

Reframing Semiotic Telematic Knowledge Spaces and the Anthropological Challenge to Designing 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 this 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 want to 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? Which are the epistemic models most suited to articulate a productive interdisciplinary knowledge exchange?

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.

This paper focuses on the cultural processes and places of transfer of interdisciplinary knowledge and the structural, methodological as well as epistemological challenges to intermediation. My particular interest is about the relationship between human beings and the ever-expanding telematic space of knowledge surrounding them. I consider my thoughts as sketches for new conceptual approaches and I hope that they may provide a better understanding of the material and social structures of knowledge in which we dwell, which would also include our relations to these structures.

I want to start off with an essay by Vannevar Bush, in which he profoundly reflects upon the requirements of science and the intermediation of knowledge. Basing my own analysis on two projects – Wikipedia¹ and the planned Universal Electronic

¹ Wikipedia is a multilingual, web-based free content encyclopedia project. The project describes 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

Library² –, I will then investigate some of the key philosophical approaches of the late Czech media theorist Vilém Flusser, whose writings are concerned with communication, knowledge, technology and lived experience.

Today, media specific changes increasingly pose questions about the relationship between humans and the contexts in which knowledge is mediated – the *apparatus* (according to Vilém Flusser) in the broadest sense of the term. These changes ask for a response that does justice to new challenges. My intention is to make Flusser's dialogical approach, which is based on an ontological perspective of the relationship between human beings and computers (machines) more comprehensible. Of special interest is what precisely Flusser's concepts of human communication, relationships, memory, knowledge and lived political space entail.

Vilém Flusser considered human communication to be a trick making us forget about the pointlessness of a life eventually condemning us to death. Accordingly, he argued that humans could not live with the knowledge of their fundamental loneliness and the pointlessness of life. To Flusser human beings don't communicate with each other because they are "political" or even social animals, but because they are *lonely* animals – not capable to live in loneliness.³ Flusser conceptualized our communicative efforts as a kind of veil consisting of art, science, philosophy and religion. He considered this veil to be a codified world which is woven into our consciousness. By becoming denser it helps us to forget our own loneliness and the death of our beloved ones.

Recently, an essay written by Vannevar Bush⁴ which he wrote for the magazine *Atlantic Monthly* in 1945 was republished on the internet. It deals with the topic of knowledge and inventions at the end of World War II in a way which was new for that time. Facing the catastrophic and destructive consequences of modern science, the author was strongly motivated to point out ways of bringing peace to the world by introducing new technological actions in support of knowledge mediation. I was especially fascinated by Bush's visionary concepts and his explicitly bold conceptualization of technological and utopian ideas. One example is the concept of data compression by means of microfilms. Imagining the *Encyclopaedia Britannica* in the size of a match box he wrote:

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.

mirrored or forked by other sites, such as *Answers.com*⁴. Available: <http://en.wikipedia.org/wiki/Wikipedia>. Last accessed: 14 October 2006.

² 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 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.

³ Flusser, V. (1996). *Kommunikologie*. 1st Edition Mannheim: Bollmann Verlag. p10.

⁴ 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.

All of these are rapidly improving. Assume a linear ratio of 100 for future use. Consider film of the 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.⁵

However, Bush wasn't exclusively engaged in futuristic, scientific, and technological scenarios, but was just as much concerned with the relationship between thinking and creative man and the new (media)technologies. 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.⁶

The author's rejection to mechanically substitute "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 intermediation 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.⁷

Though, it's possible that Vannevar Bush's primary intent at the end of World War II was – according to the editors of the article – to appeal to the enormous challenges, the responsibility and public duty of science in order to make knowledge more comprehensible. But I would draw another claim from his statements. The claim addresses the selection and preparation of knowledge whereby man and his elementary needs and desires are of major concerns. These concerns include the relevance of the processes underlying the inherited and acquired knowledge. Presumably, in this context we should look for answers to questions 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 as my starting point. Jason Scott's criticism of Wikipedia which is available on various websites or blogs is controversial, but in my opinion also profoundly informative as it contributes to the discussion of the relationship between humans and the endlessly expanding telematic spaces of knowledge. But I intend to go beyond the only too well known criticism of Wikipedia.⁸ Searching for answers to Jason Scott's frustration that

⁵ Available: <http://www.theatlantic.com/doc/194507/bush>. Last accessed: 14 October 2006.

⁶ Ibid.

⁷ Ibid.

⁸ 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

Wikipedia “holds up to itself the dark mirror of what humanity is”, I anticipate a deeper understanding of his critique:⁹

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.¹⁰

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

Today, according to Flusser, the discursive structure of society is dominated by so-called *tree discourses* which include the discourses of science and technology in particular.¹¹ In this context Flusser refers to “progressive” types of discourses that are open for dialogue, like e.g. certain political institutions, industrial organizations, art movements etc. which imitate this discursive structure more or less successfully. The question at stake here is the nature of Wikipedia's discursive structure. Wikipedia's structure bears a resemblance to 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 which results in “meaninglessness” and “inhumanness”. It is “meaningless” and “inhuman” because there is no actual receiver for the discourse and the distributed information is at best stored in artificial cybernetic memories.¹²

Kevin Kelly's¹³ technologically founded vision of a digital utopia networking all books of the world is diametrically opposed to these considerations. It only represents the next necessary step 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 that will be stored on a futuristic *iPod* according to Kelly who describes it in the following way:

... 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.

assassination of Kennedy. After several months Seigenthaler himself discovered the entry, and based on his complaint it was deleted immediately.

⁹ “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: 15 October, 2006.

¹⁰ Available: <http://www.archive.org/details/20060408-jscott-wikipedia>. Last accessed: 15 October, 2006.

¹¹ 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. p32.

¹² *Ibid.*, p26.

¹³ 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.

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* ...¹⁴

To some critics Kelly's *essay-cum-manifesto* (Walt Crawford) of the Universal Library and his "technological determinism" are out of touch with reality and greatly annoying. These critics see the future of the book (and knowledge) 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 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 ...).¹⁵

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 from a different perspective. Our feeling of being *lonely* in telematic space, for example, represents only one side of the coin or the ontological problem respectively. 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.¹⁶ Our basic dilemma (the other side of the coin) is according to 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.¹⁷ From this perspective, Jason Scott's criticism of Wikipedia may be understood as a critique against certain communication forms which optimize our needs for dialogical interaction and exchange insufficiently.

Based on Vilém Flusser's view, I will consider some of the ontological prerequisites which may be relevant for the conceptualization of a new communicative fabric. It equals an attempt to do justice to humans, machines, knowledge and our quest for communication. Based on Martin Buber's dialogical principle, Flusser's main thesis is that society is a fabric of relations. In his view, humans experience society as a network of relations, which allows them to experience what we call "we". Flusser 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'.¹⁸

¹⁴ Available: <http://www.nytimes.com/2006/05/14/magazine/14publishing.html>. Last accessed: 18 October 2006.

¹⁵ Crawford, W. (2006). Cites & Insights: Crawford at Large. *A Journal of Libraries, Policy, Technology and Media*. Volume 6, 9. Available: <http://cites.boisestate.edu/v6i9c.htm>. Last accessed: 17 October 2006.

¹⁶ Kohlenberg, K. (2006). Die anarchische Wiki-Welt. *Die Zeit*. 37. p19.

¹⁷ Flusser, V. (1990). *Nachgeschichten. Essays, Vorträge, Glossen*. 1st Edition Düsseldorf: Bollmann Verlag. p90.

¹⁸ *Ibid.*, p158.

This ontology is based on the idea of nodal points of relations and it enables approaches to an alternative model instead of the one in which we function today. This model is based on the private space of love, and instead of political consciousness and conscience it provides an intersubjective consciousness – a consciousness of the concrete recognition of the other. To Flusser the space of interhuman love is *the* existential relationship providing a potential for the reconstruction of society.¹⁹

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.²⁰

Based on this radical approach the question should be raised whether Wikipedia may actually be a “robotic” apparatus, or a “meaningless” communication structure according to Flusser. Or else, whether this knowledge platform represents in accordance with Jason Scott a type of dark mirror of what humanity is. Wikipedia's “social network pages” don't know who the actual receiver of their discourses is: if we accept the fact that, according to the definition of the tree discourse, they enable the crossing of many channels or senders but there is no such thing as *the* final receiver of these discourses. We should therefore question whether they indeed “change that which exists with tremendous power” as it is often media-philosophically stated today.²¹

In this context, Fritjof Capra's claim to design sustainable communities so that the technological and social structures don't interfere with nature's capacity to support life,²² could be understood as a challenge to design human communication needs ecologically. Based on his deep ecological thinking, Capra's approach may be also read as a critique of the yet unbalanced relationship between humans and telematic knowledge spaces (machines).

The Net's “roads” and “signposts” provided by Google and Alta Vista may point as metaphors to the real world. However, as veils of an ever more densely codified world according to Flusser in our consciousness, they seem rather to impair our communicative needs and relations. Although today, ontologically speaking, telematic knowledge spaces are a “constituent” of our everyday thinking and cling jointlessly to the “concrete given” postulated by Flusser – our macro-social living conditions and relations. But as ecologically and socially functioning knowledge spaces in the sense of Capra and Flusser they stand yet at the beginning of their evolutionary development.

Even before the Internet existed in the present form, Flusser imagined that a new codified world of texts, photographs, films, television pictures and sound would crystallize 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

¹⁹ Available: <http://www.heise.de/tp/r4/artikel/2/2030/2.html>. Last accessed 21 October 2006.

²⁰ Flusser, V. (1990). *Nachgeschichten. Essays, Vorträge, Glossen*. 1st Edition Düsseldorf: Bollmann Verlag. p163-164.

²¹ Kohlenberg, K. (2006). Die anarchische Wiki-Welt. *Die Zeit*. 37. p19.

²² Capra, F. (2002). *The Hidden Connections: A Science for Sustainable Living*. New York: Anchor Books. p.xix.

categories of knowing, experience, and analysis.²³ He recognized the potential to deprogram life to a new form of existence programmed by mass media which as a hermetic specialization of the distribution of information, however, remains problematic. For, it doesn't solve the dialogical problem of human communication which meant for Flusser the overcoming of loneliness in the face of death.

Today, it might be necessary to increasingly strive for the recognition of new levels of consciousness in the codes of the mass media programming us. A more conscious handling of digital design tools and a more critical reflection on the conditions of semiotic knowledge spaces, their structures and architectures and their relation to the "concrete given" (our relationships, intersubjectivity etc.) is required. This includes questions that we cannot satisfactorily answer in technical terms only. It concerns our expectations linked to the knowledge articulated and processed in intermediation infrastructures (Wikipedia, Universal Library etc.) supporting our basic needs for cohesion and our thirst for knowledge. We might thus experience more fulfillment regarding our longings in a networked context to be experienced in the processes of knowledge transfer enabling us to see the larger connection of knowledge.

From Capra's ecological viewpoint, science, too, should be placed in a larger philosophical and spiritual context (Capra 2002). Many new questions will come up and have to be answered in such a context. They do not only have to address our principle handling of knowledge but they must also refer to how we can potentially interact with it and how human characteristics such as curiosity and the pleasure to discover things may be articulated in intermediation infrastructures. Today intermediation structures like conferences, exhibitions, amusement parks, science centers, science and art research projects (e.g. artist-in-residence programs), knowledge platforms in the internet, film/television etc. and their produced contents of knowledge for the public ought to be investigated more critically. I believe that the institutional and social functions/tasks of so-called "knowledge architects or -designers" who are behind Wikipedia or the Universal Library should further be looked at more profoundly, as well.

Flusser's ontology according to which we are nodal points of relations offers a new perspective. It is based on a model which relies on the private space of fostering love and an intersubjective consciousness – a consciousness of the concrete recognition of the other instead of a political consciousness and conscience. There should indeed be a more critical engagement for such an intersubjective view in many realms. There are many reasons for such an engagement. One of the reasons is the fact that, owing to specialization, our universities don't provide any cohesive view or really engage in a perspective providing an interconnected view either on the sum of knowledge or our human abilities as articulated in our consciousness.

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²³ Vilém Flusser in an interview on Swiss Radio DRS 2, 13.12.1991.