht ihren Weiterbestand, kann aber dank einer ästhetischen Erziehung, die sich auf die neuen Technologien stützt, behoben werden. Eine so verstandene Ästhetische Erziehung hätte zum Ziel, „uomini universali“ in einem neuen, „höheren“ Sinn zu erziehen, und damit unserer Kultur neue Horizonte zu öffnen.“

Flusser, Vilém: *Ästhetische Erziehung*, 127. Transl.: AS.

²⁰ „Die neuen Schulen werden politische Räume sein, Republiken hinter dem Rücken der privatisierenden Apparate, und zugleich werden sie theoretische Räume sein, Orte des bedächtigen Schauens, denn die Kunst ist eminent theoretisch. In den neuen Schulen wird die apparatische Gesellschaft umschlagen in eine noch nicht vorstellbare Gesellschaftsform der dialogisch Apparate programmierenden Menschen.“

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