Beyond Wikipedia's and the Universal Library's Technological Determinism: Vistas of Contemporary Knowledge Spaces as an Anthropological Challenge to Design Interhuman Relations

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Abstract

Drawing on Vilém Flusser's view of the relationship between humans and the computer (machines), I explore a new ontological framework for our being-in-the-world. I begin by raising critical questions regarding our endeavors and efforts to create endlessly expanding semiotic knowledge spaces based on technological innovation (e.g. Wikipedia or the Universal Electronic Library) in order to reflect on the development from a Flusserian perspective, i.e. as an anthropological challenge to design interhuman relations. By searching for new ontological conditions for humans, technology, and knowledge, I will probe into responses and new perspectives/models of knowledge sharing. How would we have to rethink the relation between semiotic telematic knowledge spaces and their structure/architecture, and the "concrete given" (our relationships, intersubjectivity, etc.)? What are the consequences of these findings for the macrosocial structures of encounter where knowledge exchange is a key element? My approach intends to weave knowledge and space, memory, technology, and lived experience into an ontological fabric, and in so doing, place humans and their communicative needs in the center of my considerations. These concerns made me question my own "curatorial" occupation as a traditional "mediator of images" (a gallery owner) and resulted in the foundation of the *Swiss Biennial on Science, Technics + Aesthetics,* an event which today attracts a mixed audience from Switzerland, Europe and America.

As an interdisciplinary researcher my interests are focused on the cultural processes and places of transfer of hybrid forms of knowledge and the structural, methodological as well as epistemological challenges to intermediation. A major challenge in my research is weaving knowledge, memory, technology and human experience into an ontological fabric capable of articulating the problems of knowledge intermediation and creating alternative models or forms for critical thinking. The capability (or non-capability) to sustain new impulses from the sciences and the arts in public may, I believe, depend on the successful or (unsuccessful) design not only of intermediation infrastructures but also of the knowledge transfer processes themselves.

Today, media specific changes increasingly pose questions about the relationship between humans and the contexts in which knowledge is intermediated – the *apparatus* which for the late Czech media theorist Vilém Flusser was a "toy for the simulation of thoughts". The discourses around these issues seem to be imposed by the conditions of an ever more overcommercialized and 'telematicized' culture paralyzing the individual's behaviour and forcing humans to constantly act and react thus making them unable to 'reflect'.[1] A particular topic of reflection in this paper concerns the relationship between human beings and the ever-expanding telematic knowledge spaces surrounding us. My thoughts are sketches for new conceptual approaches and thus I hope that they may provide a better understanding of the

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material and social structures of the knowledges in which we dwell – including the relations that we have with these structures.

Knowledges are key forces in the creation and communication of a social order (Williams 1981, Doyle McCarthy 1996). I intend to contribute with this text to a new sociology of knowledge which is based on the proposition to replace the classical theory of determinism ("knowledge is socially determined", Mannheim 1936) by the idea of the social construction of reality through knowledges and the vast numbers and kinds of symbol systems.[2] Key questions which should stimulate the reader beyond this text concern our principle handling of digital design tools and our often uncritical reflection on the conditions of semiotic spaces, their structures and social architectures, and their relation to the "concrete given" (our relationships, intersubjectivity etc.). I will found my initial reflections on a text by Vannevar Bush[3] in which he ponders upon the requirements of science and the transport of knowledge to the public. Basing my analysis on two projects – Wikipedia[4] and the planned Universal Electronic Library[5] –, I will investigate some of the key philosophical and liberatory approaches of Vilém Flusser who as a distinguished theorist was also a prophetic and original thinker. Even before the Internet existed in the present form, Flusser imagined a new codified world of texts, photographies, films, television pictures and sound crystallizing from the nebulae of the synchronisation of the mass media. A world which would make the overcoming of space and time possible in order to give way to "new categories of knowledge, experience, and analysis", as he puts it. Flusser's ideas are based on an ontology of the intrinsic relationship between human beings and machines (computers), – which he considers as an anthropomorphic one. He looks at human communication as a strategy which makes us forget about the pointlessness of a life eventually condemning us to death. Flusser argues that humans are unable to live with their knowledge of what he called "fundamental loneliness" or "pointlessness" of life. In his view human beings do not communicate because of being "political" or social animals, but because being lonely animals – not capable to live in loneliness.[6] Flusser argues that all of our communicative efforts should be regarded as a kind of *veil* consisting of art, science, philosophy and religion – a codified world deeply woven into our consciousness. By becoming denser in our consciousness, Flusser claimed, this veil makes us to forget about our personal loneliness and the death of our beloved ones.

An essay by Vannevar Bush originally written for *Atlantic Monthly* in 1945 was republished two years ago on the internet. Facing the catastrophic and destructive consequences of modern science at the end of World War II, Bush's motivation was to bring peace to the world by introducing new technological actions which could support the transport of knowledge to the public. I was fascinated by some of Bush's visionary concepts and his bold conceptualization of technological and utopian perspectives. One such example is the concept of data compression by means of microfilms. Imagining the *Encyclopaedia Britannica* in the size of a match box, Bush wrote more than half a century ago:

> Today, with microfilm, reductions by a linear factor of 20 can be employed and still produce full clarity when the material is re-enlarged for examination. The limits are set by the graininess of the film, the excellence of the optical system, and the efficiency of the light sources employed. All of these are rapidly improving. Assume a linear ratio of 100 for future use. Consider film of the

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same thickness as paper, although thinner film will certainly be usable. Even under these conditions there would be a total factor of 10'000 between the bulk of the ordinary record on books, and its microfilm replica. The *Encyclopaedia Britannica* could be reduced to the volume of a matchbox. A library of a million volumes could be compressed into one end of a desk.[7]

Vannevar Bush was not exclusively engaged in futuristic and technological scenarios, but was also both interested in and concerned over the relationship between thinking and creative man and the new technologies, cultural developments and the media. For the latter he foresaw a mechanical recording of what he called "repetitive thought":

> Much needs to occur, however, between the collection of data and observations, the extraction of parallel material from the existing record, and the final insertion of new material into the general body of the common record. For mature thought there is no mechanical substitute. But creative thought and essentially repetitive thought are very different things. For the latter there are, and may be, powerful mechanical aids.[8]

Bush's rejection of a mechanical substitution of "mature thought" or more precisely creativity may cross-refer to a more urgent and still unsolved problem – the making available of selective knowledge (today this procedure is superficially referred to as *digitalization*) and its mediation in containers with extensive capacity for storage:

> So much for the manipulation of ideas and their insertion into the record. Thus far we seem to be worse off than before – for we can enormously extend the record; yet even in its present bulk we can hardly consult it. This is a much larger matter than merely the extraction of data for the purposes of scientific research; it involves the entire process by which man profits by his inheritance of acquired knowledge. The prime action of use is selection, and here we are halting indeed.[9]

Though, according to the editors of the article, it is possible that Vannevar Bush's primary intent at the end of World War II was to appeal to the enormous challenges, responsibilities and public duty of science in order to make knowledge more comprehensible. But I would draw another claim from his statements and argue that they concern the selection and preparation of knowledge, which most specifically involve man and his elementary needs and desires. These issues include the relevance of the processes underlying the inherited and acquired knowledge. Presumably, in this context we should look for answers capable of articulating more precisely our existential needs and expectations that are directly concerned with the invented technologies of communication. In order to elucidate the problem, I take Wikipedia and the Universal Library Project as my starting point.
Jason Scott's criticism of Wikipedia which is available on various websites and blogs is controversial, but in my opinion it is also informative as it contributes to the discussion of the relationship between humans and the expanding telematic spaces of knowledge. My intention is, however, to go beyond the all too familiar criticism of Wikipedia.[10] Searching for answers, for example, to Jason Scott's frustration that

Wikipedia holds up to itself "the dark mirror of what humanity is", I anticipate a more insightful understanding of Scott's critique:[11]

> The most frustrating part about Wikipedia is the fact that when you make a change [of an entry], somebody who wants to undo that change is just some guy. Jimbo [Jimmy Wales, one of the co-founders of Wikipedia] holds this up as a great aspect of Wikipedia that everybody gets to get their hands in it and we are all working together but they don't realize we kill each other. We kill each other every day. Over shit, over Nintendo games, over the fact that somebody parked in the wrong space. We do this we are human beings. ... And it's interesting because of the fact that it's an on-line experience you are able to this, and this is why I say it's important: You can learn how people interact in a relatively bloodless way.[12]

How would we have to judge Scott's irritated assessment from Vilém Flusser's view on communication and the relationship between the semiotic spaces of knowledge and the knowledge receivers?

According to Flusser, the discursive structure of society is today dominated by so-called *tree discourses* which incorporate the discourses of science and technology in particular. In this context Flusser refers to "progressive" types of discourses open for dialogue, like e.g. certain political institutions, industrial organizations, art movements etc. which imitate this discursive structure more or less successfully.[13] The question at stake here is, of course, what may called the *nature* of Wikipedia's discursive structure. Wikipedia resembles an open communicative system in which – according to the definition of the tree discourse – all kinds of imaginable channels (senders) are crossed and a final receiver of the discourse is excluded. Flusser argues that this aspect is exactly the *price* of this discursive structure resulting in "meaninglessness" and "inhumanness". Such a structure is "meaningless" and "inhuman" because no actual receiver seems to exist for the discourse. The information distributed – Flusser claims – is at best stored only in artificial and cybernetic memories.[14]

Kevin Kelly's[15] technologically founded vision of a digital utopia networking all books of the world is diametrically opposed to these considerations. Nevertheless, it is for Kelly the next unavoidable step in the development of a progressively expanding telematic knowledge explosion. Using displays which will network one billion humans world-wide in the future, search technologies of the Universal Library will offer access to the entire knowledge of mankind stored on a futuristic *iPod.* Kelly writes:

> ... This is a very big library. But because of digital technology, you'll be able to reach inside it from almost any device that sports a screen. From the days of Sumerian clay tablets till now, humans have 'published' at least 32 million books, 750 million articles and essays, 25 million songs, 500 million images, 500'000 movies, 3 million videos, TV shows and short films and 100 billion public Web pages. All this material is currently contained in all the libraries and archives of the world. When fully digitized, the whole lot could be compressed (at current technological rates) onto 50 petabyte hard disks. Today you need a building about the size of a small-town library to house 50 petabytes. With tomorrow's technology, it will all fit onto your *iPod* ... .[16]

To some critics Kevin Kelly's *essay-cum-manifesto* (Walt Crawford) of the Universal Library Project and the "technological determinism" underlying it are out of touch with reality and greatly annoying. These critics see the future of the book (and the future of knowledges) neither exclusively in digitally stored form (they may not be wrong with it) nor as a totally-linked medium in an electronic world library, but rather as a medium whose development potential leads to multiple perspectives. Crawford critically asks:

> What's the trend? Technological determinists write silly projections. 'Conversational media' triumphalists say stupid things about books and stories. Pointless and irrelevant oppositions are created when there should be room for multiple perspectives. Technology is credited not only with inevitability but with utopian powers. And life goes on. As do books (and print magazines, and electronic media, and conversational media, and searching, and …).[17]

Many of the aforementioned considerations pose questions from various angles about the relationship between human beings, technology and knowledge. In my opinion some of the key issues about the actual ontological problems regarding human knowledge exchange should be reconsidered, however, from a different point of view.

The Internet's "roads" and "signposts" provided by Google and Alta Vista point as metaphors to the real world, as veils of an ever more densely codified world in our consciousness they seem to rather impair our communicative needs and relations. Our feeling of being lonely in telematic space represents only one side of the coin. It will hardly be solved by the ever faster growing wiki-villages and wiki-cities of Jimmy Wales and other dot-commanders even if we may think that they, for the time being, satisfy our allegedly unsatiable needs for participation, our intents to share with each other – which for some people is a telematic revolution.[18] Our basic dilemma (the other side of the coin) is according to Vilém Flusser that we have become unsuccessful in establishing dialogues with others owing to the daily bombardment of the discourses. We feel lonely because we share the same information, also because of our inability to exchange and to produce new information.[19] From this perspective, Jason Scott's criticism of Wikipedia may be understood as a critique against certain communication forms optimizing our needs for dialogical interaction and exchange insufficiently. Taking Flusser's view as my starting point, I will consider some of the ontological prerequisites which may be relevant for the conceptualization of a new communicative fabric. Referring to Martin Buber's dialogical principle, Flusser's main thesis sees society as a fabric of relations allowing humans to experience society as a network of relations. He writes:

> Whoever I am, I only exist in relation to an 'other,' and when I call myself 'I', I do it because somebody else calls me 'you'.[20]

Such an ontology founded on the idea of nodal points of relations enables approaches to an alternative theoretical model instead of the one in which we live and function today. It is based on the private space of love rather than a political consciousness and conscience providing an intersubjective consciousness, a consciousness of the concrete recognition of the other. To Vilém Flusser, the space

of interhuman love is *the* existential relationship and brings forth a potential for the reconstruction of society:[21]

> We are much more open to death and to nothingness than previous generations. In this openness and through it, we can become aware of ourselves and likewise of the other's existence which is open to death – and recognize it. ... The reconstruction of society may only happen from the perspective of loneliness where there is space for love. Our retreat into privacy where we recognize the other one is for us the only gap through which we can strike the robotic apparatuses. Love is our only existential relationship to remain.[22]

The question ought to be raised whether Wikipedia may represent – along the lines with Flusser – a kind of "robotic" apparatus, or if it is perhaps just a kind of "meaningless" communication structure. Or is it in accordance with those of Jason Scott a dark mirror of humanity? The persuasive insight is that Wikipedia's "social network pages" do not "know" who is the receiver of their discourses – a conclusion which is based on the very definition of the tree discourse itself that is that many channels and senders are crossed making *the* final receiver of discourses obsolete.

The key issue for Flusser is loneliness – our being lonely in the face of death, and our very human inability to overcome loneliness in appropriate ways. Nevertheless, Flusser's ontology – according to which we are nodal points of relations – reveals a new perspective based on a model which relies on the private space of love and an intersubjective consciousness – a consciousness of the concrete recognition of the other instead of a political consciousness and conscience. Flusser's criticism of the "stubbornness" and the noncreativity of the political discourses which, in his view, operate in outdated categories like "nuclear weapons", "energy crisis", "distribution of goods" or "third world" ought to be taken as an incentive to creatively rethink cultural spaces and tools applied to the processes of knowledge intermediation.

Hence, my intellectual inquiry sketched at the outset of investigations into the problem of human knowledge intermediation becomes entangled with the broader social and moral attitudes underlying the design of the cultural processes involved in the creation and transport of knowledge. But in these endeavors there are still unanswered questions embedded addressing the potential of the transformation and the redesign of the social, interactive, contingent and productive spaces where knowledge is transferred.[23] Therefore, the development of new cultural practices of the transfer of knowledge becomes also a major subject for today's agendas of art education and much more, many of these issues are of importance for the role of cultural institutions bent on enhancing our lives or supporting the reconstitution of the conditions of human existence.[24]

Not only in view of the rapid development of the culture industries in China and the growing markets in Asia which call for new museums, science centers, theme parks etc. should we be interested in new methods for cultivating, transmitting, and recognizing the value of new forms of knowledge intermediation to emerge. But also from the perspective of ethical issues which lie at the heart of all creativity, whether in business, in the arts, or in science, or in any other field (Senge et al. 2004). There could indeed exist a more individual engagement for Flusser's intersubjective ontology in many realms. One of the reasons is that, owing to specialization, our

universities, for example, do not seem to provide any cohesive view or real engagement in a perspective providing an interconnected view either on a larger body of knowledge or our very human ability to see the world as a living, complex, and interrelated system which is articulated by everyone's unique consciousness.

In a world with a syncretic state of being (Ascott 2005) there is a fundamental need to communicate and create new methods for dialogues. The creation of new tools for these dialogues in order to facilitate the exchange of ideas, or transform consciousness collectively and culturally, depends on dialogue (Bohm 1996, Cassirer 1957, Flusser 1989). Cultural institutions and knowledge platforms and spaces which are embodiments of our consciousness incorporate a wider and often neglected potential. As an idea and a practice as primary vehicles for the production and distribution of new knowledge they are not merely the outcome of a social order (constituting a social order is a quality of knowledge itself) but institutional key forces in the creation and communication of a social order.[25] They form indeed a social entity which in Vilém Flusser's view increases the potential for new dialogues and the promise of playful fullfilment by remaining a profoundly unwieldy and problematic issue from an ontological and human point of view.

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[1] Statement of the Swiss concrete painter and sculptor Gottfried Honegger on Swiss Television SF1, May 22, 2007.

[2] Doyle McCarthy, E. (1996). *Knowledge as Culture. The New Sociology of Knowledge*. London: Routlege. pp. 12-13.

[3] As director of the Office of Scientific Research and Development, Vannevar Bush coordinated the activities of some six thousand leading American scientists in the application of science to warfare.

[4] *Wikipedia* is a multilingual, web-based free content encyclopedia project. The project decribes itself as follows: "The name *Wikipedia* is a blend of the words *wiki* and *encyclopedia*. Wikipedia is written collaboratively by volunteers, allowing most articles to be changed by almost anyone with access to the website. Wikipedia was launched as an English language project on January 15, 2001 ... and is now operated by the non-profit Wikimedia Foundation. It was created by Larry Sanger and Jimmy Wales ... . Jimmy Wales describes Wikipedia as 'an effort to create and distribute a multilingual free encyclopedia of the highest possible quality to every single person on the planet in their own language'. Currently Wikipedia has more than 5 million articles in many languages, including 1'430'483 in the English-language version. There are 229 language editions, sixteen of which have more than 50'000 articles each. Since its inception/start, Wikipedia has steadily risen in popularity, and has spawned several sister projects. It ranks among the top 20 most visited sites, and many of its pages have been mirrored or forked by other sites, such as *Answers.com*". Available: http://en.wikipedia.org/wiki/Wikipedia. Last accessed: 30 June 2007.

[5] Carnegie Mellon which hosts the *Universal Library Project* explains the vision of this project: "For the first time in history, all the significant literary, artistic, and scientific works of mankind can be digitally preserved and made freely available, in every corner of the world, for our education, study, and appreciation and that of all our future generations. ... With no more than 10 million unique book and document editions before the year 1900, and perhaps 100 million since the beginning of recorded history, the task of preservation is much larger. With new digital technology, though, this task is within the reach of a single concerted effort for the public good, and this

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effort can be distributed to libraries, museums, and other groups in all countries. ... Digital technology can make the works of man permanently accessible to the billions of people all over the world. ... A universal digital library, widely available through free access on the Internet, will improve the global society in ways beyond measurement". Available: http://www.ul.cs.cmu.edu/html/. Last accessed: 14 October 2006.

[6] Flusser, V. (1996). *Kommunikologie*. 1st Edition Mannheim: Bollmann Verlag. p. 10.

[7] Available: http://www.theatlantic.com/doc/194507/bush. Last accessed: 30 June 2007.

[8] Ibid.

[9] Ibid.

[10] It is e.g. argued that every internet user is able to modify articles constantly, or that Wikipedia doesn't offer a any guarantee for the completeness and correctness of its articles, while in contrast conventional encyclopedias with paid authors and editorial control observe quality standards. The most prominent example of a hoax-entry was the case of the American journalist John Seigenthaler who was suspected in his biography of being involved in the assassination of Kennedy. After several months Seigenthaler himself discovered the entry, and based on his complaint it was deleted immediately.

[11] "The Great Failure of Wikipedia" was the title of a presentation by Jason Scott at *Natacon 3* in Cleveland, Ohio, on Saturday, April 8, 2006. Available: http://www.archive.org/details/20060408-jscott-wikipedia. Last accessed: 30 June, 2007.

[12] Available: http://www.archive.org/details/20060408-jscott-wikipedia. Last accessed: 30 June, 2007.

[13] In my discussion I exclude the so-called *network dialogues* which, in Flusser's view, represent a basic law (réseau fondamental) that ultimately encompasses all information elaborated by humans such as gossip, twaddle, or chat etc.. The traditional and the electronic post, all telephone systems but also most recent on-line media like e.g. MSN-Messenger are forms of these communication systems. See Flusser, V. (1996). *Kommunikologie*. 1st Edition Mannheim: Bollmann Verlag. p. 32.

[14] Ibid., p. 26.

[15] Kevin Kelly is the "senior maverick" at *Wired Magazine* and author of *Out of Control: The New Biology of Machines, Social Systems and the Economic World* and other books.

[16] Available: http://www.nytimes.com/2006/05/14/magazine/14publishing.html. Last accessed: 30 June 2007.

[17] Crawford, W. (2006). Cites & Insights: Crawford at Large. *A Journal of Libraries, Policy, Technology and Media*. Volume 6, 9. Available: http://cical.blogspot.com/2006/06/cites-insights-69-available.html. Last accessed: 30 June 2007.

[18] Kohlenberg, K. (2006). Die anarchische Wiki-Welt. *Die Zeit*. 37. p. 19.

[19] Flusser, V. (1990). *Nachgeschichten. Essays, Vorträge, Glossen*. 1st Edition Düsseldorf: Bollmann Verlag. p90.

[20] Ibid., p. 158.

[21] Available: http://www.heise.de/tp/r4/artikel/2/2030/2.html. Last accessed 30 June 2007.

[22] Flusser, V. (1990). *Nachgeschichten. Essays, Vorträge, Glossen*. 1st Edition Düsseldorf: Bollmann Verlag. pp. 163-164.

[23] Turnbull, D. (2000). *Masons, Tricksters, and Cartographers*. Amsterdam: Harwood Academic Publishers. p. 4.

[24] Ibid., p. 2.

[25] Doyle McCarthy, E. (1996). pp. 12-13.