A Momentary Lapse of Reason

Politological Overlook of Cyberspace

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Englanninkielisessä tutkielmassa tarkastellaan kyberavaruutta ja sen subjekteja politologisesta näkökulmasta. Lähtökohdaksi on otettu G.W. Leibnizin (1646-1716) monadologinen käsitys universumista, jota sovelletaan tässä työssä kyberavaruuden ja sen subjektien hahmottamiseen.

Ensimmäisessä kappaleessa esitellään tutkimusongelma sekä taustoitetaan työtä metodologis-aatehistoriallisesta näkökulmasta. Valitun abduktiivisen metodin esittelyn lisäksi itse metodin ja tutkimusaiheen välille osoitetaan luonteva yhteys, mikä sinänsä tukee metodin valintaa. Aatehistoriallisessa mielessä työn taustahypoteesina on kyberavaruuden mieltäminen amerikkalaisen liberaalin aatesuuntauksen sfääriksi. Toisessa kappaleessa esitellään liberaalin aatesuuntauksen subjektin arkkityyppi, minkä kautta pyritään hahmottamaan kyberavaruuden oletetun yksilökeskeisen eetoksen taustaa. Tätä ajatusta viedään eteenpäin mm. Hayden Whiten trooppikäsitystä hyödyntämällä.

Kolmas kappale esittelee Leibnizin käsityksiä ajasta ja tilasta sekä taustoittaa hänen monadologiseen universumikäsitykseensä olennaisesti liittyvää ajatusta itsenäisten subjektien muodostamasta verkostosta mm. ramistisen filosofiakäsityksen kautta. Neljäs kappale jatkaa tätä analyysia apunaan Gilles Deleuzen ajatus Leibnizista barokin filosofina. Samalla pyritään analysoimaan sitä, miten Leibnizin idea monadisten subjektien "verkostosta" suhteutuu kyberavaruuden ideaan.

Viidennessä kappaleessa tarkastellaan "virtuaalisen" ja "todellisen" välistä suhdetta käyttämällä apuna mm. John Duns Scotuksen sekä abduktion kehittäjän Charles S. Peircen teorioita. Samalla luodaan pohja kuudennen kappaleen analyysille kyberavaruuden eri hahmotustavoista. Kyberavaruutta käsitellään kappaleessa neljän eri visionäärin kautta. Aluksi asiaan paneudutaan itse käsitteen luojan, tieteiskirjailija William Gibsonin kautta, jonka jälkeen kyberavaruutta tarkastellaan Internet-pioneeri John Perry Barlowin avulla "raja-alueena" (frontier). Lopuksi kyberavaruutta hahmotetaan Manuel Castellsin sekä Bill Gatesin talousorientoituneen ajattelutavan kautta.

Seitsemännessä kappaleessa tarkastellaan edellisten kappaleiden pohjalta "kybersubjektin" ilmenemistä, ja kahdeksas kappale puolestaan etsii politologian kannalta olennaisia valtasuhteiden rihmastoja taustaoletuksenaan kyberavaruus sfäärinä, joka toisaalta on oma itsenäinen ympäristönsä mutta samalla kaksoissidoksessa "perinteisiin" vallankäytön muotoihin. Samalla esitetään, että kyberavaruus on tilallis-ajallisena sfäärinä hetkellinen, koska sen jatkuva "päivittyminen" ei ole kumulatiivista vaan usein totaalisesti entisen korvaavaa. Samalla myös harkinta poliittisessa mielessä muuttuu enemmän tilannekohtaisten, intuitiivisten "laskosten" kuin "jatkumollisten" loogis-rationaalisten "toimintojen" ohjaamaksi. Viimeisessä kappaleessa esitellään päätännön lisäksi muutamia mahdollisia aiheita tulevaa tutkimusta varten.

Avainsanat: cyberspace, Leibniz, abduction, monadology, virtual reality.

Contents

1. Foreword

"There'll be the breaking of the ancient Western code
your private life will suddenly explode
there'll be phantoms
there'll be fires on the road
and the white man dancing."
Leonard Cohen: The Future.

As relatively new a phenomenon, the emergence of something called "cyberspace" has raised several open questions. Most of them will probably remain unanswered also after this thesis, but some notes will be made, several things analysed, and the viewpoints discussed.

1.1 The Research Question and Hypothesis

Cyberspace didn't just happen. But how was it created? What on earth is it? And is it on Earth in the first place? In this thesis some of the aspects concerning the emergence of cyberspace will be highlighted. This thesis will try to locate the

"background" or the premises that affected the current conceptions of cyberspace to emerge. However, no actual viewpoint of conceptual history will be taken. Rather, in this thesis it will be analysed, if it was so, that cyberspace as we consider it to be, is some sort of a myth-based narrative, a phantasm of different beliefs, prejudices and hopes aimed at something considered new and unknown. In this sense, the hypothesis would be, that if considered in the light of different narrative myths, cyberspace would actually be nothing new.

Probably the most extensive political argument stated about cyberspace is, that it is some kind of an electronic *agora* and, simultaneously, a global marketplace. Both commercial corporations and instances interested in "enhancing" democracy have hailed the emergence of cyberspace as automatically positive a phenomenon, a Heideggerian "standing-reserve" to be used. Most of the utopian visionaries of for example "electronic democracy" or "teledemocracy" have not defined any premises whatsoever in proclaiming, that using information technology will "revolutionise democracy as we know it". For them cyberspace is all about "being digital", as Nicholas Negroponte prefers calling it. "Being digital is different", argues Negroponte. "We are not waiting on any invention. It is here. It is almost genetic in its nature, in that each generation will become more digital that the preceding one."[1]

Cyberspace does not necessarily fit into Habermasian theories of ideal communication and deliberation, although such connotations can often be read out. Electronic version of Manichean yes/no -polling is quite far from deliberating anything, and also the relationship between an argument and the individual stating the argument is something different from Hannah Arendt's self-revealing. Cyberspace also seems to reject the "story-fetishism" Arendt can be seen to represent. In cyberspace things seem to be more all about "events" or "situations" than linear "stories". Also the notion, that cyberspace, given the potential to realise the ideal of "straight democracy" by some visionaries, would by itself be implicitly democratic, will be questioned.

[1] Negroponte 1995, 231.

1.2 About Research Method

Cyberspace as a concept is a "newborn" compared to such widely-debated and analysed concepts like for example "democracy" or "identity". However, this is not necessarily a negative thing. As Kari Palonen argues, concepts can be used both for "breaking the ice" in argumentation, or, in a way, that "freezes" argumentation.[2] The "icebreakers" like Quentin Skinner or Reinhart Koselleck use, according to Palonen, concepts as opening new ways to "navigate" between frozen, long-forgotten debates, "melting" the concepts used. The opposite of "icebreakers" are "freezers", as Palonen calls for example the Jürgen Habermas and John Rawls, whom Palonen claims to artificially present some situation as "frozen", at the same time fulfilling their own theories about something. This approach, Palonen states, leads sooner or later to a situation, where the "provinces of academic debate" continue to develop and with time rise up to deny the legitimacy of those "frozen" concepts.[3]

When thinking about the methodological premises of this thesis, it would be quite useless to grasp the viewpoint of "frozen" concepts presented, and proclaim The Final Argument about the concepts used. In a sense, cyberspace is re-born every day.[4] Therefore no definitive or "pure" logical induction or deduction concerning cyberspace is really possible, because the internal premises of cyberspace are literally in constant update.

As it will be argued, cyberspace is not a Ha(ra)waian beach, where anonymous surfers roam with no connection to themselves and others at all. The basis of any human communicative situation is, that the participants are aware of each other, forming a state of "mutual reality", a physical or metaphysical place inhabited by two or more beings.

To find the key to the communicative aspect of cyberspace through individuals, one must take under consideration the basic unit of interaction, the mind and its mental processes. According to biologist Gregory Bateson, a mind is an aggregate of interacting parts or components. To Bateson, mental process is a

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[2] Palonen 1998, 184.
[3] Ibid.
[4] In fact, it doesn't, because as a world-wide sphere, cyberspace doesn't follow any specific timeline, so it therefore doesn't cease to exist in any time of day.

sequence of interactions between "subminds", and the explanation of a mental phenomenon must always reside in the organisation and interaction of multiple parts. Second, the interaction between parts of mind is triggered by difference. In the world of ideas, claims Bateson, it takes a relationship to activate some third component, which we may call the "receiver".

What the receiver responds to is a difference or a change. If the change is not registered by anyone, it is lost forever like the sound of the falling tree which Bishop Berkeley did not hear:

> "Bishop Berkeley was right...in asserting that what happens in the forest is meaningless if he is not there to be affected by it. Kant argued a long time ago, that...a piece of chalk contains a million potential facts (*Tatsachen*) but that only a very few of these become truly facts by affecting the behaviour of entities capable of responding to facts. For Kant's *Tatsachen*, I would substitute differences and point out that the number of potential differences in this chalk is infinite but that very few of them become effective differences...in the mental process of any larger entity. *Information consists of differences that make a difference.*"[5]

Bateson argues, that in mental processes, the effects of difference are to be regarded as transforms of the difference, which preceded them. He quotes the famous Polish semanticist and philosopher of language Alfred Korzybski by saying, that "the map is not a territory".[6] Korzybski argued, that at each "level" further from the "original" space-time event, the generalisations made about that specific event become increasingly arbitrary, and therefore a less accurate mapping of representation of what's "really" going on. Every level of description will fall short of the more concrete observations, which inspired them, and no description can capture every aspect of an event.

However, it can be well argued, that not all information can be organised or "levelled" in this way. Bateson takes

> "...the case of a very simple relationship between A and B, where... A has emitted something which B could learn something about the state of A relevant to B's own existence. It might be a threat...or an indication of membership. There is always a partly predictable and therefore rather regular relation between message and referent, that relation never being direct or simple. Therefore, if B is going to deal with A's indications, it is absolutely necessary that B knows what those indications mean. Thus, there comes into existence another class of information, which B must assimilate, to tell B about the coding of messages or indications coming from A. Messages of this class will be, not

[5] Bateson 1979, 110.
[6] For more about Alfred Korzybski's work, see for example Korzybski: *Science and Sanity.*

about A or B, but about the coding of messages. They will be of a different logical type. I will call them *metamessages*."[7]

However, even this kind of "metamessages" fall short when we think about the context of a certain message. Bateson takes an example about lion "knowing" that a zebra is something to be hunted down although it may have never actually seen one to be hunted. There no "metacommunication*s*" exist, but still the message gets through in that context. Going back to former example, Bateson notes, that in the absence of such metacommunicative messages, there is still the possibility that B will ascribe context to A's signal, being guided in this genetic mechanisms.

What B is doing in that example, could also be called *abduction*. Abduction means, borrowing the definition by Bateson, "seeking other cases similar to one under study which will be analogous to it in the sense of belonging under the same rule".[8] As Bateson puts it, "we are so accustomed to the universe in which we live and to our methods of thinking about it that we can hardly see that it is, for example, surprising that it is possible by abduction to describe some event or thing and then look around the world for other cases to fit the same rules that we devised for our description".[9] Conversely, all thought would be totally impossible in a universe which abduction was not expectable. Each abduction, claims Bateson, may be seen as a double or multiple description of some object or event or sequence. For change to occur (namely the kind of difference that make a difference), a "double requirement" is imposed on the new thing. It must fit both the subject's internal demands for coherence, and the external requirements of environment. This "double-bind", therefore, becomes a double requirement or "double specification". If an entity is to endure, change must always occur in ways that are doubly defined.

The actual idea of abductive inference was coined by Charles S. Peirce (1839-1914) in the late nineteenth century. Abduction, in Peirce's definition, is "the process of adopting an explanatory hypothesis" covering two operations; the selection and the formation of plausible hypotheses. As process of finding premises, abduction is the basis of interpretive reconstruction of causes and intentions, as well as of inventive construction of theories. By its roots, abduction

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[7] Bateson 1979, 127-128.
[8] Ibid., 146.
[9] Ibid., 160.

is not Popperian falsification but hypothesis generation. Also, Peirce relates abduction with creative and aesthetic aspects, such as contemplation and "play of thought", which Peirce calls "Musement".

For Peirce, mind is a sign developing according to the laws of inference. "Semiosis", the process of interpreting signs, is structured as argumentation. Thinking and reasoning is based on abductive, deductive and inductive inferences, aiming at establishing beliefs, habits, rules, and codes. In his *Lectures on Pragmatism* (1903) abduction, deduction and induction became interacting aspects with different epistemological functions. Deduction determines the necessary consequences, relying on logical provable coherence between premises and conclusion. Induction is aiming at empirical provable coherence between the premises and experience, in order to derive a provable generalization. Yet, induction only classifies the data, while abductive reasoning furnishes the "reasoner" with a problematic theory explaining the causal relation among the facts. From the abductive suggestion, which syntheses a multitude of predicates, deduction can draw a prediction, which can be tested by induction. Therefore, as Chong Ho Yu argues, "for Peirce abduction is the firstness (existence), deduction is the secondness (possibility), and induction is the thirdness (generality, continuity)".[10]

Peirce recognized that the logic of relations required a type of deduction he called "theorematic", which require imaginative experimentation and which are therefore not algorithmic. For example Jaakko Hintikka has noted, with particular reference to the predicate logic, that the realm in which theorematic deductions are made is the realm of mixed quantifiers, and he has defined a theorematic deduction as one, which increases the number of layers of quantifiers. That is why the construction of "proofs" requires creative experimentation.

[10] Yu, Chong Ho: Paper presented at the Annual Meeting of American Educational Research Association, New Orleans, Louisiana in April 1994 (http://seamonkey.ed.asu.edu/~behrens/asu/reports/Peirce/Logic_of_EDA.html).

Peirce argued, that abduction is logical inference, because it can be represented in a definite logical form:

> The surprising fact, C, is observed.
> If A were true, C would be a matter of course.
> Hence, there is reason to suspect that A is true.

Peirce also noted, that animals have the instinct to do the correct things without struggling. Also humans, he argued, have the innate ability to make the right decision intuitively. He describes the evolution of knowledge in analogy to the Darwinian model of evolution. The selection of hypotheses is performed by an partly inborn, partly learned "guessing instinct", which has developed as a part of the universe and is grown during evolution under the influence of its laws. Peirce states, that abduction is "nothing more than guessing", but in order to make "fair guesses", abductive inference links the reasoner's "guessing instinct" with the rational and at the maximal efficiency of the process of hypothesis formation and hypothesis testing. This "economy of research" aims at maximal plausibility of the hypothesis and at the maximal efficiency of the process of hypothesis formation and hypothesis testing.

Massimo Bonfantini and Giampolo Proni suggest to interprete the abductive "guessing instinct" not only as *lumen naturale*, a natural insight, but also as *lumen culturale*, an insight in our cultural background.[11] Recently abduction has been applied especially in the research field of "artificial intelligence", aiming at imitating the reasoning process and the human faculty to deal with uncertain information in a meaningful way.

Michael D. Bybee presents, that the suggested fact of abduction being an inferential process, combined to Aristotle's claim about the rhetoric being "the antistrophe of logic", would lead to an argument, that "abduction must have a

[11] Bonfantini, Massimo & Proni, Giampolo: *To guess or not to guess.* In Eco & Sebeok (eds.): *The Sign of the Three. Dupin, Holmes, Peirce.* Indiana University Press 1983, 119-134.

notes, an abductive argument makes a "weak" modal
emises are true, then there is a possibility that also the
claims Bybee, abduction "describes an irrational,
re a psychological than logical phenomenon".[13] This
g new information, abduction can be used as evidence,
ion. When considering possibilities, the probability of
with rhetorical means.

ount, one can argue, that creating a comprehensive
about cyberspace is simply not possible. More likely,
f cyberspace is more like at the same time considering
ıg "certain points - clues - symptoms - which allow us
this, abduction as a (methodo-)logical premise of this
e. Cyberspace is not an extra-terrestrial entity but a
s, either concrete technological inventions or more
ıre making scientific, sensible Popperian guess could
ural way of familiarising oneself with the subject.
stated, that cyberspace is not a representation of our
y of its own. Therefore abduction, as a method,
duction, because the nature of cyberspace cannot be
ır lifeworld. Of course, one must recognise, that
a scientific method is more or less a risk, but after all,
ıe seen both as the leading method of this thesis but
ce works.

a user searches something on the Internet, he uses
search words", for finding the wanted sites consisting
The search engine browses only a fraction of all the
vs the results by "guessing" the possible connection
d the result. A search word "lions" may give as much
han for example ice hockey teams no matter which
earch for. That is because the computer does not

understand the context of some parameter, but only the letters decoded into binary code.

Also, the logic of finding these results is not systematic in inductive or deductive sense. A search engine "bounces" from one location to other, "guessing" which web sites could be relevant and which ones not. So, what is happening is a certain form of "digital abduction". Science fiction writers have often imagined what it would be like to experience this kind of travels. Isaac Asimov described such travel as a "jump through hyperspace". When his fictional space ship hits the speed of light, Asimov says that the ship makes a special kind of leap. At that speed, it is impossible to trace the discrete points of the distance traversed. In his novel *The Naked Sun*, Asimov depicts movement in hyperspace:

> "There was a queer momentary sensation of being turned inside out. It lasted an instant and Baley knew it was a Jump, that oddly incomprehensible, almost mystical, momentary transition through hyperspace that transferred a ship and all it contained from one point in space to another, light years away. Another lapse of time and another Jump, still another lapse, still another Jump."[15]

On one hand, the computer is a device, relying on Boolean logic with such operators as "and" (both search terms must be found), "or" (either of the search terms must be found), and "not" (no search term must be included). This kind of use of logical terms is very straightforward, hence its applicability in different storage systems as for example libraries. This is one reason, why Boolean logic - and in some sense all forms of logic - have claimed to cause "alienative" thinking. Because of this, our involvement in different matters, as argued, has changed from "genuine" interaction to more "mechanized" direction. The counter-argument is, of course, that the vast amount of information requires some kind of common system in order to use it in the first place.

Abductive inference, as argued, could be seen as a valid way to analyse the actual "use" of cyberspace. The computer still has a clear Boolean "heart" with its microprocessors, but in cyberspace the Boolean way of going things systematically through is no more necessary. With programs like Netscape Navigator or Internet Explorer, one can literally browse cyberspace. As books have a page-by-page linear structure, the Boolean reader carefully goes through

[15] Asimov 1957, 16.

the whole book in order to seek information. Boolean reader knows, where to start and where the "exit" is.

He can't do the same in cyberspace, because the information is not ordered in a linear manner. With browsing in cyberspace, the element of surprise and contingency emerges. Although pre-created, the information one finds is somewhat more unpredictable than what the Boolean reader has gotten used to when using books as the primary source of information. There, one could argue, can be found the element of Peircean Musement: the person browsing must meditate every moment while under way, foregoing immediate aims in order to merge with an unexpected content in some page, whether a page of a book or a page in the World Wide Web.[16]

Also, there is the contestable viewpoint of "truth" in abduction. In this thesis a notion from Gilles Deleuze will be taken into account. In Deleuzean sense, "browsing" can be argued to be the very method in attaining the "truth". In Deleuze, "truth" is a result of a "tremendous violence in thought, an irruption of the larval mind that is populated by a thousand souls, a thousand plateaus of intensity".[17] Because of this, one can't, in Deleuzean manner, find "truth", if one knows beforehand what one is looking for.

This viewpoint also questions the relationship between the concepts of "possible" and "real", or more accurately, the "real" and the "virtual". A mere conception of "life" in terms of "realizing the possible" basically makes existence inconceivable. This is because "every time we pose the question in these terms, we are compelled to conceive existence in terms of brute eruption, as a kind of leap that is subject to a law of all or nothing".[18] Thus the "real" would exist only in the image of the "possible" whose task it would be to be realized. The "real" and the "possible" would, then, actually become the same thing, eliminating the possibility of non-linear "becoming" of the virtual", and at the same time the very idea of evolutionism as the invention or creation of differences.

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[16] It is interesting, that Nietzsche in his time was quite worried about this kind of reading, calling it a basis for us lying about the texts we read. As he writes: "With practice, everything should become a knack as natural as feeling, so that one can survey the whole easily and quickly without being conscious of every single detail... he (reader) picks about five words at random out of twenty and "guesses" at the meaning that probably belongs to these five words...Basically...we are accustomed to lying." (Nietzsche: *Beyond Good and Evil*).

[17] Pearson 1997, 7.

[18] Ibid., 10.

As Keith Ansell Pearson notes, virtual reality makes "actual plural time as a non-linear time of invention".[19] Therefore one might argue, that grasping an invention through "linear lines of thought" is some what a contradiction in terms, because the things one finds through such process cannot actually be called an "invention" in the first place. The "same invention" cannot be made, because the very presupposition we tend to make about the world is, that there exists some kind of "difference", "disparity", or "inequality" between things to be separated. There are no implicit "series" or "stages" in this Deleuzean "becoming". Therefore, the features of non-linear change can be seen to represent the "normal" conditions of that subject instead of the "abnormal".

The term both Deleuze and Pearson use about this process is "involution". Pearson describes involution as a process similar to for example the classic Turing machine as arguing, that "only involution breaks with filiative evolution by forming blocks which allow things to pass through and freely become".[20] Hence both the "inner" and "outer" argument in this thesis about the absence of an absolute "centre" of thought to return to. Because this thesis does not recognize such construction concerning the research subject, namely cyberspace and its subjects, one cannot argue in a meaningful manner, that such absolute or "natural" centre of argument would be found concerning this very thesis. As cyberspace is claimed to be "situational" in this thesis, so will the actual thesis be.

1.3 Theoretical Background

As a political science thesis, the viewpoint of this work is one emphasising things related to political nature in discussing cyberspace. As David Holmes argues, the traditional concerns of political theory are being

> "...comprehensively supplanted by a flight towards questions of ontology. Where once social and political analyses concerned themselves with matters of exchange, production, consumption and integration as the departure point, today there is a retreat, which is also an advance, towards understanding the primary ontology, or domains of existence – language,

[19] Ibid., 12.
[20] Pearson 1997, 190.

> the body, time and space – which social thought had always worked with but had not included in its analysis".[21]

A forerunner to all this was the attention given to language during the period that became known as the linguistic turn. The great model of language became a new referential setting for considering questions of power and its forms, human subjectivity, otherness and identity, and, through this consideration, critical upheavals of traditional models of social and cultural life. More recently, the turn to categories of space, time, and the body, and historicity have followed at an astonishing pace.

Although this thesis includes ideas often originated to such scholars as Michel Foucault and Gilles Deleuze, it would still be inappropriate to claim the theoretical basis of this thesis to lie on "post-modern" political theory. Quite the contrary, more than political theorists, these thinkers often considered post-modern are present in this thesis for some other reason than their views on "politics". Foucault's extensive work on power as relation and Deleuze's analysis on Leibniz are fruitful explorations to be used when processing the idea of cyberspace, even one wouldn't think oneself as a purely "genealogical" or "deconstructive" thinker. As a matter of fact, this might be the very thing to do, if one thinks about the abductive basis as the leading method of this thesis. Grasping a significant point from something could prove itself more useful than considering postmodernism as an icon to be - or not to be - idolised.

As Anthony Giddens argues, postmodernism can be at its best "kept to refer to styles or movements within literature, painting, the plastic arts, and architecture".[22] However, the task of challenging the current line of thinking of the author of this thesis is here present. One can learn more from a first-rate postmodern scholar with whom one disagrees than from a first-rate thinker who simply ratifies or reinforces what one already believes. Hopefully this will also bring more intellectual tension to this thesis than mere self-proving with biased source material. As one must recognise, there exists no Archimedean point outside our world, no Cartesian *cogito*, no single ideal observer's vantage-point from which to observe and pass judgement on our world and its inhabitants' actions and practices.

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[21] Holmes 1997, 8
[22] Giddens 1990, 45.

More than postmodernism, this thesis has probably benefited from the idea of *tropes*. As Hayden White argues:

> "For rhetoricians, grammarians, and language theorists, tropes are deviations from literal, conventional, or proper language use, swerves in locution sanctioned neither by custom nor logic. Tropes generate figures of speech or thought by their variation from what is "normally" expected, and by the associations they establish between concepts normally felt not to be related or to be related in ways different from that suggested in the trope used."[23]

With tropes, White seeks for identifying the structural components of different discourses of historical narrative. In White's work, these narratives take different forms of archetypes, such as Tragedy, Comedy, Romance, Irony etc. If White's line of thought is to be followed, the Story of Cyberspace would probably fall in to the category of Romance, a classic story about Good versus Evil, with both individual and communal destinies waiting to be fulfilled. However, one could argue, that no romance exists without satirical elements. The hero, after conquering the vast frontiers of cyberspace, suddenly notices, that all he anticipated and dreamed has become real; there's no more space left to invade, so to speak. In this satirical moment, as White puts it, man notices, that he "is ultimately a captive of the world rather than its master, and by the recognition that...human consciousness and will are always inadequate to the task of overcoming definitively the dark force of death, which is man's unremitting enemy."[24]

However, this line of thought, when projected to cyberspace, implicitly carries the Deleuzean "cruelty" of interfering through conquering into something. In fact, Deleuze would probably neglect any hints to the existence of anything called a "soul" in Whitean Romance. For Deleuze, the ever-beautiful soul is the one lamenting the tides of history, and its romantic untimely nature consistently rejects the idea of an intrusion of the War Machine. Therefore, it can be argued, that "Romance" is a concept Deleuze wouldn't probably use when describing the conquering the "smooth terrains of cyberspace".

Smoothness requires sensitivity, would a Romantic point out. Browsing cyberspace cannot be done with out the element of the *aesthesis*, providing the necessary sense of detail and situational intuitive wisdom. This very thought is

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[23] White 1978, 2.
[24] White 1973, 9.

quite similar to the whole idea of abduction, in where the "leads" must be interpreted in that very situation. Thus the element of pleasure emerges. And what would be more romantic than seeing cyberspace as a celestial sphere for fulfilment, in where the secret passions uncover.

As argued, cyberspace can be seen through the idea of abductive inference, where each new logging in is a "fresh start", a romantic idea of leaving one's past behind. As noticed, the same kind of logical premise could also be found in the actual "using" of cyberspace. The "Asimovian leap" from site to site, from newsgroup to another, is an intuitive, un-Boolean process, an ahistorical "event", where each "micro-past" is left behind in order to reach something else through transition into a new site.[25] In this sense, cyberspace can be argued to foster the romantic ideal of intuitive, associative and somewhat non-rational way of collecting information through "browsing", which makes us, in David Lynch's words, "intuitive detectives". This Romance of information between Man and Machine, and cyberspace as a sphere for "digital honeymoon", is probably the central *ethos* of this thesis.

The more time-bound information becomes, the more the importance of gaining that information first will increase. As it will be argued, "mapping" cyberspace is practically impossible because the spatial "topography" of cyberspace is "non-striated" or "nomadic" by its "nature". Instead, the groundwork for a "situational" point of view on cyberspace will be sketched. So, rather than mapping anything tightly, this thesis will try to describe the "intellectual climate" around the discourse on cyberspace.

[25] Actually, this kind of traffic does leave "traces" both to the computer used and the sites visited, but basically one can surf anonymously in cyberspace if one chooses to do so.

2.The Myth of the American Adam

"I'll take my time anywhere
I'm free to speak my mind anywhere
I redefine anywhere
anywhere I roam
where I lay my head it's home."
Metallica: Wherever I May Roam.

Both the "techno-logical" and "ideo-logical" history of cyberspace can be labelled as an America-led project. This is why it would be relevant to take a closer look at the American *ethos*, that labels cyberspace as a sphere. For example, Michael J. Shapiro finds the story of constituting America similar to the story of the ancient Israelites. Both stories, he argues, are about "making a civilization out of nature".[26]

According to Shapiro, this "conquering of the wilderness" has also a strong religious connotation, because the wilderness is a place, where the "divine sanction has yet to be fulfilled".[27] In constituting America, "Americans saw

[26] Shapiro 1998, 56; Jehlen, Myra: *American Incarnation.* Harvard University Press, Cambridge 1986.
[27] Ibid., 56.

themselves as building their civilization out of nature itself, as neither the analogue not the translation of Natural Law but its direct expression".[28] The ancient myth of "the vacancy of the place of settlement governed the story, for the wilderness was regarded as effectively unoccupied as European settlers saw themselves as quickening a virgin land."[29]

However, the West as One is somewhat imagined a construction, but yet this line of thought has its supporters. As Shapiro points out, for example Samuel Huntington is "an articulate exemplar of those who think that the U.S. - as a part of an entity called "the West" - is threatened by the increasing presence of cultural Others".[30] As William E. Connolly argues, Huntington considers the West to be a "historically unique achievement: thus it must be protected from internal and external corruption".[31]

Thus the Huntingtonian "freeze-framers" of culture consider the idea West to be all about "securing the home", protecting the unique civilization against alien (or domestic) intruders. The term "civilization", as Shapiro argues, is often used both to "denote any mannered way of being through which forbearance, modesty and civility are folded into social relations, and, distributively, to rank different places according to a single standard of cultural achievement".[32] To speak of a civilization in the first place thus becomes the discourse of "offering an articulation of the universal conditions of cultural life and defending a more particular set of practises from cultural assault".[33]

Relying on the assumption about cyberspace being a realm for an individual, one must consider the premises of this significantly liberal vision. As it will be argued, there exists an interesting Batesonian double-bind in cyberspace, when it is juxtaposed to this idea of West as something to be protected. The original "settlers" of cyberspace could be considered to be the forerunners of openness in cyberspace, and that is what they to some extent are. However, the very same persons - like for example John Perry Barlow - are the ultimate "protectors" of cyberspace from certain outer influences. This makes cyberspace an interesting sphere or "zone" of investigation.

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[28] Ibid., 57.
[29] Ibid.
[30] Shapiro (1999): *Samuel Huntington's Moral Geography.* In *Theory & Event* 2:4.
[31] Connolly (1999): *The New Cult of Civilizational Superiority.* In *Theory & Event* 2:4.
[32] Ibid.
[33] Ibid.

Also, it is important to note, that the myth of constructing America as a nation is told thru the narrative stories of certain heroic individuals.[34] One central factor in these stories is with no doubt the myth of the "American Adam" as the ideal archetype of liberal individual.

2.1 A Mansion on the Hill

America has often defined itself politically as an Enlightenment experiment, a new nation based on the highest hopes of life, liberty, the pursuit of happiness, and equality. As such it was to exemplify the best hopes for rational, progressive, liberal reforms, fusing these with the older divine mission to found "God's City on the Hill". The American Enlightenment political project was to have a sharp ideological edge, a fusion of John Locke, Adam Smith, and Jehovah. In short, America was to develop the ideal modern community under God. What was argued for was a chance to "realize" oneself, to fulfil the romantic imperative of a self-created life.

This is, of course, something of a paradox. How could the Enlightenment ideals for social justice, resting on sense of duty, equality, public service, education, reconcile themselves with the romantic ideals of self-creation, individualism, and freedom? In America the paradox was resolved with the creation of a new hero, the American Adam; an independent individual, embodying the romantic ideal of no concessions to the demands of a conforming civilization and yet, at the same time, the friend of that civilization, often aiding it and furthering its progressive imperatives, not from any carefully worked out political vision, but simply because he wanted to. Like Mitch Buchannon in *Baywatch*, the American Adam is a genuinely nice guy. In other words, the American Adam served to unify symbolically the potentially divisive ideals working in the development of the country.

The American Adam stands alone in the world by choice, not by accident or by thrown into it. He is the Genuine Self against the whole world, without a

[34] For example the infamous adventurer, Colonel Daniel Boone.

distinct past, ancestors, tradition, home, or community. Unlike his Biblical namesake, the American Adam answers to no traditional faith, no system of moral absolutes. He is an artefact of his own making, at once self-propelled and self-reliant. He answers only to his conception of himself, even when he is put into a world that does not live up to those expectations. Thus, he exists, not as a good or a bad person, but as a potential for something new, which would transcend conventional notions of goodness and badness. The American Adam has no hidden agendas for he is an integrated and innocent simplicity, bringing into the world no baggage except his uncontaminated individual self and his readiness to meet experience personally.

The guarantee for the American Adam's separateness, his ability to resist social contamination, and the maintainer of his purity, his ability constantly to recreate himself, is his constant motion. Like Mark Twain's *Huckleberry Finn*, he lives primarily for the motion itself, not for motion as a means to a particular destination. Unlike Chaucer's pilgrims, he has no home and no destination. His motion is on the edge of civilization, in that magical area known as the "frontier", the space into which civilization is about to advance, but which is still uncivilized enough so that the wilderness of nature and the wild creatures who live in it have not given it up. Although this Adam may make contact with civilization, like Huck Finn's visits to the towns along the Mississippi, the American Adam defines himself by not belonging to any town. The town is only a temporary stopping place. For the American Adam, the motion itself is more important than direction or destination.

The breaking-out of narrowing confines has long been a hallmark of the Adamic myth. Characters like Huck Finn are taking their leave, heading for the frontier or the territories, leaving their past behind, and seeking their individual freedom and their fortunes in the open space of the West. However, after the actual physical frontier having been closed, Americans had no new places to go, no new space to conquer. Only when they "ran out of space", said Hegel, "would the Americans then confront their past and become a people with a genuinely historical consciousness."[35] Yet for the American Adam, space exists for him primarily as something to move through, not in order to communicate with or

[35] Hegel 1956, 85-86.

meditate upon whatever the space may offer, but rather to express his sovereign superiority over it, his ability to move effortlessly through it, answerable to no one but himself. He thus makes no concessions to a changing landscape. He is, in the very sense of the word, indifferent to the landscape.

Also, the American Adam has a unique relationship with time. Since he has no memorable past and does not associate himself with any community, which has a history, he has no historical identity. His life thus consists of moment-by-moment episodes, contingent encounters between himself and the world, each one independent of the others. He brings no sense of history, either his community's or his own, to the next experience.

The American Adam also lives in a world dominated by men. He may respect women and be polite to them, and he is often ready to help them if they are in trouble. But women come from the world of "civilization" which restricts him and is therefore to be avoided. His basic friendship towards women is similar to his general attitude to civilization, and his doubts about getting too close to women indicate his desire to stay also detached from civilization. Also, no physical sexual attachment to any woman exists: it's all Platonic. However, his sexuality towards women doesn't seem to trouble him, mainly because sex doesn't seem to interest him.[36] There is, in other words, no American Eve, no one to commit sin with.

2.2 Thomas Paine as the American Adam

Actually, a British-originated thinker, Thomas Paine, was among the earliest and most adept articulators of the Adamic Myth and its political implications. Paine, born in Thetford, England in 1737 started as a corseter apprentice for his Quaker father, worked some years as a tax officer, and moved in 1774 to Philadelphia with the help from inventor Benjamin Franklin, whom he had met by accident. In America, Paine published several books including *Common Sense*, a strong defense of American Independence from England. Paine for example stated, that "all the arguments for separation (of America) from England are based on nothing

[36] This could, of course, be seen as both denying one's sexuality towards women, and as connotations to homosexuality in the symbolic form of "brotherly love".

more than simple facts, plain arguments and common sense". While being back to Europe in 1791-92, Paine wrote *The Rights of Man* in response to criticism of the French Revolution by Thomas Burke, labelling him as an antimonarchist in England. *The Rights of Man* included also an analysis of the roots of the current discontent in Europe, which he laid in arbitrary government, poverty, illiteracy, unemployment and war. The book was banned in England, and in order not to be arrested, Paine fled to France. There Paine wrote his third major work, *Age of Reason*, which was written in praise of the achievements of the Age of Enlightenment, and it was of this book that he was widely accused of being an atheist. Seeing his work being mostly forgotten and derided by the public, Thomas Paine died in New York in 1809, allegedly as drunk and a pauper. The whereabouts of his remains are unknown today.[37]

Paine saw the state and the civil society as opposite forces. In *The Rights of Man*, Paine stated, that "the end of all political associations in the preservation of the natural and "imprescriptible" rights of man."[38] For him, the "overgoverning" of the state was both a great problem and a sign of "uncivilization". Therefore individuals are degraded and victimized by a global system of political alienation. In Paine's world, despotic states rest upon despotic households, and individuals become each other's enemies because of a surplus of state power. The "civilized" option was a scheme, wherein constitutional governments are empowered by the active consent of naturally free and equal individuals. These governments have no rights, but only duties before their citizens, who are permanently sovereign. Paine believed, that individuals' natural wants exceed their individual powers. Because they realize their necessary need of others, they are bound to develop forms of

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[37] The irony in the case of Thomas Paine is, that although, because of his work, labelled as a speaker for individual liberty, prosperity and success, his personal life was quite something else. As a boy, he was expelled from school and failed as a corseter. As an tax officer, Paine was discharged from his post twice in four years. His only literary work from this time is *The Case of the Officers of Excise* (1772), arguing for a pay raise for the officers. In 1777 Paine became Secretary of the Committee of Foreign Affairs in Congress, but in 1779 he was forced to resign because he had disclosed secret information. In 1787, after the release of *Common Sense*, Paine returned to Europe, initially to raise funds for building a bridge he had designed. In that time Paine was also involved in a project aimed at developing a smokeless candle. Under Robespierre's era, Paine was arrested in France in 1793, because he had voted against the execution of the dethroned king Louis XVI. Only because of the efforts of James Monroe, Paine narrowly managed in escaping execution. After his release Paine stayed in France until 1802, when he sailed back to America, after an invitation by Thomas Jefferson, who had met Paine in Paris while being a minister. However, back in America Paine realised, that he was either seen as a great infidel because of his religious views or completely forgotten. For idealist like Paine, not receiving credit for his contribution to the American Revolution led to his descending into alcoholism. After his death, a New York newspaper wrote about Paine: "*He had lived long, did some good and much harm*".

[38] Paine 1984, 186.

commercial exchange. However, finally Paine reaches such spheres in his visioning, that they make even Yoneji Masuda's *Computopia* seem lame. Paine claims, that instrumental "market interest and the love of others" predisposes individuals to live together "harmoniously by exercising their natural rights to freedom and happiness" within a civil society. Finally politics would be replaced by "the cordial unison" of civil society. So at the end, the ideal relation between the state and the civil society was for Paine similar to Marx's vision of the state withering away. Quite ironic, but Paine wanted to achieve the same by using the market forces.

In the idea(l) of Adamic American, an individual is placed in The Original Position, as John Rawls describes it. Once situated behind an imaginary veil of ignorance, argues Rawls, people

> "...do not know who they are or where they have come from, or to what race, sex, or generation they belong, what their talents and/or handicaps are, and so on. Thus deprived of all contingent and particular features of their personalities, social status, and situation, such disinterested hypothetical choosers are therefore presumably equipped to arrive at, and to articulate, general an impartial principles of justice."[39]

Terence Ball emphasizes, that like Thomas Paine's Adamic Americans, Rawls' hypothetical choosers are placed "as in the beginning of a world, unencumbered by the past, by tradition, or by the memory of previous practices, they alone are able to articulate, for the first time, truly universal principles of justice."[40] For them, the past has ceased to exist, and the present includes a possibility of renewal, almost like rebirth.

2.3 The Western Hero

The western movies and novels are major homesteads for the American Adam. The heroes of the western movies are without exception loners with no discernible past. The hero has no family or close personal friends. He is always on the move through the frontier, with no particular direction.

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[39] Rawls 1970,136-150.
[40] Ball 1995, 283.

The western hero's enemies are either wild Indians or white European frontier types who stand in the way of the spread of the new American civilization westward. He opposes these people because he wants to, not from any ideological or financial motive. He may decide to come to the aid of the enfeebled advanced forces of civilization against those who would disturb progress by shooting up settlers, stealing technology for inappropriate uses, or because they interfere with his right to move. His immediate allies are the pioneer homesteaders on the edge of the frontier. His approach to people is extremely democratic but at the same time distant and reserved, for he is a man of few words, making his judgements about people on the basis of the experiences he has with them rather than on anything else. He can talk on even terms with prostitutes or hostile natives or the town drunk in a way that no one in the community can.

Even when the western movies discovered ironies and complications (not all Indians were wild savages, the historical realities of western life was often far from heroic etc.) the result of the American Adam's popularity as often as not subverted any latent political criticism of the existing myth. For example, in Fred Zinneman's movie *High Noon* (1952), the noble community of citizens is exposed as a sham, but the hero prevails, thanks to his loyal bride's discovery that the gun is more useful than her Quaker faith. And there's always a new town to move on to. Similarly, in films like Clint Eastwood's *Unforgiven* (1992) or Sam Peckinpah's *Wild Bunch* (1969), the overtly critical stance to the traditional story of the American Adam gets somewhat overcome by even stronger power of the traditional shoot-out.

2.4 Adam Goes to Space

As Richard Hofstadter argues, "time is the basic dimension of history, but the basic dimension of the American imagination is space. What Americans have lacked in a sense of time they have tried to make up by an enlarged sense of space."[41] Actually, "space" is the key word when tracing the further adventures of American

[41] Hofstadter 1969, 5-6.

Adam. Since already discovered the geographical limits on Earth, the myth of Adamic American had to be transformed into reaching new frontiers. After World War II space became the "place to be", so to say. The post-war development - especially the emergence of Soviet nuclear weapons - had shown, that even the Home of the Brave was not bulletproof against its enemies. Only in space could mankind attain immortality. On Earth people would always be endangered species.

It was not just the actual Space Race that refreshed the Adamic American in the twentieth century. For example in *Star Trek* series, the opening scene consisted the U.S. starship *Enterprise*, commanded by Capt. James T. Kirk (William Shatner), arriving to an uncharted galaxy, with the narrated voice on the background and the legendary words: "Space. The Final Frontier". Few years later, since the conquering of the Moon, the movie *Star Wars* (1977) presented a self-evident Adamic hero, Luke Skywalker, facing a choice of whether to leave his past behind[42] and become a Jedi warrior or not. Of course, Luke accepts to take part on the romantic quest. After all, there was the ultimate motive, losing one's personal freedom for the evil Empire.

Terence Ball criticises the Adamic myth but is not convinced about the opposite, more communal perspective either. Both Adamic individualists and more community-oriented people, claims Ball, using Tocqueville's words, are left "in the solitude of their own heart, individual or group".[43] The problem of contemporary identity politics, states Ball, is that "while it supplies some with a place to stand initially, it provides no one a place to stay".[44] Ball, with a drop of conservatism in his voice, argues, that this is because the contemporary politics of identity, like Adamic individualism, offers no sustainable civic vision, no wider view of political possibilities for the community of which we might yet be full members and citizens. In a way, this notion fits also to the context of cyberspace. Every time one logs into cyberspace, it is like a new beginning, with a possibility to "re-create" oneself.

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[42] Although being a son of Anakin Skywalker (who joined the evil Empire and became Darth Vader), Luke grew up in a farm in a small peripheral planet.
[43] De Tocqueville, *Democracy in America*, II ch.2.
[44] Ball 1995, 296.

2.5 An Adam Sinned

The American Adam is not the same as his biblical namesake, but these two do have some things in common. For example, as noticed, the American Adam does not have his female counterpart, the American Eve, which leads to the impossibility for the American Adam to commit sin. However, this is something of a paradox. After all, the Biblical Adam did sin. Therefore one could argue, that the Sinning American Adam is neither impossible nor contradictory. In Leibnizian sense, where the smallest thing includes the whole world, the world of the Sinning American Adam is actually included also in the world of the American Adam. As Deleuze notes, concerning the "Biblical Adam" and "Adam sinned":

> "Between the two worlds there exists a relation other than one of contradiction (although there may be a local contradiction between the subjects that compose them, when taken two by two). It is a vice-diction, not a contradiction."[45]

Therefore, God creates the Leibnizian monads, although a world does not exist outside of the monads that express it. But God does not create Adam first, although he is to have him sin or at least to be aware that he is going to commit sin. Instead, He creates a world in which Adam sins, and also includes it in every individual that conveys it. As Deleuze continues:

> "We begin with the world as if with a series of inflections or events: it is a pure emission of singularities. Here, for example are three singularities: to be the first man, to live in a garden of paradise, and to have a wife from one's own rib. And then a fourth: sinning."[46]

Taking this into account, one could argue, that the American Adam, although self-created he would be compared to the Biblical Adam, is simply unable to "have a wife from one's own rib". Because there is no God for him, there is no wife for him. The American Adam is presented as "capable of not-sinning", but he could also be seen as "not-capable of sinning", doomed to solitude and communal exclusion. Also, this means that the American Adam actually could have sexual interests in sinning, but as a permanent outsider he is, within his power, unable to realise those interests. He is like the Kristevan stranger, doomed to nomadism in order to find one's sexual homestead. This inner drive for sexual interaction could

[45] Deleuze 1993, 59.
[46] Ibid., 60.

be seen as a major motive behind the American Adam and the mythology linked to it.

2.6. The American Jeremiad

Whereas the American Adam is mostly presented as an individual, the very myth could also be juxtaposed to different communal institutions. For example, in his classic book *The Folklore of Capitalism*, Thurman W. Arnold argues, that in the American history corporations are often considered having the same rights and prerogatives as individuals. With this, people have come to believe, that "their own future liberties and dignity are tied up in the freedom of great industrial organizations".[47]

This line of thinking originates from the idea of freedom being engaged to the individual person's economical wealth. Thus, in order to be both free and wealthy, one should be an individual. With the emergence and spread of industrialization, skilled individuals first became members of some group of professional craftsmen, and later replaced by machines. To "tolerate" this situation, claims Arnold, men had to learn to think these organizations as individuals. Companies like McDonald's or Marlboro were identified to some individual figure, which was considered suitable for representing that corporation's brand. In fact, the famous Marlboro Man (an actor, who later died of lung cancer) was a perfect example of both this individualization and of the Adamic American, free from the communal commitments, enjoying a cigar in the middle of the prairie (where he had purchased them was never shown).

This corporation individualization led however into a strange situation. No more could people, who considered their actual individual rights offended, state their case against the individual of corporation, because it was considered as violating the rights of that illusion of individualism by law, which Arnold sees as being one of the most important backbones of the individualization myth. The tobacco industry is probably the best example of this. Someone arguing for

[47] Arnold 1968, 185.

restriction of smoking can easily be labelled as a person wanting to deny the legitimacy of the American Constitution, which emphasizes the rights of the individual. Thus the American Adam would be free only as long as he would not himself get mixed with these corporate individuals: a task practically impossible in market-capitalism. Otherwise the heroic image of Adamic American would be converted into American Jeremiad in community.

Arnold's citation to the Sacco and Vanzetti case gets new connotations, when one thinks about the book *The American Jeremiad* (1978), written by Sacvan Bercovitch, a man, who got his first name after the case. In the book, Bercovitch contrasts the American Jeremiad with its European predecessor. The European Jeremiad depicted a static society condemned to fall perpetually from its mythic roots. The American Jeremiad added to this picture the dimension of progress: the very hope that public life can be improved.

The emergence of the American Jeremiad consists of three stages. First, it provides a spiritual standard for public life. Second, the American Jeremiad outlines the manners in which people have fallen from this original standard. Third, the Jeremiad envisions an ideal public life with individual benefits, following the return to the original spiritual standards. With this ideal, the American Jeremiad sustains an ambivalent rhetoric of hope and fear. Bercovitch claims, that this ambivalence leads to a situation, in where the original promise turns to experience, and goes forward with "prophetic assurance" of both condemnation and promise for the better.[48]

Contrasting Arnold's argument of individualized corporations against the American Jeremiad gives an interesting outlook to the American Adam. The Jeremiad myth works best in situations, when people realize that there is tension between the public ideal and the efforts they make in the individual level. Hence the need to see corporations as individuals: if everything exists in the individual level, there is no more reason for Jeremiads to argue their case, because no other "levels of existence" exists.

The other interesting thing emerging from this setting is the Sacco and Vanzetti kind of "Jeremiadization". If some actual individual (or individuals) try to take position against the Adamic corporations, they, by doing that, are

[48] Bercovitch 1978, 16.

automatically considered as Jeremiads by their community, and labelled as discontented by the prospects offered by the Home of the Brave. It is not hard to guess that the least such a person gets by acting like that, is condemnation and rejection by the general public. As argued, the very thing happened to the archetype of the American Adam, Thomas Paine, who was in his later years considered as an ungrateful outcast in the U.S. Paine and his Adamic colleagues had created a "great organization", the Land of the Free, which no more needed them but vice versa.

3. G.W. Leibniz and Cyberspace

"We're one
but we're not the same."
U2: One.

It can be argued, that one of the most significant philosophers of cyberspace is Gottfried Wilhelm von Leibniz (1646-1716). His models of logic and work on monadology have influenced many of those sketching today's informational spheres. Like Sir Walter Ralegh (1552-1618) before him, Leibniz was a true *uomo universale*, a man of many talents: a scholar, a public servant and a courtier. The other thing combining these two was, that both of them died as abandoned American Adams.[49] However, Leibniz' work has lasted till our days, and with the emergence of cyberspace, it is probably more actual than ever.

[49] Leibniz became a *persona non grata* at the Hanoverian court after his long stay in Vienna. The Hanover clergy actually called Leibniz in his later years *Lövenix*, "a believer in nothing". Ralegh, on his account, arranged several failed attempts for settling the New Continent. Also, Ralegh had in his time interests with several European courts. Finally, he was executed by the British, although on request by the Spanish court.

3.1 Leibniz, Time and Space

Unlike for example Newton, Leibniz considered space to be relative. As time is for him organising the sequential things, space is the organisation of consequent things. Neither does Leibniz accept space being some kind of giant container nor a void, because for him space is full, and therefore space as an independent entity does not exist. His thesis relates to the "perspective of various alternative possible worlds taken as a whole."[50]

Leibniz' idea of creation cannot be a historical event. There was no moment of time when the universe was not, for time itself is logically posterior to the existence of the universe. For Leibniz, space does not exist in itself. Everything one might want space to do has to be done by someone or something else.

For Leibniz time is conceptually coordinate with space: one could not have space in an atemporal context. However, time has a dual nature for Leibniz. There is the essentially private, intra-monadic time of each individual substance continuing, by "appetition", through its transitions from state to state. There is also the "public time", obtaining throughout the system of monads in general, made possible by the inter-monadic correlation established by the pre-established harmony. On the other hand, space is "the order of co-existence",[51] the order among the mutually contemporaneous of things, while time is the order of succession, the order among the various different mutually coexisting states of things. As Edward S. Casey points out, such an order can be interpreted as a "situation" where situation is "equivalent to relative position" or "sameness of place".[52] Here it is important to discuss the concepts of "space" and "place" in Leibniz' work. For Leibniz, a "place" is that, which is "the same in different moments to different existent things", which are supposed to "continue fixed" from one moment to another and "agree entirely together".[53]

Thus for Leibniz space and time are ideal, or rather "phenomena"; space because it is nothing but the order of relation of simultaneous existents, and time since it is relational, and involves the labyrinth of the continuum. However, for Leibniz, space is not any kind of ambivalent chimera but a *phaenomena bene*

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[50] Rescher 1979, 84.
[51] Casey 1997, 285; Alexander (ed.): *The Leibniz-Clarke Correspondence.*
[52] Ibid.
[53] Ibid.

fundata, a "well-founded phenomenon". However, Leibniz' view on "place" leads to two interesting viewpoints. First, more than a "place", Leibniz discusses the concept of "same place". "Place", then, becomes reduced to relative "position". Second, by doing this, as Casey notes, Leibniz actually conflates "place" with "space".

This absorbtion of "place" into "space" becomes even more interesting, when Casey brings up the concept of "site" to describe this shift from "space-place" to "situation". After all, a "site" is the very concept used in cyberspace discourse, when one talks about a compilation of Internet pages joined in one single domain. For example "www.jyu.fi" is a domain name, under which the actual university site exists, with numerous individual Internet pages. In this sense, one's being-in cyberspace could be considered as "situational" rather than "traditional" spatio-temporal existence. However, as Casey notes, the result of this "transmutation" of space-place into site is Deleuzian "striated space", the "relative global", which is "limited in its parts" which are "assigned constant directions", and are "oriented in relation to one another, divisible by boundaries, and can be fit together".[54] This question of this "striated space" and its connotations will be discussed more thoroughly in chapter 8.

3.2 Leibniz and Ramism

Leibniz believed all problems to be soluble. The first step in achieving this was to create a universal medium in which conflicting ideas could coexist and interrelate. A universal language would make it possible to translate all human notions and disagreements into the same set of symbols. His *characteristica universalis*, "universal character set", rests on binary logic. Contentless and silent, the binary language can transform every significant statement into the terms of a logical calculus, a system for proving argumentative patterns valid or invalid, or at least for connecting them in a homogeneous matrix. Through the common binary language, discordant ways of thinking could then exist under a single roof.

[54] Ibid., 288, Deleuze & Guattari: *Nomadology*, 54.

Disagreements in attitude or belief, once translated into matching symbols, could later yield to operations for ensuring logical consistency. A single system would encompass all the combinations and permutations of human thought. Leibniz longed for his symbols to foster unified scientific research throughout the civilized world. The universal calculus would compile all human culture, bringing every natural language into a single shared database.

In his works, Leibniz rejected the Medieval idea of a single "book of world", because in his time the amount of information increased rapidly, and it could not any more be collected into one single encyclopedia like for example St. Thomas Aquinas' *De Civitate Dei*.[55] For Leibniz, the idea of an encyclopedia does not realize itself in a form of a single book but a vast logical database-like system, through which every single library and book could be found. Connected to this matrix, these books would become files in the "universal database".

This idea of the Medieval Book of the World, contrasted to Leibniz' "network of books", opens an interesting side-path, when the two are shadowed against the philosophy of the Ramists. This school was led by Pierre de la Ramée (1515-1572), better known in his Latinised style as Petrus Ramus.

As a Foundationalist, Ramus believed that there is complete, ultimate knowledge, or truth, for everything and every situation. However, in Ramus' view, dialect was based upon probability, leaving room for the rhetor to persuade (this is quite similar to Michael D. Bybee's former claim on rhetoric being analogous to abductive inference). Prior to Ramus, and his new theories on rhetoric, rhetoric was defined in a five-part system: invention, style, memory, arrangement, and delivery, known as the five "cannons" of rhetoric. Ramus also defined logic in his own terms. The general principle being was about the deductive simplification of everything going from general to particular; take something and split it into two categories, then split each of the two categories and so on. The multiple divisions would eventually create something both conceivable and "extra-mental". This form of logic leads back into his Foundationalist belief, that eventually there is one ultimate truth.

The Ramist movement also introduced a novel form of education that advanced rational clarity in the modern Cartesian sense and sought to reorganize

[55] Actually, the last man trying to do this was Konrad von Gessner, who in 1545 tried to collect a book of all known books, including all titles published. After collecting some 15000 releases, he was forced to give up.

the traditions Western logic and rhetoric. The "motor" of Ramism was the printing press, which empowered the Ramist movement by making it feasible to reproduce and distribute outlines of knowledge on paper. As Michael Heim notes, for Ramists

> "Each page is a skeletal outline of a subject arranged systematically, with the branches on the tree showing how the parts of the subject matter connect. The printed page thus becomes a chart of topics divided into dichotomies with their parts and interconnections made clearly visible. That is, the printed Ramist text is a visual encyclopedia of cultural literacy in which topics and their parts appear in a nutshell."[56]

Ramism advanced the binary, visualist, and monological mind-set. Ramist outlines presented "knowledge" as topics branching visually across a silent page. People, Ramists thought, could absorb "truths" printed in books at a remove from the direct challenge of discussion. As Heim continues:

> "Whereas truth was once understood to be matter for public dispute, it now became the property of individual minds. Whereas understanding was previously connected with audible verbal utterance, it was now conceived in graphic, spatial terms. And whereas subtle differences once provoked argument, the effort was now to keep distinctions clearly in memory. The analytic graphic tree simplified knowledge, and the printed outline gave modern thought an engine to transform culture."[57]

Ramism emerged in an era, where the development from a single scholarly language (Latin) was, with the emergence of printing, starting to develop into separate national languages (of course, one must take into account that in Ramus' time Latin still clearly prevailed its competitors). However, also the printing itself changed the way people saw science and the world. The scholastic diagrams could now be actualized in paper, and the orator's words could be anchored more fixedly in a certain striated space.[58] Printing and the use of textbooks made also possible for the teachers to "focus the whole pedagogical economy on the spatial arrangement of material before his pupils".[59] Like boxes, these books "contained" the truth, the "right" things to be learned. A book was a form with a certain, final content in it.

One could, according to the former notions, argue, that abandoning the idea of the Book of the World towards a more expanded conception of a "network" of

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[56] Heim 1993, 44.
[57] Ibid., 45.
[58] Ong 1983, 128.
[59] Ibid., 314.

information in the form of many books follows from this Ramist reform. Suddenly, arguments could be both deliberated in the public with spoken language, and judged in private with the written language. Following this situation, the Leibnizian idea of an independent monad interacting through "interface" gets an interesting connotation. Books could be seen as these interfaces, because they were something to be used to mediate information without face-to-face communication. However, unlike Ramists, Leibniz replaced the Medieval idea of one ultimate truth which several independent points of view forming the whole.

3.3 Leibniz and Network

Interested in architecture, Leibniz applied his idea of "network" also to his perception of cities. Leibniz' ideal city is not ordered around one single central point. Moreover, there are multiple bigger or smaller centres. Leibniz' city or library was an endless network in where every single point is both the start and the middle point, and in where no actual end could be defined.

Cyberspace could be seen to represent the Leibnizian idea of a matrix, through which all data available could be "downloaded", although Leibniz of course didn't use the exact concept. However, the idea of shared information in monadic environment is puzzlingly similar to the present form of cyberspace.

Grounding on this, one could argue, that not only the idea of a "meta-book", the book of books,[60] was abandoned because of the ever-increasing amount of books published but the whole idea of Western science, as we've learnt it, could be originated to this very same idea. In *The Nature of the Book*, a detailed history about the emergence of printed publication in England,[61] Adrian Johns argues,

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[60] For example, In Jorge Luis Borges' novel *Book of Sand* (1975) the main character trades the Holy Bible to *The Book of Sand*, which has an infinite amount of pages. *Book of Sand* includes all possible knowledge and information, but because of the unlimited amount of possible information, nothing once discovered can be recovered after turning the page.

[61] The earliest dated printed book, known as *Jin gang ban ruo bo luo mi jing* (the actual original Sanskrit edition was called *Vajracchedika-prajnaparamitasutra*, translated into Chinese by Kumarajiva. In English the book is known as *The Diamond Sutra*) was produced in China in 868 AC, but it is believed that the practice dates back well before this date. The Japanese and the Chinese regularly used wood blocks carved in relief to produce Buddhist charms as early as the fifth century AC. Nearly six centuries later Europeans began

that for scholars of the sixteenth century, this change became as a shock: the amount of books was claimed to overcome the criteria of quality.

This is quite similar a line of conversation, that surrounds nowadays the Internet and cyberspace. As O. Bradley Bassler notes, Leibniz did accept the very idea of infinity, but he rejected the idea of infinite wholes or "amounts".[62] Considered this way, cyberspace could be argued not to be a finite whole formed by finite entities, but rather one indefinite set of finite things: there is no "number of numbers" or "Last Page of the Internet", and the ones existing are not ordered in a finitely linear manner (like for example whole numbers 1,2,3...). So can we rely on this new "indefinite" form of media, because no one can handle all of its contents anymore? Because of this, argues Johns, the early scientists and scholars were somehow forced to create methods of controlling information: expert opinions, peer reviews, and the critic of science along with the principles of scientific knowledge. In one sentence, science-based professionalism emerged.

In fact, the history of book-printing is at the same time both about the emergence of something called "author", and the emergence of probably the first mass-product. The "author" as a concept became more important, when unauthorized printing started to increase with the spread of cheap printing technology in the beginning of sixteenth century. Also, different workshops or printing-houses played a major part in early printing. Printing houses were not just physical places, but more like "domains" with certain cultural settings. Because the "art of printing" was then a highly respected skill (or more likely, a construction of many different skills), the final product was always a compromise between the author and different authorities in printing-house. Since the early times, readers were bound to assess the reliability of a book by checking its author, the printing place, general outlook of the book, and the materials used.[63] So, the methods of evaluation were quite similar to the current ones used for example separating pirate cd:s from the "real" ones.

The method of trying to get one's manuscript published was quite straightforward: the best strategy for a writer was to enter the printing house and attend the press in person. If this failed, one was bound to try forming alliances

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block printing - whether or not this was influenced by examples from the orient or an independent development is not certain - for religious illustrations and playing cards.

[62] Bassler 1998, 854.

[63] Johns 1998, 31.

with others, who could attend the printing-houses, and possessed the knowledge to intervene successfully.[64] This, of course, made the whole domain of printing uttermost political. Whereas the author was the producer of for example a manuscript concerning a matter of domestic politics, his abilities in getting the manuscript reliably published was the precondition for anyone else to ever hear about that piece of text. As writing of that pamphlet could be seen as a political act, the acceptance of it for publishing, the politics of printing, would then appear to be some kind of "politics of politics". For example one of the most famous pioneers of English printing, John Streater, held the "dexterous skill" of printing as a political power because of its vast effect to the whole culture of written language.

Benedict Anderson sees this "standardization" of national written languages as a major trait in the process of "imagining" the modern Western communities. Anderson finds this imaginative construction to be a product of mutual interaction between a "system of production and productive relations (capitalism), a technology of communications (print), and the fatality of human linguistic diversity".[65] When the elite markets were saturated, the natural move for the book publishers to make was to expand their entrepreneurship towards the masses, already possessing a substantial ability to read, thanks for the unauthorized "pirate books" affordable for them.

Books can therefore said to have undergone a process of "unitization". First, books were manually copied manuscripts (for centuries, the actual work of copying the books was mostly done by monks, priests, and Jesuit friars), each slightly different from the other. In a sense, each book was then the original, because no exact copy of it existed. After the emergence of printing technology in the mid-fifteenth century, the unique manuscripts could be edited and manufactured into publications. With the Protestant Reformation and the development of printing technology, the book prizes gradually lowered, and the amount of errors in printing process was diminished. In time, books became standard-quality "units" for transaction, industrial commodities with a final form and a market-set prize. Thus it can be argued, that capitalism has largely

[64] Ibid., 186.
[65] Anderson 1991, 42-43.

"assembled" the written language in forms it is used in "imagining" Western communities.

Networks, especially the Internet, could be seen as a sphere where the "official", written (communal) languages collide with the individual languages. Of course, there are some differences between the Internet web sites and the "network of books". First, there's no final form for cyberspace. The constant updating of cyberspace makes it, in terms of computer, a "RAMsphere" (Random Access Memory), whereas books, already given a "final" form, are from "ROMsphere" (Read Only Memory). Second, there was written text before books, and books were hand-written before the emergence of printing. Also, these books existed long before anything called a library or a "book network" emerged, but no single web site existed before the actual networks of cyberspace. Therefore it could be argued, that cyberspace as a form of representing information has been affecting the contents of it since the very beginning. Everything on the Internet has been created to fit the limitations and standards of the current information technology. Hence without abduction the supposed limits of information technology would also limit the ways people use it.

Finally, there is the question of authorship in cyberspace. In the beginning of printing era, book publishing was mostly a self-regulating business, because so few people could actually afford to such line of entrepreneurship. When the publishing circles were small, accusations of plagiarism - the actual term used was "usurpation" - flew constantly between authors. For example Isaac Newton was in one time both accused of usurpation and claiming, that he had been "usurped" (the interesting point here is that whom he called a "thief" was Leibniz). Later printing became supervised by a network of professionals considered suitable for the job.[66]

In computerized networks the amount of "anonymous" information is significant, and this has raised the question of the overall reliability of networks as medium. Also, the copyright issue on the Internet is largely unsolved. However, there already exist a court decision, declaring, that the publishing companies' copyrights don't automatically cover distribution in the networks.[67]

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[66] For example, in England book publishing was supervised and controlled by the Stationer's Company, which would accept or reject every authorized book published in England.

[67] In July 2001, the Random House publishing company lost its case against RosettaBooks, an Internet publishing house, which had, with the permission from the authors, published eight books, for which Random House had the paper print rights. In the New York State Court verdict it was declared, that the concept of a

3.4 Leibniz and Substance

In his search for a universal language of the matrix, Leibniz, to some extent, continued the Medieval tradition. Behind his ideal language stands a pre-modern model of human intelligence. The medieval Scholastics held human thinking to be more or less identical with logical reasoning. Reasoning functions along the lines of a superhuman model, which remains unaffected by the vagaries of feelings and spatio-temporal experience. Human knowledge imitates a Being, who knows things perfectly and knows them in their deductive connections. The omniscient Being transcends finite beings. Finite beings go slowly, one step at a time, seeing only moment by moment what is happening. A finite being cannot see clearly the things that remain behind on the path or the things that are going to happen after the next step. An infinite divine mind, on the contrary, oversees the whole path. God sees all the trails below, inspecting at a single glance every step taken, what has happened, and even what will happen on all possible paths below.

Human knowledge, argued Leibniz, should emulate this *visio dei*. Human knowledge should strive to know the way the Divine Being knows things. No temporal unfolding, no linear steps, no delays limit God's knowledge of things. The temporal simultaneity, the "all-at-onceness" of God's knowledge serves as a model for human knowledge in the modern world as projected by the work of Leibniz. What better way, then, to emulate God's knowledge than to generate a "virtual world" constituted by bits of information? In such a world human beings could enjoy a God-like instant access.

Leibniz' substance is a simple, unified, perduring existence, simple not in the sense of logical simplicity, but in the absence of spatial parts. A given individual substance is capable of functioning as the subject of propositions, the predicates of true propositions concerning the substance standing for attributes of the substance. Substances are also capable of uniting inconsistent attributes and

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"book" does not necessarily include "electronic books". One of the authorities used was a lexicon, in where a "book" was defined as "a factual or fictional document, printed on paper sheets". The harsh irony in the case was that the actual lexicon used had been printed by Random House.

are thus capable of change, having a certain attribute at one time but not at another, while always carrying, as imprinted on their own nature, the principles that govern the succession of their changes:

> "There are only atoms of substance, that is to say, real unities, that are absolutely devoid of parts, which are the sources of action and the absolute first principles of the composition of all things and, as it were, are the ultimate elements in the analysis of substantial things. One could call them metaphysical points. They have something vital, a kind of perception; and mathematical points are their points of view, from which they express the universe."[68]

In his early writings, Leibniz talks about a "simple substance" or an "entelechy". An entelechy, originating from Greek *entelecheia,* is that which realizes or "makes actual", what is otherwise merely potential. *Entelecheia* is intimately connected with Aristotle's distinction between "matter" and "form", or the "potential" and the "actual". Matter and form, however, are never separated: they can only be distinguished. In the case of a living organism, the sheer matter of the organism can be distinguished from a certain form or function or inner activity, without which it would not be a living organism at all. This "soul" or "vital function" is what Aristotle called *entelecheia* of the living organism. For him, rational activity was what distinguished man from animals.

Leibniz considered the existing (real) world to be a manifold of possible substances. It is not the only such manifold: there are infinitely many others, each of which constitutes a possible world alternative to this one. Every possible world has its own population of possible substances:

> "In every possible world everything is linked together (*tout est lié*). The universe – however it might be constituted – is a unified whole, like an ocean; even the smallest motion extends its influence to any distance, however large."[69]

Thus, every substance has imprinted on its defining nature, an ineradicable index of its entire environing world. No substance can be pried loose from its world-environment and transposed into some other possible world. Also, no possible substance can populate two distinct possible worlds, and no member of one world can be compatibly united with any member of any other. No two substances are completely similar, or differ solely in number: "there are not in nature two

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[68] Rescher 1979, 14; Gerhardt: *Die philosophischen Schriften von G.W. Leibniz.*
[69] Ibid., 49.

indiscernible real absolute beings."[70] This "identity of indiscernibles" is a fundamental logical principle in Leibniz' work: if we cannot tell or discern two things from each other, then they are the same thing.

3.5 Leibniz and Monadology

Leibniz splits the realm of the actual into two domains: the realm of *monads*, which forms the object of study of metaphysics, and the realm of the things of our everyday experience, the phenomenal world, which forms the object of study of the sciences in general, but pre-eminently of physics. These two realms are not disparate or disjoint, but are different aspects of the same world. The Leibnizian system of phenomena results from the system of monads, and is "well founded" in it.

"Monad" originates from Greek root *monas*, used by for example Euclides, and later by Pseudo-Dionysios, the founder of Christian Mysticism. The most famous "user" of the concept of monad was probably Giordano Bruno, but also in the Neo-Platonic writings of Henry More and Franz Mercurius van Helmont, the concept of monad has a steady stronghold.

For Leibniz, monad is an existing substance that is a member of the actual, and thus of the best possible world:

> "Monads cannot have shape, otherwise they would have parts. And consequently a monad, in itself, and at a given moment, cannot be distinguished from another except by its internal qualities and actions which cannot be otherwise than its perceptions (i.e. representations of the compound, or of what is outside, in the simple) and its appetitions (i.e. its tendencies to pass from one perception to another), which are the principles of change. A monad is as a center or a point where, simple though it is, an infinity of angles are found made by the lines that come together there."[71]

The feature of monads is that each of its new states is a "prelude" to others. As one could argue, the present is constantly "pregnant" with the future. Continuous change from one system of perceptions to another is the only "activity" of which

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[70] Ibid., 51.
[71] Ibid., 14; Leibniz: *Principles of Nature and Grace*, §2.

an individual substance is capable. Leibniz chooses to call it "appetition", defining it as "the tendency from one perception to another".

Monads differ from one another not in what they perceive but in point of view, with differing features of the things they perceived. Monads also differ in clearness of perception. A and B may perceive the same thing, but A perceives it more sharply than B does. Actually, argues Leibniz, the only thing monads can actually "do" in relation to one another is to perceive, and to agree in their successive states. All talk of causal interaction is thus purely metaphorical.

All material characteristics of the macro-objects of our everyday world are monadically derivative, or in Lockean sense, secondary qualities rather than primary ones. A characteristic is primary or "primitive" if it characterizes monads and derivative if it characterizes monadic aggregates. What is primitive is simply the series of the states or perceptions of monads and nothing else. The mental life of the monad is a procession of internal representations.

Leibniz calls these representations *Vorstellungen*, from *vor*, "in front of", and *stellen*, "to place". Realities are representations continually placed in front of the viewing apparatus of the monad, but placed in such a way that the system interprets or represents what is being pictured. The monad sees the pictures of things and knows only what can be pictured: the monad "knows" through the "interface". The interface "encodes" things, simulates them, and preserves them in a format the monad can manipulate in any number of ways. The monad keeps the presence of things "on tap", making them instantly available and disposable, so that the presence of things is represented or "canned". From the vantage-point of physical phenomenal beings, the monad undergoes a surrogate experience. Yet the monad does more than think about or imagine things at the interface. The monad senses things, sees them and hears them as perceptions. But the perceptions of phenomenal entities do not occur in real physical space because no substances other than monads really exist. Whereas the interface with things vastly expands the monad's perceptual and cognitive powers, the things at the interface are "virtual representations".

Leibniz' monadology speaks of monads in the plural. But how can monads coordinate or agree on anything at all, given their isolated nature? Do they even care if other monads exist? Leibniz argues, that each monad represents within itself the entire universe. Each monad mirrors the whole world, and each monad

represents the universe in a *mundus concentratus*, a "concentrated form". With socio-biological vocabulary, each cell-like microcosm contains a DNA-like macrocosm. As such, the monad reflects the universe like a "living mirror", whose appetites drive it to represent everything to itself. Since each unit represents everything, each unit contains all the other units, containing them as "re-presented". No direct physical contact passes between units. Monads never meet "face-to-face".

A monad doesn't necessary have a bodily appearance at all. Leibniz also uses the concept of a "dominant monad", describing them as one, which would "...detract (nothing) from the existence of other monads, since there is really no "interaction" (*commercium*) between them, but merely an "agreement" (*consensus*)".[72] Aggregates can become genuinely individuated things, "real unities", only by virtue of the presence of a dominant monad or *entelecheia*, a monad of the system, which, because of its hierarchic structuring, can perceive with a high degree of clarity all the other monads of the system. Such a dominant monad provides a sort of "central receptor" for their perceptions and, so to speak, using them as organs of perception and activity:

> "Monads do not constitute a complete composite substance since they do not make up a unity per se but merely an aggregate, unless some *vinculum substantiale*, a "substantial bond", is added."[73]

If every finite object consists of an infinite number of monads, what actually are monads? Since there is no space or matter in Leibniz, monads, like "souls" in Descartes, consist of *Vorstellung*. Monads have always had their representations: they were created with them. These representations represent everything, the entire universe in all eternity. Given this nature of monads, some questions arise. How can the representations of one monad agree with those of another if they are not physically or causally related? And how can monads have a representation of all eternity without destroying the "free will" for future events? Also, how can physical objects consist of an infinite number of monads and yet be, as we tend to think, inanimate and unconscious? Finally, without space, how can different monads appear in different places in physical objects?

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[72] Ibid., 111.

[73] Ibid., 115; Gerhardt: *Die philosophischen Schriften von G.W. Leibniz.*

Although the monads represent the same universe, each monad sees it differently. The differences in perception come from differences in perspective. These different perspectives arise not from different physical positions in space but from the varying degrees of clarity and intensity in each monad's "mental landscape". The appetitive impulses in each monad highlight different things in the sequence of representational experience. Their different impulses constantly shift the scenes they see: different monads run different "software".

Because Leibniz considers everything we see to be real, and because the monads have no extensions, this means that every finite object consists of an infinite number of monads, "angels". This rather bizarre conclusion is perhaps less strange when we realize that Leibniz is one of the co-inventors of calculus. Calculus in the seventeenth century was thought to deal with almost infinitely small quantities. Leibniz provided metaphysics to match this. No matter how small the quantity, there is a monad there. Such an extreme ontological pluralism, of course, stands in stark contrast with for example Spinoza, who was an equally extreme Monist.

The representations of different Leibnizian monads agree with each other because their Operator, namely God, has set it up that way. The representations have a "pre-established harmony", one of the most famous phrases in Leibniz, co-ordinated and ensured by God. According to the Leibnizian monadology, there can be only one actual universe. Despite their ultimately solitary character, the monads belong to a single world. The harmony of all the entities in the world comes from one underlying "operating system". Although no unit directly contacts other units, each unit exists in a synchronous time in the same reality. All their representations are coordinated through the supervisory role of the "Infinite Monad", namely God.

So God can be seen as the "Central System Operator", who harmonizes all the finite monadic units. For Leibniz, God is the only being that exists with absolute necessity. Without the Operator, taking in Leibniz the form of God, no one could get "online" to reality. Because of the Operator, each individual monad may live its separate life according to the dictates of its own wilful nature while still harmonizing with all the other monads online.

3.6 Leibniz and the City of God

The monads of the highest grade share with God in both the intellectual capacity for self-consciousness and the moral capacity for reasoned choice based on a vision of the good. Whereas all monads mirror the created world of other monads, the spirits are reflections of God as well. The spirits comprise *Cité de Dieu*, the City of God:

> "...this truly universal monarchy, (which) is a moral world within the natural world, and (is) the highest and most divine of the works of God. It is in this (sphere) that the glory of God truly consists, for He would have none of His greatness and goodness, were they not admired by spirits. It is, too, in relation to this divine city that He properly has goodness: whereas His wisdom and power are manifest everywhere."[74]

For Leibniz, spirits are unlike the lower monads in that they mirror with relative clarity not only the monads of the created universe, but God as well. The spirits thus constitute *Cité de Dieu*, which comprises the locus of moral responsibility and moral goodness in nature. *Cité de Dieu* overcomes all other similar decriptions about well-organized cities or city-like spheres. Leibniz describes a world, where each soul is both autonomous and separated from others. Together these souls form the Ultimate City, *Cité de Dieu*, where justice always prevails, and where all things always go the best possible way. *Cité de Dieu* is a perfect *ou topos*, a "non-place", because it neither exists on any sea or continent nor in any spatial location. As the mutual relations of monads reflecting each other, *Cité de Dieu* is everywhere, but as a place it is a mere abstraction.

It could be stated, that the goal of Leibniz' philosophy was the creation of "a universal society, which mirrors the Kingdom of Spirits, of which God is the head".[75] For Leibniz, the reunion of the churches, for example, was a pre-eminently feasible and moral goal. All human spirits would be citizens of *Cité de Dieu*, and one single theological system should be able to unite the religious principles of all "right-thinking" men.

Although our representation is allegedly of the entire universe, we are not aware of that because most of our representation is confused. It is so confused that

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[74] Ibid., 114-115; Leibniz 1965, §86.
[75] Rescher 1979, 154.

most of the universe is run together in a complete "mush". That mush is what we call "perception". For Leibniz, perception is just confused thought. That is the opposite of what one can find for example in the works of British Empiricists, for whom thought was merely dim perception.

Our representation is of all eternity, but Leibniz does not think that this precludes free will. We make free choices on the basis of what we know, but then what we know is what is presented to us in representations, whose unfolding have been pre-established. In Leibniz, like in Aristotle, final causes are "pre-packaged" within the substances. This does not sound very much like free will, but Leibniz does have an important point. Free will can be thought of as arbitrary will, but an arbitrary will really would just be random and irrational. This is how freedom will be thought of in existentialism, but it tells us nothing if we want free will to be rational. The fundamental point upon which Leibniz relies is that there are basic differences between causation and purpose. Causes are often hidden, but a rational will is going to have conscious and intentional purposes. If purpose is operative in an event but efficient causation is not, then this all by itself is a conception of rational will very different from determinism as in Spinoza. Spinoza's God drives us from behind, while Leibniz' God tempts us forward with selected information, at least of which we are aware.

In Leibnizian manner one can argue, that what we call "space" is just how we represent monads simultaneously in our perception. We think of different monads as spatially distinct because we are unable to conceive of their inner differences, which is more how God would represent them. With the identity of indiscernibles, each monad can be discerned by some "real" difference. The difference actually is that their representation, which is, after all, what they are, is slightly different. In perception, we construct this difference as meaning that they are in a different location in space and so have a slightly different perspective on the rest of the universe.

Even physical objects that seem to be indiscernible, like electrons, which are taken to be absolutely identical by a postulate of quantum mechanics, would be different for Leibniz because their history would be different, which means that the rest of the universe appears slightly different from their perspective.

Yet a word should be said concerning the pre-established harmony in its own right. It is a harmony that obtains among the monads, not a mutual causal

influence, because every individual substance is self-complete, and its development in time is fixed. Monads are self-complete, and their development in time is fixed. Monads are "windowless": they neither admit nor emit any causal impetus. They can only accord with one another in their states. This "protocausal" reciprocal accord extends throughout the universe and links all of its monads in one vast framework of mutual interrelation. According to Leibniz, humans lose sight of this

> "...because our senses lead us to judge only superficially, but in reality, because of the interconnection of things, the entire universe, with all of its parts, would be wholly different, and would have been another world altogether from its very commencement, if the least thing in it happened otherwise than it has."[76]

These interconnections are of an intimate lineage that continues operative in infinite detail throughout the course of historical development of the universe. All singular things are thus successive.

As argued, the purpose of Leibniz' theory was to provide a conceptually solid theory according to certain essentially orthodox views in ethics and theology. One could argue, that the works of Leibniz can be seen as a final link in the line of Christian Pansophism, in which scholars like Giordano Bruno, Tommaso Campanella, and Francis Bacon played a major role. Pansophism was the last attempt to create a unified European culture based on common religion. Pansophists shared a common utopist view on Christian society. The dream of having a scientific basis to all this emerged at the same time, when Christians had already separated into different dogmas, and science had been separated from strict Scholastic religious control. In Pansophism, the idea of collecting knowledge by scientific research was central. By practicing science, new things about the world created by God would be revealed, and, with this, people's love of God would automatically increase.[77]

Of course, Leibniz was somewhat a "pre-determinist" in his work on monadology. Because he was apt to unify Europe, his theory had to suit that very point of view. However, that doesn't shimmer the value of Leibniz' works. His observations about monadism are strikingly similar to the ones current scholars tend to make on cyberspace as a sphere. Of course, Leibniz was an utopist, and

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[76] Ibid., 65-66; Gerhardt: *Die philosophischen Schriften von G.W. Leibniz.*
[77] Siukonen 1995, 111-112.

therefore political indeed, both in his own time and now. From this, one could argue, that most of the current commentaries about cyberspace should be read the same way: not as actual "manuals" on "how cyberspace is", but more as political manifests about "how cyberspace should be".

4. A Deleuzean Interlude

"Inside looking outside
outside looking inside."
Remu: Let's Born to Rock.

The Baroque is most often seen as the art style of the Counter-Reformation in the seventeenth century. Although some Baroque features appear in Dutch art, the Baroque style was limited mainly to Catholic countries. It is a style in which painters, sculptors, and architects sought emotion, movement, and variety in their works. The art of The Baroque was aimed at creating works with the idea of an overwhelmingly impressive whole. For example, the German term *Gesamtkunstwerk* as the Wagnerian "total work of art" has been applied from this Baroque ideal. In the Baroque, the images tend to "break" their frames in order to form a continuous fresco, and join broader cycles, either of other aspects of the same image, or aspects of other images. The image presented is never an "essence" or an attribute, as in a symbol, but an "event", which is related to a history or to a series.

4.1 Leibniz and the Baroque

As to art, the concept of "baroque" can also be extended to cover some of the scholars of that time. Leibniz can be seen as "the philosopher of the Baroque,"[78] as Tom Conley argues in his foreword to Gilles Deleuze's book *The Fold.* The central element of understanding Leibniz and Baroque is the idea of "folds", different "levels" that emerge in a serial form, confusing the traditional ideal of "surface" and "space". As to space, this also goes to the concept of time. The individual experience of space and time is, however, the point Deleuze wants to emphasize. These "events", being something of the "pure empty form of time",[79] are something Deleuze sees as a "virtual sensation" of a somatic moment of "totalization" and dispersion. For Deleuze, an event "unfolds from the union of our perception and the duration of a fan that unites and disperses a word (an *event*) and an object (an *éventail*) when it swirls the atmosphere."[80] Leibniz was the first philosopher to deal with these experiences of events and also the world of atomic dynamics. Also, Leibniz' work consisted the problematic of the relation between organic and inorganic matter: if organic life cannot be clearly demarcated from inorganic matter, how should "matter" be considered in the first place?

Deleuze notes, that the totalitarian aspects of liberal democracy should to be atomised by conceptual thinking, making possible the use of "monadic sensibility" when considering issues of habitat and thinking. He also turns the concept of "monadology" into "nomadology" in order to describe individualistic thinkers who "deterritorialize" generally accepted notions of space. Here Deleuze evokes the romantic ideal of a "browser" by describing a "geophilosophical surfer", sliding on the waves that "envelopes mind, energy and matter", and diffusing them "into the atmosphere".[81]

Deleuze uses Leibniz' concept of "harmonics" to advocate the possibility of infinity to be thought within the restricted limits of our habitat. Deleuze argues, that Leibniz exemplified a system that does not flatten nature to a concept or a

[78] Deleuze 1993, xi.
[79] Pearson 1997, 7.
[80] Deleuze 1993, xii.
[81] Ibid., xv.

Heideggerian "world-picture". This, of course, is a consequence of the very fact, that Leibniz himself was often a "non-linear" thinker, with ambivalent points of view not to be localized.

Leibniz' theories are not specifically "objects" but, in Deleuze's lexicon, Baroque "territories": territories of contemplation for the mind. In this line of thought the subject lives and reinacts its own development as a "play of folds", without pitting the "self" against the static world. In Leibnizian manner, a flexible body is one with cohering parts that form a fold. These parts are not separated into "meta-parts" but rather divided to infinity in smaller and smaller atomistic folds that always retain certain cohesion. It is like a labyrinth: not a collection of individual separate points but more like "a sheet of paper, divided into finite folds or separated in to bending movements, each one determined by the consistent or conspiring surroundings".[82] Thus, unfolding is not the juxtaposition of folding, but following the fold up to the next folding. The model for the Leibnizian science of matter is, in this sense, like *origami*, the art of folding paper. Considering this with the identity of indiscernibles, as Leibniz calls it, it gives interesting a viewpoint, when it is projected against Deleuze's line of thinking: if two distinct things can be inseparable, two inseparable things can be distinct. Thus every man is, not an island, but more like an archipelago. Although singular monads, we are entities of infinite levels.

4.2 The Traits of Baroque

There are some notable traits that account for the specificity of the Baroque, making also possible stretching the Baroque beyond its historical limits. First, as Deleuze notes, the Baroque invented the infinite work or process, which continues a fold, bringing it to infinity. This fold affects matter so that it becomes formally expressive, determining and materializing Form itself. Second, the infinite fold moves between matter and soul, dividing them into the "inside" and the "outside". The monad is the autonomy of the inside, an inside without an outside. The

[82] Ibid., 6.

outside, the "façade", is an outside without an inside. This division is probably most clearly seen in the Baroque architecture, where the inside and the outside are clearly two separate things, leaving no visible trespasses. The façade was used as a matter to isolate the inner divine soul. Third, there is the division into two spiritual "levels", the two floors being one and the same world. The outer "façade-matter" goes down below, while the inner "room-soul" goes up above. The infinite fold the moves between these two levels, going "from matter to manner, from earth and ground to habitats and salons, from the *Texturologie* to the *Logologie*",[83] as Deleuze puts it. Everything is divided to Leibnizian binaries of 0 and 1. The "1", the monadic soul, is separated from the "0", but in Leibnizian monadology the "0", although claimed to be the "infinite number" for example by O. Bradley Gassler,[84] is not necessarily a "no-thing" or a void but rather filled with folded matter.

As Deleuze notes, "the definition of Baroque mathematics is born with Leibniz".[85] For example a labyrinth, he notes, cannot be represented by a straight line: it has to be intermingled with curved lines. With the Baroque invention of perspective, one forms a point of view about something, relating oneself to everything else. So, the Baroque subjects are defined as what "remains" in that point of view. Alfred North Whitehead calls this phenomenon a "superject". As the object becomes "objectile", the subject becomes a "super-ject" instead of a "sub-ject". From all this, as one can argue, the idea of a point of view replaces the idea of an absolute centre. A point of view is a power of arranging cases, a condition for the manifestation of reality. Following this, Deleuze describes a system of three kinds of singularities:

> "The physical point is what runs along inflection or is the point of inflection itself. The mathematical point...is a simple modality. It is only the projection of a third point in the body, the metaphysical point, the soul or the subject. Thus the soul is not in a body in a point, but...itself a higher point and of another nature, which corresponds with the point of view."[86]

According to Deleuze, the concept of monad is associated with Leibniz because of his two ways of "stabilizing" the concept. First, the mathematics of inflection

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[83] Ibid., 35.
[84] Gassler 1998, 868.
[85] Ibid., 17.
[86] Ibid., 23.

allowed him to posit the enveloping series of multiples as a convergent infinite series. Second, the metaphysics of inclusion allowed him to posit enveloping unity as an irreducible individual unity. As long as series remained finite or undefined, individuals risked being relative, called upon to melt into a "universal spirit" or a soul of the world that could complicate all series. But if the world is an infinite series, it then constitutes the logical comprehension of a notion or of a concept that can now only be individual.[87] The accord of singular points of view replaces universal complication, thus also replacing the "dangers" of pantheism and immanence.

But if each monad, as Leibniz argues, represents the whole universe, "the whole series", so to speak, why there is no single and universal point of view? As Deleuze notes, "God produces the world before creating souls since he creates them for this world that he invests in them".[88] In this sense, the soul also is an artefact or a "product". The soul results from the world that God has chosen. Because the monad is for the world, none of them contains the "reason" of the series of which they are all a result, and which remains outside of them. If the world is placed in the subject, then the subject gives the world the possibility of beginning over and again in each subject or monad. The monad thus becomes the "actuality", the expression of the world. The "virtual" becomes what the monad expresses in that world.

4.3 Monadic Interfaces

The Baroque ideal of a "total" creation can be argued to be found somewhat in the heart of cyberspace discourse. What is interesting is, that the idea of an outside and an inside in this virtual environment can get new meanings. Obviously, the idea of "not-being" in cyberspace could be seen through Leibniz' binary conception. Although not-being-in cyberspace by not logging in, the subject still exists "offline": one is not a void although "offline". On the other hand, the forms

[87] As Nicholas Rescher notes, this Renaissance evolution of spatially infinite universe from the finite cosmos of Aristotle gave for example Giordano Bruno a "near-demonic" delight, but for example Pascal was frightened by this "eternal silence of infinite spaces". (Rescher 1979, 31)
[88] Deleuze 1993, 25.

of existence in cyberspace create monads with the possibility to interact. Those monads are indeed separated, but they can be connected. However, as Leibniz argued, monads don't meet face-to-face, and neither do the "virtual monads" in cyberspace. The thing connecting them could be called an "interface", literally a "many-face", a fold, that actualizes the potential of a monad to become a part of the virtual *Cité de Dieu*. This interface would have the same kind of idea Leibniz and Whitehead have when they use the concept of "extension", meaning one element stretching over the following ones. As Deleuze argues, such a connection of the whole and its parts forms

> "...an infinite series that contains neither a final term nor a limit. The event is a vibration with an infinity of harmonics or submultiples, such as an audible wave, a luminous wave, or even an increasingly smaller part of space over the course of and increasingly shorter duration."[89]

The limits of that kind of "inter-facial" extension are not of the ones of time and space themselves, but abstract coordinates of all series, that are themselves in extension. For example, if one takes an example from cyberspace, a certain file can be transferred through an interface from one user to another, but it requires a certain amount of time, which depends on the line speed used. Then, the limit of that extension is not time itself, but "x/second", x describing the amount of extensive binary bits. Also, like binaries, time is here in extension: the minute, the second, the tenth of a second etc. When considered together with matter, in this case the binary data, time and matter form the interface, through which us monads, although claimed windowless by Leibniz, may realise our self-enjoyment through "downloading", taking for example the form of bitmap image of *The Death of the Virgin* by Caravaggio on our desktops.

4.4 A New Baroque?

In *The Fold* Deleuze argues, that what we are experiencing in our times is some kind of New Baroque or "Neo-Leibnizianism". The same construction of the point

[89] Ibid., 77.

of view over the city continues to be developed, but now it is neither the same point of view nor the same city. In our times, both the figure and the ground are in movement in space. The monad of today can be seen for example as a car speeding through city in the night. *Agoras* have become places to drive through, not to stop in order to contemplate.

In cyberspace, the individuals are usually there for not to meet anyone but to take care of something concerning primarily only that person (for example paying a bill in a network bank). This kind of communication is, in its very nature, monadic. No one intrudes your privacy or asks you to explain why you are doing whatever you are doing. Quite the opposite: your privacy is often secured. This is because the economical aspect of cyberspace requires secure connections. However, the technologies of digital "cryptography" can be applied to any kind of communication in cyberspace. This is one reason why cyberspace cannot be "mapped". All one can grasp from cyberspace is the outer façade: the interior is as protected by outsiders' eye as in architecture of the Baroque.

As claimed "global" as cyberspace is, cyberspace is still mostly about privacy, staying inside, "not-leaving" one's privacy, an exemplar of Deleuzean sedentary space. One can "browse" through the websites of exotic physical places without getting into a situation, in which one would actually have to take the risk of the place affecting one's inner harmony. The outside "textures" covering the interior of the monad is all that is revealed to others. Both the monad and the "virtual environment" he visits are left untouched by each other, like the American Adam and the city he rides through.

5. Virtual Reality or Real Virtuality?

"No return
no return
I'm deranged."
David Bowie: I'm Deranged.

For two thousand years, Western culture has puzzled over the meaning of "reality". Therefore, one cannot expect in two minutes, or even two decades, to arrive at the meaning of "virtual reality". The adjective "virtual" became something of the "keyword of the 1990's". Yet the concept "virtual" is nothing new, although its ubiquity is new, as is perhaps its current meaning. In 1902, "virtual" was defined by Charles Peirce as follows: "A virtual X (where X is a common noun) is something, not an X, which has the *virtus,* of an X." Peirce also made references for example to the thirteenth-century philosopher and logician John Duns Scotus' (1266-1308)[90] concept of *vitualiter*, "virtual knowledge".

[90] Scotism developed out of the Old Franciscan School, to which Haymo of Faversham, Alexander of Hales, John of Rupella, William of Melitora, St. Bonaventure, Cardinal Matthew of Aquasparta, John Pecham, Archbishop of Canterbury, Richard of Middletown etc. belonged. This school had at first but few peculiarities; it followed Augustinism (Platonism), which then ruled theology, and which was adopted not only by the Parisian professors belonging to the secular clergy (William of Auvergne, Henry of Ghent, etc.), but also by prominent teachers of the Dominican Order (Roland of Cremona, Robert Fitzacker, Robert of Kilwardby etc.).

Because of his early and sudden death, Scotus did not manage to write a *summa philosophica* as for example St. Thomas Aquinas did, but quite a lot of his separate work have been found so a representation of his philosophic standpoints can be roughly outlined.

5.1 John Duns Scotus and the Concept of Virtuality

The fundamental principles of John Duns Scotus' philosophical and theological work are his *distinctio formalis* and his idea of being. The *distinctio formalis* is an intermediate between the *distinctio rationis tantum*, "the distinction made by the intellect alone", and the *distinctio realis*, "which exists in reality". The former occurs between the definition and the thing defined, the latter within the realm of created reality, between things that can exist separately or at least can be made to exist separately by divine omnipotence.

In Scotus' work "soul" is not conceptually identical with the "intellect" or the "will", nor are intellect and will the same. Thus individuals have various realities, entities, or formalities of one and the same thing. So far as the thing itself exists, these entities have their own being; for each entity has its own being or its own existence.

Also, in Scotus' work things have real being: in other words, being is identical with existence. Before their realization, things have an essence, an ideal conceivable being, but not an actual one. Otherwise they could not be created or annihilated, since they would have had an existence before their creation. And since being is also true and good, only things, which actually exist, are really good and true. Therefore, if God gives existence to the essences, He makes them by this very act also true and good. In this sense, it is quite correct to say, that according to Scotus, things are true and good because of God. God alone is absolutely immaterial, since He alone is absolute and perfect actuality, without any potentiality for becoming other than what He is.[91]

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[91] Duns Scotus 1962, 62-63.

Since all created things, corporeal and spiritual, are composed of potentiality and actuality, the same *materia prima* is the foundation of all, and therefore all things have a common *substratum*, a common "material basis". This material may be determined to any sort of thing by a form: a spiritual form determines it to a spirit, a corporeal form to a material body etc.

Michael Heim argues, that John Duns Scotus used the Latin term *virtualiter* to bridge a gap between formally unified reality (as defined by our conceptual expectations) and our diverse experiences. "The concept of a things", Heim notes, "contains empirical attributes not in a formal way (as if the thing were knowable apart from empirical observations) but *virtualiter*, virtually".[92] Although we may have to dig into our experiences to unveil the qualities of a thing, the real thing already contains its manifold empirical qualities in a single unity, but it contains them virtually. Otherwise they would not be the "qualities" of that thing.

5.2 The Peircean Semiosis and Scotus' Conception of Virtuality

Charles Peirce was the universally acknowledged founder of modern semiotic, and it is to Peirce's semiotic that one may turn as an interpretive framework for understanding the phenomenon of virtuality in contemporary culture and technology. By a "sign" Peirce meant anything capable of standing to somebody for something in some respect. There is thus an irreducibly triadic relation among the sign, its object, and the one whom the sign stands for its object to. To stand in this relation to somebody is to be subject to interpretation in this person's mind, and this process of interpretation is the creation of a new sign in the interpreter's mind. Peirce labelled this new sign the "interpretant" of the original sign. As a pre-computer age scholar, Peirce may not have coined the phrase "every decoding is another encoding," but he certainly conceived the general idea behind it and made it the centrepiece of his theory of signification, cognition, and discourse.

In Peirce's view, as in John Locke's before him, thoughts were signs. Thus "semiotic" implies a complete "philosophy of mind", in which cognition is

[92] Heim 1993, 132.

thematized as the development of signs, not as a succession of conscious states of mind. Cognition consists in the manipulation of signs, which may be externally embodied. Finally, no present actual thought (which is a mere feeling) has any meaning, any intellectual value, for this lies not in what is actually thought, but in what this thought may be connected within representation by subsequent thoughts. Through thought, one always "encodes" something: hence the result is always something virtual. That is why one might argue, that "virtual reality" as a thought of "realising the virtual" is somewhat a contradiction in terms.

Peirce argued, that thoughts are inherently dispositional, a view echoing that of Scotus and later echoed by Karl Popper, who held knowledge to reside "exosomatically", in books, articles, and the like, rather than in the conscious experience of the authors or readers. It is its possibility or potentiality of being understood, or misunderstood, which makes a thing a book. This potential may, however, exist without ever being actualized or realized.

Peirce was not only making the point that without ink he would not be able to express his thoughts. Moreover, thoughts come to him in and through the act of writing, so that having writing implements is a condition for having certain thoughts, issuing from Fichtean "trains of thought", too long to be entertained in human consciousness. In this respect Peirce's semiotic doctrine of mind gives aid and comfort to some version of the very argument that literacy enables modes of thought, and hence contents of thought, unavailable to a purely oral culture. Also, Peirce's note is echoed in Popper's claim, noted above, that human knowledge depends on the evolution of exosomatic organs, such as pens, pencils, typewriters, and computers. From this, it could be argued, that in Peircean/Popperian way, computers and network are also these kinds of exosomatic organs, enabling new forms of thought.[93]

To sum it up, not only did Peirce clearly articulate the Scotistic concept of virtuality, but he also made it a centrepiece of his semiotic doctrine of mind, knowledge, and language. In addition, he adumbrated a potential critique of "artificial intelligence", and formulated an alternative conception of the cognitive role of machines. In this conception human reasoning, being the manipulation of internal and external signs, essentially involves the use of machinery, including

[93] More about the Peircean Semiosis, see Wiener, Philip P. (ed.): *Charles S. Peirce: Selected Writings.*

"hard" machinery, such as pens and computers, and "soft" machinery, such as alphabets and logical and mathematical notations. In Peirce's thought, then, one can find probably the most promising philosophical framework available for the understanding and advancement of the project of augmenting human intellect through the development and use of today's information technologies.

5.3 Virtual Reality

As Michael Ostwald argues, "virtual reality is the only environment other than politics for which truth is not determined as the adequacy of knowledge to reality".[94] Throughout the Western philosophical tradition, manifold theories or "epistemologies" have been elaborated, aimed at assessing how well our understandings refer to, describe or explain the "real". The enduring assumption is that the real is relatively fixed and its truth revealed by seeing it adequately. However, where the real becomes highly unstable as a result of the ability to remake it over and over in a manner both comprehensive and spontaneous, one is compelled to turn his attention away from this reality and towards the logic of "techno-science". This logic is one in which a fabulous reversal occurs between the fixity of the real and representation. Whereas, in modernity, science was a matter of representing the world adequately so that we might better control it, today it is as if science changes the world in a form in which our representations of it seem more and more adequate. The ideal does not conform to the real. The real conforms the ideal.

In his glossary of cyberterms, Michael Heim defines "virtual" as "a philosophical term meaning not actually but just as if". He also notes that the term in this sense goes back to John Duns Scotus. Heim argues, that "the ultimate experience of virtuality is a philosophical experience, probably an experience of the sublime or awesome".[95] For Heim, "the final point of a virtual world is to dissolve the constraints of the anchored world so that we can lift anchor – not to

[94] Holmes 1997, 10.
[95] Heim 1993, 7.

drift aimlessly without point, but so we can explore anchorage in ever new places".[96]

The word "virtuality", in the context of computers, may have been first used to describe interactive computer systems by Theodore Nelson, the inventor of the term "hypertext", who proposed this definition in 1980. By the virtuality of a thing Nelson meant the "seeming" of something, as distinct from its more concrete "reality", as an opposite of "real". While this may at seem equivalent to Heim's later definition, Nelson's definition represents a significant meaning shift from the traditional sense. This becomes clear when we contrast it with the definition offered in 1991 by the media philosopher Paul Levinson. Levinson defines a virtual X as "what you get when the information structure of X is detached from its physical structure".[97] Omitting the idea of cyberspace, Levinson takes examples of virtual classrooms, books and libraries. These two different concepts may be taken to reflect two different types of virtuality, understood as cultural phenomenas. As Peter Skagestag notes, "while Heim's definition is a general one, Levinson's definition takes virtuality to consist in functional equivalence, whereas Nelson's definition locates virtuality in equivalent appearance".[98]

Donating his share to all this, Michael Benedikt argues that virtuality is

> "...the realm of pure information, filling lake, siphoning the jangle of messages transfiguring the physical world, decontaminating the natural and urban landscapes, redeeming them, saving them...from the diesel smoke of courier and post office trucks...from all the inefficiencies, pollution (chemical and informational), and corruptions attendant to the process of moving information attached to things – from paper to brains – across, over and under the vast and bumpy surface of the earth rather than letting it fly free in the soft hall of electrons that is cyberspace."[99]

The idea of "being digital" is the basic concept in virtual reality. The idea behind virtual reality, Nicholas Negroponte claims, is to deliver a sense of "being there". Normally, mainly because of the hype of it, virtual reality is usually reduced as wearing a helmet with a display and data gloves. This experience created would, then, be something Negroponte calls "being there": forgetting the actual premises of one's physical appearance for *telepresence*, something manufactured and

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[96] Ibid.
[97] More about Levinson's work, see Levinson: *Taming the Beast. Control in the Electronic Jungle.*
[98] Skagestag, Peter: *Peirce, Virtuality, and Semiotic.* On: http:www.bu.edu/wcp/Papers/Cogn/CognSkag.htm.
[99] Benedikt 1992, 3.

created. In virtual reality, "reality" (people's material and symbolic existence) would become entirely captured, fully "immersed" in a virtual image setting, in a world of make believe, in which appearances are not just on the screen through which experience is communicated. The appearances become the experience.

So, what is the "essence" of virtual reality, its inner spirit, metaphysical motor that propels the technology? For example, Plato held out ideal forms as the "really real" while he denigrated the raw physical forces studied by his Greek predecessors. Aristotle soon demoted Plato's ideas to a secondary reality, to the flimsy shapes we abstract from the really real which, for Aristotle, are the individual substances we touch and feel around us. In Medieval period, real things were those that shimmered with symbolic significance. In Renaissance, things counted as real that could be counted and observed repeatedly by the senses: the human mind infers a solid material substrate underlying sense data but the substrate proves less real because it is less quantifiable and observable. Finally, the modern period attributed reality to atomic matter that has internal dynamics or energy, but soon the reality question was doomed by the analytical drive of the sciences toward complexity and by the plurality of artistic styles. The reality question, when dealing with virtual reality, has always been a question about direction, about focus, about what we should acknowledge and be concerned with. We should not therefore be surprised when virtual reality appears us as controversial and elusive. No final meaning for neither "reality", virtual", or "virtual reality" exists.

5.4 Rebuilding Reality

Behind the development of technology lies a vision. As Michael Heim proclaims:

> "The vision gives impetus to developers in the field even though the vision may not be clear, detailed, or even practical. The vision captures the essence of the technology and calls forth the cultural energy needed to propel it forward. Often a technological vision taps mythic consciousness and the religious side of the human spirit".[100]

[100] Heim 1993, 118.

Some visions neglect those things from our lifeworld that don't fit into its aestethic surroundings. For example, there are no toilets in *Star Trek* vessels, and we have no such cyberspace like the wildest visionaries of science fiction dreamed of. However, what has emerged with the network of computers we have, is the conviction that being involved in computer-mediated communication means entering a space that is fundamentally different to normal physical space because it transforms the relationship between our selves and our bodies.

Along with phasers and teleport, the *Star Trek* starship *U.S.S. Enterprise* introduced us the Holodeck. In *Star Trek*, the Holodeck is used by the crew of *U.S.S. Enterprise* to visit faraway times and places, offering the crew recreation, escape and entertainment on long voyages. However, the Holodeck can also be seen to portray the "ideal interface". It is a virtual room that transforms spoken commands into realistic landscapes populated with walking, talking humanoids and detailed artefacts appearing so lifelike that they are indistinguishable from reality.

However, some researchers knowingly avoid using the concept "virtual reality", not only because of the spectre of metaphysics it evokes, but also because of the large promises it raises. The term seems to make greater claims than do terms like virtual environment. Virtual reality may not be attainable with any technology we can create. The Holodeck may forever remain fiction. Rather than control or escape or entertain or communicate, the ultimate promise of virtual reality may be to transform, to redeem our awareness of reality-something that the highest art has attempted to do. Virtual reality promises not a better vacuum cleaner or a more engrossing communications medium or even a friendlier computer interface. It promises the Holy Grail.

The Holy Grail, as fiction as it is, sums up the aspirations of centuries. It is part of Hayden White -like Romantic narrative archetype, an image of the Quest. From Tennyson's romantic *Idylls of the King* to Malory's *King Arthur and the Knights of the Round Table*, the ancient Grail legend reaches back to Christian and pre-Christian times. As Heim notes, The Grail has always been a symbol of the quest for a better world. According to Heim

> "In pre-Christian times, the Grail was the cup that holds a cure for an ailing king who, suffering from his own wounds, sees his country turning into a wasteland. Christians believed the Grail to be both the chalice of Jesus' Last Supper and the cup that caught the

> Savior's blood at the Crucifixion. Medieval legend links the spear that pierced Jesus' side on the cross with the sacred cup that held his blood."[101]

Some later works of art like T. S. Eliot's *The Wasteland* and Richard Wagner's *Parsifal* have preserved the Grail story as a symbol of spiritual quest and lofty aspiration.[102]

If one thinks cyberspace as a sphere, where the former ideological *ethos* has been replaced with a more commercial one, an interesting analogy emerges. The conquest of cyberspace then shows itself quite similar to the story of the conquest of space. For example, the U.S. space program was a child of the Cold War. The May 1961 speech by President John F. Kennedy that set NASA's goals incorporated traditional elements of myth: heroic struggle, personal sacrifice, and the quest for national prominence. However, the thing that finally launched the U.S. space program was the fear of being surpassed by the Soviets, who had made a series of bold advances in human space travel. For the U.S., the goal of the Moon landing was an attempt not to be overtaken by the Soviet developments in manned space exploration.

Most of the people are not aware of the vision behind their Soviet competitors in space exploration. The need for information was more than mere imperialism or a vague lust for new uncharted frontiers: it was a moral mission, a complex and imaginative grasp of human destiny in the cosmos. The early Soviet

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[101] Heim 1993, 124.

[102] We might learn something about the esoteric essence of virtual reality by thinking about Richard Wagner's *Parsifal*. Wagner himself was searching for a Holodeck, though he did not know it. By the time he finished *Parsifal*, his final opera, Wagner no longer considered his work to be opera. He did not want it called opera or music or theater or even "art," and certainly not entertainment. By the time he finished his last work, Wagner realized he was trying to create another reality, one that would in turn transform ordinary reality. The term he came to use was "a total work of art," by which he meant a seamless union of vision, sound, movement, and drama that would sweep the viewer to another world, not to escape but to be changed. Nor could the viewer be a mere spectator. Wagner created a specially designed building in Bayreuth, Germany, well off the beaten track, where the audience would have to assemble after a long journey because he forbade the performance of *Parsifal* in any other building. The audience would have to prepare itself well ahead of time by studying the libretto, because *Parsifal* was long, mysterious, and full of complex, significant details. (Wagner's *Ring* cycle takes over fifteen hours to present a related myth.) Looking for the right terms to express his intent, Wagner called *Parsifal* "a festival play for consecrating the stage" (*ein Bühnenweihtestspiel*). The Bayreuth theater would become the site for a solemn, nearly liturgical celebration. The mythmaker would create a counterreality, one reminiscent of the solemn mass of the Catholic church, which appeals to all the senses with its sights, sounds, touch, drama, even appealing to smell with incense and candles. The audiences at Bayreuth were to become pilgrims on a quest, immersed in an artificial reality. Wagner hoped to do more than make music and theatre; he believed that his music dramas could transform society by imparting new feelings and attitudes. This goal he shared with traditional religion; and religion returns the competition with distrust and the accusation of heterodoxy. For this reason, Wagner's work remains to this day controversial among religious people, including many artists and musicians who have strong religious faith. (Heim 1993, 124-126). For more about Richard Wagner and his time in Bayreuth, see for example Frederic Spotts (1994): *Bayreuth: A History of the Wagner Festival*. New Haven and London: Yale University Press.

rocket pioneers, who gave the impetus to the program, felt there was an essence to their space technology, a deep inner fire that inspired and directed the research. They felt an existential imperative that drew on the religious and cultural traditions coming down through the main stream of Russian history. As Heim notes, this essence was

> "...not itself technological, and so we might call it the esoteric essence of space technology, the hidden core of ideas that in themselves are not technological. In fact, the ideas behind the first space exploration were lofty, awe inspiring, and even mystical."[103]

The visionary ideas fueling Tsiolkovsky and the early Soviet explorers came from N. F. Fedorov.[104] Nikolai Fedorovich Fedorov (1828-1903) was a powerful source of inspiration to a whole generation of Russians who sought to understand how modernization connects with traditional religion and culture. His profound vision applied certain strands of Russian Orthodox spirituality to the harnessing of modern technology.

Fedorov's vision emphasized the classic, uttermost close relationship of man and nature. In Orthodox art for example water is seen as a redeemer, washing away our sins, and the rain is something delicate, aesthetic. The soil is something one wants to be a part of, and by that become one with the past generations.

In Fedorov's thought, in the ideal situation man would dominate nature, but in a special way. Unique to Fedorov's vision is its guiding moral spark. Instead of basing the conquest of nature on dominance, aggression, and egoism, Fedorov shunned the notion that humans should rule the cosmos out of a selfish desire for material wealth and abundance. Instead, he envisioned the conquest of nature as an act of altruism. But being generous to future generations can be less than purely altruistic, for they can return the favour by their acclaim of our deeds.

Fedorov's strategy was to channel science and technology towards the reunion of all humanity. Without such a high aim, a heartless science would ultimately turn against society. For him, and for the many Soviet scientists inspired by him, the ultimate aim of the space program was quite literally, nothing

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[103] Heim 1993, 119.

[104] For more about N.F Fedorov, see N.A. Berdyaev's article (trans. by S. Janos) "On N.F. Fedorov", originally published as a part of article "Tri Iubileya: L. Tolstoy, Genrikh Ibsen, N. Fedorov" in *Journal Put* in 1928 (No. 11, 76-94). The translation by S. Janos is available on http://members.nbci.com/frsjanos/berdiaev/berd_lib/1928_333.html.

less than resurrecting the dead, bringing back the ones that live only in our memories. As Heim argues:

> The resurrection of all our dead ancestors, and it alone, provides a lofty enough ideal to mobilize humanity to explore the entire universe, including outer space. Fedorov found this thought in Russian Orthodox Christianity. According to Christian belief, the dead will rise again so that Christ, in a final judgement, will reorganize and completely redeem the world. The bodies of all human beings will one day rise again, and this resurrection, according to Fedorov, will take place through the work of human beings who carry out the divine plan. The long-range goal of human cooperation must be to discover the laws of nature to such a depth that we can eventually reconstitute the bodies of past human beings from their remaining physical particles still floating about in the universe.[105]

This vision is interesting when contrasted with the vision of the U.S. space program. The "commercialization of space", as promoted by NASA since the late 1970's, offers civilian entrepreneurs new opportunities for investment. To cover this obvious self-interest, a mythic notion from the U.S. history adds the sense of a new frontier. As a mere resource for commerce, space appears as a new frontier beyond Earth. The vision even draws on the California Gold Rush in the nineteenth century, the spirit of enterprise. However, the word "enterprise" shows where the commercialization of space falls short. As the Russian case showed, the idea of commercialization fails to touch the essence of space exploration, for commercial interests will neglect the long-range research needed for space science. In short, this kind of exploration envisions no future but only short-range profit.

The story of virtual reality seems to have the same kind of romantic connotations as the biblical Holy Quest waiting to be fulfilled. However, when discussing actual information technology, the potential of virtual reality requires some sphere in order to "realise" itself. This particular sphere is something that is usually called "cyberspace".

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[105] Heim 1993, 120.

6. Conceptualising Cyberspace

"I love you in a place where there's no space or time."
Ray Charles: Singin' My Song.

Cyberspace is more than a mere breakthrough in electronic media or in computer interface design. With its virtual environments and simulated worlds, cyberspace could be considered as a "metaphysical laboratory", a tool for examining our very sense of reality. But why be satisfied with a single virtual world? Why not several? Must we pledge allegiance to a single reality? Perhaps worlds should be layered or "folded" in Deleuzian manner, like onion-skins, "realities within realities", or loosely linked like "neighbourhoods", permitting free aesthetic pleasure to coexist with the task-oriented business world.

Important as these questions are, they do not address the ontology of cyberspace itself, the question of "how cyberspace is": what it means, in Heideggerian sense, "to-be-in" the virtual world. They do not probe the reality status of our metaphysical tools or tell us why we keep inventing virtual worlds. They are silent about the "essence" or "soul" of cyberspace.

6.1 Neuromancer in the SimCity of God

Probably the most famous definition of cyberspace was constructed as a "side-product" in the cyberpunk novels of William Gibson, known to both technical and literary researchers as the coiner of the term "cyberspace". Looking back it seems to make sense, that the idea of cyberspace was originally coined by a science-fiction writer. When William Gibson published his key novel *Neuromancer* in 1984, presenting the concept, the Internet as we've learned to grasp it was literally a fictional sphere. Gibson's fictional conception of cyberspace was of a sphere collating all the information in the world, entered by disembodied consciousnesses. In *Neuromancer,* the main character Case listens to a history of cyberspace, describing cyberspace as

> "...a consensual hallucination experienced daily by billions of legitimate operators, in every nation,...lines of light ranged in the nonspace of the mind, clusters and constellations of data. Like city lights, receding."[106]

In 1980's, computing became old enough to display an evolutionary past. Primitive scraps of computer code - once independent programs - could live on even if their "host" program was deleted. The model of "an artificial mind" was not of one program handling every data but more like an array of programs, not an unconditioned logical entity but an organism with a history and variously functioning parts, yet still orchestrated by a governing master control.

This is the starting point from where Gibson steps into his imagined cyberspace. Gibson fuses cognitive science with fashion and computer technology, taking on speculations from anthropology and linguistics. The result is a mind, which is seen as a vast assemblage of bits of code. The "escape from the flesh" is also imminent in Gibson's work: cyberspace is what happens when computer network users re-enact Descartes. Plugged into the matrix of computer code, the minds of the users receive input in the form of naked binary code. As

[106] Gibson 1984, 67.

Gibson puts it, the users of cyberspace "decide by an act of will to perceive this input as a space with objects in it, a world in which they can act."[107]

Gibson's vision of cyberspace has four key parts. First, bodiless consciousnesses live there. Cyberspace in Gibson's work is often described with architectural images like cities and skyscrapers.[108] The Gibsonian cyberspace is made of information only, offering great power for those who can manipulate information. It is also possible to attain immortality in Gibsonian cyberspace, because there everything is data only. In fact, in Gibson's books many of the characters decide to give up their physical appearances, their "meatspace", in order for "pure" existence in cyberspace. For Gibson, being-in cyberspace is therefore a continuous, somehow timeless, never-ending grid on which different constructions emerge. Although this view of immortality is perceived as science-fiction, at the same time it is somehow like a classic *film noir* plot; immortality in Gibsonian cyberspace requires constant updating and developing one's data in order to "outsmart" other data-consisting beings from deleting you. It's just like chasing *The Maltese Falcon*; the thing to be gained is unclear and undefined, but everybody still wants it more than anything else.

In Gibson's novels, cyberspace is often conceptualised as "matrix", a sphere constructed out of information. It appears as some sort of *ou topos* because it is where physically separated individuals meet. Politically thinking, Gibsonian cyberspace is not conceived as free and equally open. Rather than being democratic, it is an economically divided space.[109] Access to the heavily protected

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[107] Ibid., 67.

[108] Cyberspace as a topic has interested architects around the world since it emerged. For example, architect Michael Benedikt defines cyberspace as "the electronic space of data and representations generated, organized, and presented consistently to all viewers connected to a set of globally-networked computers".[108] He argues, that cyberspace is ultimately constituted by information, information spread through space and seeking, almost of itself, to maximize its own complexity and organization. To him, also cyberspace can be experienced at some level spatio-temporally, cyberspace, like cityspace, can be inhabited, explored, and designed. What Benedikt argues is, that community, economy, art, design, commerce, recreation, and other urban amenities are possible in both worlds, in the real and the virtual, in cityspace and in cyberspace. (Benedikt 1993: *Cityspace, Cyberspace, and The Spatiology of Information.* Invited lecture delivered at the "New Urbanism Symposium". Written for Boyer & Gandelsonas: *The New Urbanism.* The whole lecture is available on: http://www.ar.utexas.edu/center/benedikt_articles/cityspace.html)

[109] Tim Jordan argues that this occurs in three ways. First, the largely contingent spatial divisions between nation-states are dissolving as the new technologies facilitate an ever greater global reach. State power thus seeps upwards towards new global political agents - the multi-nationals and the new global supranational political formations. Second, power seeps downwards away from national boundaries towards spatially more regionalised zones. Third, state power seeps towards individuals - the new global citizens wired up to the Internet who, through the unintended consequences of their actions, are busily forming new patterns of sociality, new virtual communities and thus new bases of power. For the new global citizenry, the inhabitants

citadels of knowledge and information held by large corporations (and the military) is available only to those who work for or control those organisations or for those who possess the required individual skills to find a their way around. The latter possibility gives an exceptionally talented individual a chance to gain significant power, somehow "equalising" the dystopian social structures Gibson describes.

However, it is important realising, that in Gibson's cyberspace a single genius or even a small group of smart people are not enough to create something called "artificial intelligence". It is because artificial intelligence is not an entity to be created, but rather a side-effect of the complexity of all interconnected data processing networks. Another thing is, that because of the straight or raw data input, Gibson's cyberspace is a total vision, leaving no room for being "offline". Gibsonian cyberspace does not exist in world: it *is* The World, some kind of meta-world of the worlds of the users in it.[110] No more people visit cyberspace; they abandon the "real" world for good.

The appeal of seeing society's data structures in cyberspace, if we begin with William Gibson's vision, is like the appeal of seeing the *Blade Runner* -like metropolis in the dark at five thousand feet; a great warmth of powerful, incandescent blue and green embers with red stripes that beckons the traveller to come down from the cool darkness. We are the moths attracted to flames, and frightened by them too, for there may be no home behind Platonic lights, no secure abode behind the vast glowing structures. There are only the fiery shadows of dream and longing. All this is like a virtual love affair between humans and computers, a Hayden White -like Romance between Man and Machine.

Keeping this in mind, one could argue, that the allure of cyberspace is more than utilitarian or aesthetic: it is erotic. Instead of a refreshing play with surfaces, as with toys or amusements, our love affair with information machines announces a symbiotic relationship and ultimately a "mental marriage" to technology. The world rendered as pure information not only fascinates our eyes and minds, but

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of the mini-citadels of the globe's major urban centres, the nation-state and other more proximate sources of self-identity are increasingly becoming an irrelevance. (Jordan 1999).

[110] In Gibson's "real" world, outside cyberspace, it remains unclear whether there are any nations or not. The most relevant social actors are either large corporations or cities or urban sprawls that appear as vast, semi-militarised zones. Structures of power are not destroyed by cyberspace but are rearticulated within it. It seems, that in Gibson the nation-state no longer is functioning in the interests of collective capital; the nation-state has withered to such an extent that it is just another business with little or no legitimacy whatsoever. It is certainly no longer the apex of a rational democratic authority of any sort. (Jordan 1999, 27).

also captures our hearts. We feel augmented and empowered. Our hearts beat in the machines. This is indeed Eros at work.

For Gibson, cyber-entities appear under this "sign of Eros."[111] The characters of *Neuromancer* experience cyberspace as a sphere for rapture and erotic intensity, powerful desire and even self-submission. In this matrix, things attain a supervivid "hyper-reality". "Ordinary" experiences seem dull and unreal by comparison. Case, the data wizard of *Neuromancer*, awakens to an obsessive Eros that drives him back again and again to the information network:

> "A year (in Japan) and he still dreamed of cyberspace, hope fading nightly.... Still he'd see the matrix in his sleep, bright lattices of logic unfolding across that colorless void.... He was no longer console man, no cyberspace cowboy.... But the dreams came on in the Japanese night like livewire voodoo, and he'd cry for it, cry in his sleep, and wake alone in the dark, curled in his capsule in some coffin hotel, his hands clawed into the bedslab, . . . trying to reach the console that wasn't there."[112]

As Michael Heim notes, the sixteenth-century Spanish mystics John of the Cross and Teresa of Avila used a similar point of reference. Seeking words "to connote the taste of spiritual divinity, they reached for the language of sexual ecstasy".[113] They wrote of the union of meditation in terms of the "ecstatic blackout" of consciousness, "the *llama de amor viva* piercing the interior centre of the soul like a white-hot arrow, the *cauterio suave* searing through the dreams of the dark night of the soul".[114] This intensity of Gibson's cyberspace inevitably conjures up the reference to sexual arousal, and finally to climax:

> "Now she straddled him again, took his hand, and closed it over her, his thumb along the cleft of her buttocks, his fingers spread across the labia. As she began to lower herself, the images came pulsing back, the faces, fragments of neon arriving and receding. She slid down around him and his back arched convulsively. She rode him that way, impaling herself, slipping down on him again and again, until they both had come, his orgasm flaring blue in a timeless space, a vastness like the matrix, where the faces were shredded and blown away down hurricane corridors, and her inner thighs were strong and wet against his hips."[115]

In Plato's *Symposium*, Diotima, the priestess of love, teaches a doctrine of the spiritual roots of the erotic drive. She tracks the intensity of Eros continuously from physical attraction all the way to the mental attention of mathematics and

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[111] Heim 1993, 86.
[112] Gibson 1984, 4-5.
[113] Heim 1993, 86.
[114] Ibid.
[115] Gibson 1984, 33.

he biological sex drive, she explains to Socrates,
:e we continually seek to expand our knowledge.

lrive to extend our finite being, to prolong something of our
ortal existence. But Eros does not stop with the drive for
extend ourselves and to heighten the intensity of our lives in
:he longs to perpetuate itself and to conceive offspring, and
sense, by conceiving ideas and nurturing awareness in the
r own. The psyche develops consciousness by formalizing
eriences through clearly defined entities. But Eros motivates
ıow more deeply. So, according to Plato, the fully explicit
ve are conscious help us maintain life in a "solid" state.[116]

separates this Platonic notion of knowledge from
s.[117] There seems to be an ontological continuity,
:dge of ideal forms to the information systems of
ıns to outrun the drag of the flesh, by attaching
.lly attracts the mind. As Platonists and Gnostics
that guides us to Logos. However, this erotic drive
ain its fulfilment. Left on its own, Eros naturally
ɔf tangents, most of which come from sensory

:lls the well-known story of the Cave in which
everyday life learn to love the fleeting, shadowy
of the dungeon of the flesh. In *The Cave Allegory*
ato's brothers, discuss about the human nature and
.cerpt, one might argue, tells also something about
:ocrates asks Claucon to imagine the world as a
g and wide entrance open toward the light". The
ı distant fire burning far above and behind them.
: just like us. He asks Claucon:

'thing of themselves and one another? Or do they merely see
l on the side of the cave facing them, cast by the fire above

for "mother", the generative-erotic origin.

Claucon replies:

> "How could they see one another if they're forced to keep their heads turned in one directions throughout their whole lives?"

Later, after describing the isolation of these people from one another, Socrates argues, that what the chained people held to be the truth would be "nothing more than shadows". "If one of these men would be lead into the light", claims Socrates, asking Claucon:

> "what do you suppose this man would say if someone told him that he'd only been looking at shadows and now he was seeing real things? Wouldn't he feel at a loss?"[119]

With their attention forcibly fixed on the shadowy moving images cast by a flickering physical fire, the prisoners passively take sensory objects to be the highest and most interesting realities. Only later, when the prisoners manage to get free of their corporeal shackles, do they ascend to the realm of active thought, where they enjoy the shockingly clear vision of real things, things present not to the physical eyes but to the mind's eye. Only by actively processing things through mental logic, according to Plato, do we move into the upper air of "reliable truth", which is also a realm of intellectual beauty stripped of the imprecise impressions of the senses. Thus the liberation from the Cave requires a "re-education" of human desires and interests. It entails a realization that what attracts us in the sensory world is no more than an outer projection of ideas we can find within us. Education must redirect desire toward the formally defined, logical aspects of things.

Filtered through the computer matrix, all reality becomes patterns of information. When reality becomes indistinguishable from information, then even Eros fits the schemes of binary communication. Bodily sex appears to be no more than an "exchange of signs" on the genetic corporeal network. Further, the erotic-generative source of formal idealism becomes subject to the laws of information management. Just as the Taoists of ancient China created a *yin-yang* -cosmology

[119] The excerpts from *The Republic* were taken from translation by Benjamin Jowett.

that encompassed sex, cooking, weather, painting, architecture, and martial arts, the computer culture interprets all knowable reality as transmissible information.

In *Neuromancer*, William Gibson raises the deepest ontological question of cyberspace by suggesting that the master-computer simulates the body and personality of Case's beloved. A simulated, embodied personality provokes the sexual encounter. Why? Perhaps because the cyberspace system, which depends on the physical space of bodies for its initial impetus, now seeks to undermine the separate existence of human bodies that make it dependent and "secondary". The ultimate revenge of the information system comes when the system absorbs the very identity of the human personality, absorbing the opacity of the body, grinding the meat into information. In an ontological turnabout, the computer counterfeits the silent and private body from which mental life originated. Information digests even the secret recesses of the caress. In Gibsonian cyberspace, the Platonic Eros becomes the master of artificial intelligence, controlling Logos.

Leibniz' monadological metaphysics bring out certain aspects of the erotic ontology of cyberspace. Although monadology does not actually describe a fully computerized sphere of information, of course, it does suggest some of the "inner" tendencies of it. These tendencies are inherent in the structure of cyberspace and therefore affect the broader, "outer realities" in which the matrix exists. However, the monadological metaphysics show us a cultural topography riddled with deep inconsistencies.

First, cyberspace seems to supplant physical space. We see this happening already in the familiar cyberspace of online communication: telephone, e-mail, etc. When online, we break free, like the spiritual monads, from bodily existence. In this vision, telecommunications offer a freedom of expression with far less hierarchy and formality than are found in the "actual", primary social world. However, isolation persists as a major problem of contemporary urban society. With telephones and televisions, the computer network can also be seen as a counter-measure: for many, networks act as "computer antidotes" to the alleged "atomism of society". In this vision, the networks are used to "assemble" the monads.

What technology gives with one hand, it may take away with the other. Technology increasingly eliminates direct human interdependence. While our

devices give us greater personal autonomy, at the same time they disrupt the "familiar networks" of direct association. Because our machines automate much of our labour, we simply have less obligatory things to do with one another. Association becomes a voluntary, conscious act of individual will.

Different cybernetic visions may be seductive for someone dreaming of a Brave New World, but a healthy amount of caution and criticism is recommended, as Tim Jordan points out. Gibson's image of "total cyberspace" can easily misdirect us from the existing matrix, our present "reality", wherein the cyberspace as a phenomenon has emerged. This is important, because all too many scientists read this kind of science fiction literature as actual social and cultural theory. When these kind of fictional dreams of a one man assume the status of a theoretical prophecy, the temptation is to turn (Har-)away from what is actually occurring because "we have seen The Future". As Jordan argues, "visions like Gibson's should be taken as necessary and essential intellectual framework within which the cyberspace is being shaped".[120] However, to grasp the nature of Gibsonian cyberspace, the dreams of Gibson must be described and related to the physical reality of the matrix. If either of these sides is ignored, emphasises Jordan, "we may fail to see the real conditions of computers, phone lines and code that create cyberspace or fail to recognise the possibilities that are dawning".[121]

Finally, "online freedom" seems paradoxical in Gibsonian cyberspace. If the alleged drive to construct "cyber-entities" comes from Eros in the Platonic sense, and if the alleged structure of cyberspace follows the model of Leibniz' computer God, then cyberspace rests dangerously on an underlying fault of paradox. Remove the hidden recesses, the secret "lure of the unknown", and you also destroy the erotic urge to uncover and reach further; the source of yearning is destroyed. Set up a controlled virtual reality, place yourself in a computer-simulated environment, and you undermine the human craving to penetrate what is novel, surprising, and unpredictable. In one sentence, this kind of "computer God" can be argued to rob us the possibility of individual "browsing" and abduction.

With the free access to unlimited corridors of information comes the complementary threat of "total organization". Beneath the artificial harmony lies

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[120] Jordan 1999, 22.
[121] Ibid., 23.

the possibility of surveillance by the all-knowing God: the Central System Monad, wielding its invisible power over all members of the network. The infinite CSM holds the key for monitoring, censoring, or rerouting any piece of information or any phenomenal presence on the network. The integrative nature of the computer shows up today in the ability of the CSM to read, delete, or alter private e-mail on any computer-mediated system. Those who hold the access to the system, technically and economically, have access to anything in the system. The CSM will most likely place a top priority on maintaining and securing its power. While the matrix users feel geographical and intellectual distances melt away, the price they pay is their ability to initiate uncontrolled and unsupervised activity. Instead of "knowing", they have to abduct things in a pre-created sphere, where no one but CSM possesses the "wisdom" for initiative unfolding.

According to Leibniz' monadology, the physical space perceived by the monads comes as an inessential by-product of experience. Spatio-temporal experience goes back to the limitations of the fuzzy finite monad minds, their inability to grasp the true roots of their existence. From the perspective of eternity, the monads exist by rational law and make no unprescribed movements. Whatever movement or change they make disappears in the lightning speed of God's absolute cognition. The flesh, Leibniz maintained, introduces a cognitive fuzziness. For the Platonic imagination, this fuzzy incarnate world dims the light of intelligence, limiting our bodily existence to the "Cave of Flesh".

6.2 The Final Frontier

> "Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind. On behalf of the future, I ask you of the past to leave us alone. You are not welcome among us. You have no sovereignty where we gather."[122]

If that piece of text sounded like a declaration of independence, it is because it was one. The writer of this *Declaration of the Independence of Cyberspace* is John Perry Barlow, a 1947-born retired cattle rancher, and former lyricist for the

[122] Barlow: *Declaration of the Independence of Cyberspace.* For the whole declaration, see http://www.eff.org/~barlow/Declaration-Final.html.

band *Greatful Dead*, Republican state senatorial candidate (failed) and co-founder of The Electronic Frontier Foundation (EFF), meant to promote freedom of expression in digital media. Because of his declaration, Barlow has been often called "the Thomas Jefferson of Cyberspace".

Barlow defines the concept of cyberspace quite loosely by stating:

> "Cyberspace consists of transactions, relationships, and thought itself, arrayed like a standing wave in the web of our communications. Ours is a world that is both everywhere and nowhere, but it is not where our bodies live".[123]

Besides cyberspace, one cannot forget the concept of "electronic frontier" when discussing John Perry Barlow. For Barlow, frontiers are lines between what a culture or society knows about itself, often called its "civilisation", and what a culture or society does not know about some other place. "The fundamental power of the metaphor of the frontier", argues Tim Jordan, "is to take as protean a form of communication as cyberspace and conceive it as space".[124] This is, Jordan continues, "the reason why the metaphor of the frontier is the foundation metaphor for cyberspace, because it conceives virtual life fundamentally as a place, and nearly all other metaphors for cyberspace follow this conception".[125]

However, this mythical electronic frontier is a two-sided entity. First, a frontier is something "untamed", an outlaw region, where (in this case electronic) cowboys take care of themselves and mind their own businesses, without any government looking after them. Then, any common legislation about the premises of that frontier becomes unacceptable. It's like the old Law of The West: the fastest man is always right. From this basis people may create communities or choose to live solitary, self-determined lives. The spirit here is clearly libertarian, and from this basis genuine communities may, according to Barlovian ideology, be created. Frontiers, by their nature, do not include all the organised amenities of civilization, often things necessary for survival are absent. This, Barlow states, draws people into "authentic" social relations, although the obvious critic would probably argue, that in these kinds of situations people only do whatever they do only because they don't have a choice.[126]

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[123] Ibid.
[124] Jordan 1999, 176.
[125] Ibid.
[126] In other words, one has to co-operate because of the circumstances, just like for example in a hostage situation.

Second, there's the narrative element of a frontier. John Perry Barlow used to be a cattle farmer (that's where all of his money comes from, not cyberspace), which no doubt affects his conception of how to perceive land, community and other people. One can argue, that calling cyberspace a Wild West -like electronic frontier is just as fictional as the Gibsonian version. Many researchers claim, that the real West was nothing like we've thought ourselves to believe. And where we've learned those things from are pure fictional products like Hollywood Westerns, where American Adams protect the settlers from Indians. That's why it is somehow incorrect to argue, that frontier is a boundary between the civilised world and the unknown: it may as well be a boundary between two different civilisations or cultures. If one, however, calls cyberspace a frontier, it means, that cyberspace is a sphere in where people can move and occupy. Because of the existence of the settlers, cyberspace cannot be left completely untouched. Defining cyberspace a place allows notions of control and domination of purchase on the virtual lands. Cyberspace defined as an "electronic frontier" becomes, then, a sphere available for individual possession, an economical sphere.

However, for Barlow cyberspace is not about possession: it's a Holy Crusade. What Barlow is clearly arguing for is that a "virtual community" with particular values exists in cyberspace, and that those values are not similar to those practised by (the U.S.) government. His efforts for planting a flag on behalf of cyberspace is the result, not the cause, of an existing imagined community in cyberspace, not necessarily a nation, but a political community. It is also clear, that the romantic notion of a heroic crusade lies in the background of Barlow's vision of cyberspace. In an article written with Mitchell Kapor in 1990, Barlow argued, that:

> "...while our (EFF) agenda is ambitious to the point of audacity, we don't see much that these issues are being given the broad social attention they deserve. We were forced to ask: if not us, then who? Our original objectives were modest. We were prepared to fight a few civil libertarian brush fires and go on about our private work. However, examination of the issues surrounding these government actions revealed, that we were dealing with the symptoms of a much larger malady, the collision between society and cyberspace. We have concluded that a cure can lie only in bringing civilization to cyberspace."[127]

As modest as a way Barlow tries to put it, it is his task to heal the world, whether virtual or not. The philosophically narcissist dream behind him is an eternal one;

[127] The whole article can be read on: http://www.eff.org/pub/Publications/John_Perry_Barlow/HTML/eff.html

it's all about the "republic of love and peace", the "Monopolis of goodness" and implicit justice, in which all disputes can be consensually settled, and where differences can be dissolved in a "final end of reconciliation". No politics would be required, just like in the visions of Marx and Yoneji Masuda, because nothing "political" or even with the potential of "becoming political" would exist anymore.

The Gibsonian vision of cyberspace was one of a renegade-like world, where our physical appearances, our "meatspace", has lost its meaning, because everything important, everything worth living, happens online. The ideal subject in Gibson's work is an entity based solely on data, powerful enough to conquer any existing computer there is. That's probably the reason why William Gibson has been hailed as a leading visionary in underground *hacker* communities for years.

The Barlovian cyberspace is some sort of "safehouse" for ideas, and probably for ideals, something untouched by "cold realism" of the offline world.[128] However, Barlovian cyberspace is not as free as Barlov himself seems to think it is. Possessing the practical skills required to master the Gibsonian cyberspace are very useful also in the Barlovian cyberspace. Both have the same kind of implicit conception as masses being "the bringer of all bad", shaking the neat equilibrium built by Founding Fathers -kind of few good men and generally messing things up. What is specifically interesting in Barlovian version is, that John Perry Barlow, as hippie-orientated as he is/was, doesn't bother to hide his resentment towards (American) democracy, which he would seem to like to replace with some kind of enlightened tyranny:

> "Certainly democracy is not the solution. I mean we have democracy and it's working grotesquely well. You've got a government that reacts to every hysterical whim of the populace and the populace is being whipped into one hallucinatory frenzy after another by media. And it's completely out of touch with anything that I would call reality."[129]

It is evident, that Barlow's own vision of reality is quite strong, and he thinks he possesses "the virtue of being right". His main targets to oppose, besides the

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[128] This line can be stable or it can move, but it is always a boundary between the known and the unknown. When Barlow founded the Electronic Frontier Foundation (EFF) with Mitchell Kapor (who developed Lotus 1-2-3 software), Steve Wozniak (co-founder of Apple Computers) and John Gilmore (UNIX expert), their self-set aim and fundamental mission was to "civilise cyberspace". Cyberspace was then seen as something, where no government had gone before, and this Barlovian "pioneership" was meant to keep the frontier free.
[129] Barlow 2000. On: http://www.cyber.law.harvard.edu/is99/governance/barlow.html#future

governments, are large corporations. In Gibsonian cyberspace the corporations have already taken the power from governments, which is something Barlow doesn't recognise in his vision. It just might be, that Barlow is all too concerned maintaining the kind of state he fancies in cyberspace and not realising, that maintaining the cyberspace itself is a business of its own. However, a global marketplace for ideas may not be the most profitable solution for someone wanting to sell his idea. Keeping the idea as secret as possible to some extent means its value will increase. Here the Gibsonian/*film noir* idea of chasing something important before anyone else gets it is relevant. Something known by practically everybody has no specific exchange value in the information era.

6.3 The Manuals of Castells

One of the most influential scholars or information society and its aspects is no doubt Manuel Castells. As a historian, his work on the development of the economic side of the information society is widely quoted, and his efforts have taken into account in determining the information strategy for the European Union for the twenty-first century.

Castells notes, that information, as communication of knowledge, has been critical in all societies, including Medieval Europe, as culturally structured, and to some extent unified, around common Scholasticism. In contrast, "the term *informational* indicates the attribute of a specific form of social organization in which information generation, processing, and transmission become the fundamental sources of productivity and power, because of new technological conditions emerging in this historical period."[130] Developed and developing socio-economies have been restructured from using information as a key component in industrial forms of production and consumption to information becoming both the central resource and the driving force of socio-economies. As part of this transition, socio-economies have also become global in ways they were not previously. That is why information societies are called by that name: not because

[130] Castells 1996, 21, fn 33; Jordan 1999, 146.

previous societies did not utilize information but because information has become the central principle by which production, consumption and, more generally, power, is distributed across a global socio-economy.

Castells argues, that in the information age our societies are "increasingly structured around a bipolar opposition between the Net and the Self".[131] In his view, cyberspace supports a pattern characterized by two main features. First, the expansive use of widespread social and cultural differentiation leads to the emergence of commercial mass market, in where the messages become segmented by market following senders' strategies, diversified by users, according to their interests, taking advantage of interactive capacities. Second, cyberspace causes increasing social stratification among the users. The freedom of choice is restrained to those with enough time and money. The information about what to look for and the knowledge about how to use that information will increase its importance and value radically. This Castells predicts leading into situation, where cyberspace will be "populated by two essentially distinct populations, the interacting and the interacted".[132] The first ones are able to choose what they like from the near-infinite selection of cyberspace, but those without these kinds of resources will be provided with prepackaged choices.[133]

For Castells, cyberspace is a total sphere. Reality itself, which he defines as people's material/symbolic existence, will be "entirely captured, fully immersed in a virtual image setting, in a world of make believe, in which appearances are not just on the screen through which experience is communicated but they become the experience."[134] The concepts Castells likes to contemplate with when discussing cyberspace are "timeless time" and "informational space of flows". According to Castells, timeless time occurs, when "the characteristics of a given context, namely, the informational paradigm and the network society, induce systemic perturbation in the sequential order of phenomena performed in that

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[131] Castells 1996, 3.
[132] Ibid., 371.
[133] This shows already in seeing the peripheries of the informational space of flows as a Heideggerian standing reserve. For example, Lester Thurow asked once his audience in a speech to U.S. business leaders, "Who do you think has more high school graduates – the U.S. or China? He self-replied "If you guess China – you're right – by a couple of hundred million. Now why hire a graduate in the U.S. for 30 000 dollars per year when you can get an equivalently educated person in China for 100 dollars per month? Many U.S. businesses have already answered with a resounding "We don't". (The example taken from Luke: *The Politics of Digital Inequality.* In Toulouse & Luke (eds): *The Politics of Cyberspace* (1998).
[134] Castells, 1996, 372.

context".[135] Then again, "timeless time belongs to the space of flows, while time discipline, biological time, and socially determined sequencing characterize places around the world, materially structuring and destructing our segmented societies."[136]

According to Tim Jordan, this informational space of flows has three components. First, it structures a global form of communication. Second, it operates this global communication in real time, put another way, "communication ignores distance to work nearly instantaneously".[137] Third, it never stops or, rather, if it does then this is because of a technical malfunction in the networks. As structured this way, the informational space of flows follows as an "online" phenomenon much off the economical development "offline". Although being "global", it doesn't mean, that the informational space of flows would be planetary. It can skip all those physical places, which lack the potential for economic profit.

As Jordan notes, "the informational space of flows is the part of cyberspace that informational socio-economies need".[138] Cyberspace offers to informational socio-economies a sphere in which flows of information reach globally, operate in real time and never stop. Cyberspace has made possible to sell "virtual commodities" (files, know-how etc.) which are not dependent on their material embodiment. Cyberspace has in a short period become indispensable to the new form of global socio-economy that looks likely to dominate the twenty-first century. So basically, the more important the informational space of flows becomes, the more the need to reduce uncertainty in cyberspace will increase.

If one thinks about the social vision of Castells' space of flows, it could be argued, that the whole idea of technology as totalitarian *ethos* by Heidegger has realized itself in it. All substance a person or a community can get in this space of flows comes through economical exchange. And everything is exchangeable, a Heideggerian standing-reserve for "e-commerce". It is also interesting to note, that Castells sees the Net and the Self in a bipolar position. It seems, that for him no Self exists in cyberspace. Capturing our reality totally, the information space of flows becomes the Leibnizian *Cité de Dieu*, where the dominant monads exploit

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[135] Ibid., 464.
[136] Ibid., 465.
[137] Jordan 1999, 170.
[138] Ibid., 171.

the interacted ones through "transactions", without any closer "interaction". Neither the face nor the name is important: only the price matters. Manuell Castells' God, or the Central System Monad, is capitalism.

6.4 Microsoft Parade

> "The global information market will be huge and will combine all the various ways human goods, services and ideas are exchanged. On practical level, this will give you broader choices about most things, including how you can earn and invest, what you buy and how much you pay for it, who you friends are and how you spend your time with them, and where and how securely you and your family live. Your workplace and your idea of what it means to be "educated" will be transformed, perhaps almost beyond recognition. Your identity, of who you are and where you belong, may open up considerably. In short, just about everything will be done differently."[139]

Like all previous waves of revolutionisation of human artifice, whether the agricultural revolution of Neolithic times or the industrial revolution nearly three centuries ago, the claimed informational revolution is arriving with its own social movements of self-interested groups intent upon transforming all human ecologies. However, asking who has access in this digital planet, how inequality works in these digital neighbourhoods, and what structures determine distribution - the link between the demand and the supply - as we interconnect ourselves are not trivial questions because it all boils down to the question about who is allowed participate: whom is all this meant for?

According to Bill Gates, once the transition is made to a world built out of information (like it was some sort of final goal), anyone with access to network and a personal computer (preferably connected into the Microsoft Network, with Microsoft software) can instantaneously enter the "information highway". Gates sees the information highway more as a destination - a marketplace of exchange and ideas - than a road to somewhere. In this new marketplace, he denounces, digital information of all kinds will be the new medium of exchange.

In his book/CD-ROM *The Road Ahead* (1995), Bill Gates omitted the role of revolutionising personal computer use, freely capitalising upon the organisational frictions in existing businesses. Yet, in assuming that anyone or

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[139] Gates 1995, 6-7.

everyone can, or will soon, do things just as he does,[140] Gates discloses himself by stating how we are not equal in either the virtual or the material world. So, if the virtual world is just seen as the extension of the material world, what would basically happen is, that with the emergence of this "techno-social" movement led by the digerati, the world is split between those who foment computer revolutionisation, and those who are passively revolutionised, or those world class "cosmopolitans" who flow friction-free through global commerce, and those nativist "locals" who "stay put and get burnt". Because we are not all created equal in the material world, as Gates argues, we never will be equal in the virtual world. So, instead of being used as solving the material world's problems as a global exchange place for ideas, "the growth of *infobahn* will aggravate them, while, at the same time, creating entirely new sociological conflicts and contradictions in cyberspace".[141]

Thinking of Bill Gates it seems obvious that there are no major obstacles on his site in the road ahead. The aspect of dream may still lie in the background, but the aspect of money has clearly stepped in front. After all Gates has made a fortune out of the "digital pavement" of the information highway.[142] The digital pavement, then, becomes a means of increasing its own importance to the crucial point that after no one can cope without it.[143] The road ahead becomes the destination, the Net. What appears as "empowerment" is *a trompe l'oeil*, an "entrapment" in a Baudrillardian loop in which the Net elicits information from the "user" and gives it back in what the selectors say is an appropriate form for that user. On one hand, there are numerous supporters of pure capitalists in the cyber-industry, and on the other hand there are capitalists who are also visionary computer specialists. The latter, people like Nicholas Negroponte, generate the ideological hype, a messianic element, that the former often take up cynically. As a whole, the cyberspace industry processes ideological hype for capitalist ends.

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[140] After all, *The Road Ahead* is based on a vision of a one man, just like William Gibson's *Neuromancer.*

[141] Luke 1998, 134.

[142] *Microsoft* is actually quite ironic a name for corporation accused of being a global monopoly in the information technologies.

[143] This is somehow analogous to the development of the infrastructures of large cities about 100 years earlier. For example, in New York, the problem was, that the public had to cope with a maze of people, horses, bicycles, and vehicles on streets that were often unpaved, muddy, or dusty. However, the pavement was not the only relief. A major change in developing New York traffic happened in October, 1904, when the city's subway system began operating. More about the development of New York traffic systems, see http://www.ci.nyc.ny.us/html/nypd/html/transportation/newpage5.html.

The visionaries are essential to cyber-capitalism because they provide the ideological mediation to seduce the Flesh into the Net, so to speak.

In his book *Business @ The Speed of Thought* (1999) Gates simultaneously proclaims a manifesto for the triumph of digital business as the dominant ideology at the cusp of the twenty-first century and a dynamic, well theorised description of the business strategies involved in using a "digital nervous system". What makes Gates' perspective such a radical rupture in the rhetoric of competitive, although always monopolistic, multinational, is that Gates is both the author of a biological model of digital business and an astute business theoretician of the specific strategies necessary for booting up the digital nervous system as the operational language of, at first, business and then later of those other "special enterprises" like for example education, medicine, government, and warfare. What is disclosed in Gates' book is nothing less than a general political philosophy, installing the digital nervous system both in business and public policy but in human flesh and the biogenetic body. *Business @ The Speed of Thought* is a book not so much about business, as about the nature of "cyberpower" in the Castellsian information flows that code electronic culture. Gates is explicit about the biological basis of digital business, stating that

> "An organization's nervous system has parallels with our human nervous system. Every business, regardless of industry, has "autonomic" systems, the operational processes that just have to go on if a company is to survive...What has been missing are links between information that resemble the interconnected neurons in the brain."[144]

What systems theorists such as David Easton and Norbert Weiner could only postulate in the 1960's, Gates puts into actual political practice in the twenty-first century. In Gates' cyber-world, the "feedback loops" of general systems theory

> "...merge with the dynamic logic of bio-genetics to create a post-human vision of digital business. Here, there are no human beings, only "inflection curves". No digital dirt, only "interconnected neurons in the brain". No accidents, only "autonomic systems". No history, only "data mining". No human vision, only "pivoting the data from every angle."[145]

In *Business @ The Speed of Thought, le volonte generale* merges with the *le volonte digital.* This "digital will" is reduced to the technical, cybernetic

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[144] Gates 1999, 10.

[145] Kroker, Arthur & Kroker, Marilouise (1999): *Digital Ideology: E-Theory. Technology @ The Speed of Business.* On: http://www.ctheory.com/article/a073.html

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note, "Gates' vision of digital world is an extreme will: the American Trinitarian code stripped of its covering rhetoric and its history, then digitized and genetically booted, ready to be system-installed into the minds of the twenty-first century".[147]

The language of the digital will abandon its temporary refuge in the body of the enterprising American individual, breaking with its capitalist determination, and taking up a new residence as the spirit of the digital nervous system. Neither purely immanent nor solely transcendental, the digital will is both simultaneously. In the Gates of Microsoft, it is not enough to get into the light of knowledge: one has to get there first in order to beat one's competitors. The digital nervous system is all about the speed of grasping significant information. It is all about the total will to virtuality, moving first at the speed of business and, only later, in its future appearance as unfettered "technicity", at the speed of light, towards the Leibnizian *Cité de Dieu* with Microsoft Operating System and Bill Gates as its indeed-wealthy Central System Monad. It's because the Microsoft Monads have Windows™ only.

[147] Ibid.

7. Subject and Cyberspace

"The question of identity
is one that's always haunted me
whoever I might choose to be
depends on who is with me."
Pet Shop Boys: Too Many People.

As the French sociologist Alain Touraine has claimed, in post-industrial society "it is the future of the subject, in its personality and culture, against the logic of apparatuses and markets, that replaces the idea of class struggle".[148] Like science and evolution, cyberspace (sometimes seen as an evolutionary entity) has its own ecology. In a way cyberspace itself, as in fiction and in the real world, has become a victim of its own success. Cyberspace has become so popular, that everybody wants a piece of it. However, cyberspace is not about the extinction of species but rather defining the present ones. Who or what are those surfing the virtual oceans of information every day?

[148] Castells 1996, 23.

7.1 The Virtual Subject

The politics of identity is not a new variety of politics but is almost as old as politics itself. The ancient Greeks distinguished themselves from foreigners or "barbarians". In Athens, women and slaves and resident aliens, *metics*, lacked the requisite identity - that of free male native-born Athenian - to be citizens. To put the point in the terms of the contemporary communitarism vs. libertanism -debate, the politics of identity is about defining and claiming membership in a community of one or another sort. All communities are more or less "imagined communities": they are "maintained and legitimated by their members' shared self-images, images that shape and make possible their interpretations of who they are and where and to whom they belong".[149]

Through its generations, computer science has mimicked these successive images of consciousness. The research and biological neuroscience have both been transformed in the last decade, moving towards a strange symbiosis. The biologists are served by terrifyingly expert technologies that can capture localised physical events as never before, while in artificial cognitive science, scraps of code are encouraged to breed like bacteria, in the hope that consciousness would by itself crawl out of the "digital slime". Because there is no Leibnizian master program controlling the global data network, no individual can really actually know what's going on in it. Without boring any new holes into our skulls or attaching any artificial interfaces beyond those supplied by biological evolution, we have created an entity conforming to the original fiction: a matrix of information, infected by "visiting minds".

David Holmes defines a "virtual subject" as an "identity within a communication process, or an identity subjected to a relation of power".[150] In cultural and political theory (as well as in cyberspace), the subject is not the same as the individual. In Holmes' words, "an individual is tied to the same body but may be many subjects at once",[151] and in cyberspace this fact is made particularly salient. In cyberspace, as in "pre-virtual" social life, one can take on many

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[149] Ball 1995, 273; Anderson (1991): *Imagined Communities.*
[150] Holmes 1997, 238.
[151] Ibid.

different "subject-positions" whereby identity is tied to our location within a discourse, a communication process or an ideology. Some commentators on cyberspace argue that we do not merely change out intellectually mediated sense of identity in virtual worlds but also the way in which we experience our bodies, which is to change not only what it means to be a subject but what it means to be an individual as well.

Some of the early visions of an artificial intelligence emphasized the role of a "cyborg", a pact or connection between Man and Machine. Human-machines or machine-humans were invented in fiction in the seventeenth century. For example Descartes thought, that man was basically a mechanical device, which was possible to be described with mathematical concepts.[152] As modernization went forward, science fiction as genre gained more ground with books like *Frankenstein* by Mary Shelley or *War of The Worlds* by H.G. Wells, in which aliens invaded Earth. Since that, the relation between man and machine has also been the theme for numerous science fiction movies. In Ridley Scott's film *Blade Runner* (1982) the difference between man and machine had practically disappeared. In *Blade Runner* mankind had learned to produce "replicants", machines with human characteristics. They were so perfectly made, that in their own consciousness even the replicants considered themselves as humans and not cyborgs.[153]

However, there seems to be no sign of an upcoming, postmodern race of Donna Haraway-style cyborgs, liberated by technology itself from patriarchal technology's domination. Haraway sees in this line of development a chance for a new, flexible cyborg-identity. For Haraway, "cyborg" is a metaphor for ever-expanding ideological network of Foucauldian control. At the same time, however, it refers to new insights, through which humans can reflects their relation to nature, technology, society, families and gender. For Haraway, technology is not anymore something outside the human existence, but an irreversible part of being human.[154] When subject and object are woven together this way, human should, according to Haraway, learn to think themselves both as

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[152] Siivonen 1996, 12.

[153] They were advertised to consumers by the company manufacturing them as being "more human than human". The only thing to differentiate them from humans was to scan the replicants' iris, which was different from the human eye.

[154] Siivonen 1996, 62

machines and organic beings. If this two-dimensional view disappears, we become mere robots, as Haraway argues.

One's "being-in" a body constitutes the principle behind our separateness from one another and behind our personal presence. Our bodily existence stands at the forefront of our personal identity and individuality. Both law and morality recognize the physical body as something of a "fence", an absolute boundary, establishing and protecting our private sphere. Now the computer network simply brackets the physical presence of the participants, by either omitting or simulating corporeal immediacy. In one sense, this frees us from the restrictions imposed by our physical identity. We are more equal on the net because we can either ignore or create the body that appears in cyberspace. But in another sense, the quality of the human encounter "narrows". The secondary or "stand-in" body reveals only as much of ourselves as we mentally wish to reveal. Bodily contact becomes optional; you need never stand face-to-face with other members of the "virtual community". Only a fraction of the information we send, knowingly or not, is mediated by textual measures, so a great deal of the codes the receiver could/should be able to observe, is left out in a non-bodily communication.

The darker side hides a sinister melding of human and machine. The cyborg or cybernetic organism implies that the conscious mind steers the meaning of the Greek *kybernetes*, our organic life. Organic life ceases to initiate our mental gestures. Can we ever be fully presented when we live through a surrogate body standing in for us? The stand-in self lacks the vulnerability and fragility of our primary identity: the virtual stand-in self can never fully represent us. The more we mistake the cyberbodies for ourselves, the more the machine changes our perception about ourselves into the "prostheses" we are wearing.

7.2 Copies of a Copy

One of the most enduring claims pervading of the literature on new technologies is derived largely from an extension of Cartesian subjectivity rounded in traditional Western philosophy. This view sees individuals as agents in history, capable of standing outside the world and its object through instrumental reason.

Grounding their theories within this view of rational and autonomous human agency theorists are able to maintain that developments in electronic communications and cybernetic technology have in no way upset the Cartesian subject. In fact, in the view of these theorists, the new developments have merely extended this subject position by promoting the institutional mechanisms of writing that are associated with the autonomous rational subject. In the view of authors such as Marshall McLuhan, new technologies can most appropriately be understood as "tools" for maximising efficiency among acting human subjects. They frame these kinds of changes, which simplify and streamline familiar routines. As such it is argued that these new communication experiences should fall under the traditional laws and cultural norms that govern written and oral practises.

Most comments concerning subjects in cyberspace are concentrated on the changes to patterns of time and space. In this viewpoint, language in electronic communication is nothing more than a transparent representation of an author's writing or speech. According to this, new technologies simply increase the representational power of language by reducing the constraints of time and space, in particular by reducing the temporal and spatial distancing of meaning. Mark Poster confronts this by arguing, that

> "...for the issue of communication efficiency which is at stake in the above discussion, does not raise the basic question of the configuration of information exchange or what I call the wrapping of language...what is at stake are new language formations that alter significantly the network of social relations and the subjects they constitute."[155]

Within structural linguistics, Ferdinand de Saussere suggested that all human activity and subjectivity is structured by the organisation of signifiers within language. Saussere argued that each referent is represented by a "sign" and "signifier" in language and while there is no inherent or necessary connection between referents and signifiers there are cultural norms that maintain a stable relationships between the two. This structural viewpoint has later been criticized for example by Felix Guattari, who has noted, that everything, as structuralists argue, must not - and cannot - be represented in language. Also, structuralism fails

[155] Poster 1990, 8.

in Guattari's viewpoint to encompass non-linguistc elements on the same level as language.[156]

In his works, Jean Baudrillard coined the term *simulacra* to describe the state of image and representation, which our time has created. Baudrillard argues that there are no longer any "true" or essential identities, instead of virtue of our state of hyper-commodification we are left with a series of detached and distanced, alienated, and isolated images which are merely "copies of a copy", as he puts it, holding no claims to something called "essential truth".

Using a similar framework, Mark Poster argued, that decoding the new electronic communications requires a theory that is able to account for the linguistic dimension of these media. In Poster's analysis, the final stage of the modes of information is captured in our present moment of electronically mediated exchange characterised by informational simulations. In this stage, the subject or self is "decentered, dispersed, and multiplied in continuous instabilities."[157] In the language of these new technologies it means, that traditional social and cultural markers such as sex, race, as well as temporal and spatial boundaries which fix the language of everyday life and which are inscribed in both print media and speech are to some extent absent, resulting in condition of "virtual anonymity".

In cyberspace the traditional face-to-face communication is replaced with individuals using computers. The Leibnizian term "monad" has often referred to the characteristic state whereby solitary individuals pursue their appetites and needs in complete isolation from one another. As Michael Heim states, the "monad exists as an independent point of vital willpower, a surging drive to achieve its own goals according to its own internal dictates".[158] For monad, the world does not extend beyond his/her own individual senses, immediate tastes and limited experiences.[159] Characters stereotyped on the Internet, the *hackers*, the "browsers", the surfers, the *flâneures*, can be seen as examples of monadic existence.

These kinds of "alterity relations", as theorized in the work of Shelly Turkle, are invoked when objects are seen as things in themselves. On one hand,

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[156] Welchman 1997, 222; Guattari (1992): *Chaosmose.*
[157] Ibid., 6.
[158] Heim 1993, 37.
[159] Holmes 1997, 236.

the "magic" of the black-boxed computer process that conjures a world might suggest that one is dealing with another "quasi-intelligence", which has the power to create worlds. Alterity relations, the construction of the computer and its activities as another self, tend to "become established in the digital world in its less sociable instances".[160] When a player is competing against a figure randomly generated by the software program, the computer becomes the "opponent", another "self".

Here Holmes' definition of a virtual subject gives another interesting viewpoint. The virtual subjects, created by individuals, are based on the linguistic resources. However, the language of computers, taking often a form of some programming language, is something to be used in controlling the primary tool in participating in cyberspace: the computer. Therefore, it somehow becomes the ultimate language skill in cyberspace: something to be used if everything else fails. In computer language, it is not the strength of an argument which matters but a line of binary-based "commands", used in different situations for whatever means the individual sees necessary, erasing the need for long-term judgement.

Somehow this reminds the line of development Friedrich Kittler describes in his book *Discourse Networks 1800/1900.* Kittler argues, that in the eighteenth century language, reading, and writing were concentrated around the idea of Mother as the source of (oral) language. Developing his story like a chess game, Kittler strips the motherly language from its origins, taking it, with the emergence of mechanized inscription, to point where it is stripped from the implicit idea of creating something with "inner sense". Also, the possibility to select and store this "data" in the nineteenth century finally led to a situation of "medial constellation" of cultural view. The new technology (typewriters etc.) and the expanded amount of information also created a realm of Many Women, with the possibility for practically everybody to become a "sign-creator".

From this, one could argue, that in cyberspace the old eighteenth-century roles have turned upside down. It is no more Mother educating her Son but vice versa. In cyberspace, Sons have a say over their Mothers. The very fact, that cyberspace is a sphere dominated by young men, or young boys, labels also its "essence". Being a realm of Son, cyberspace has a romantic undertone of erotic

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[160] Ibid., 69.

fulfilment waiting to be realised.[161] At the same time, this Romance mixes with the innocence and erotic tension of boyhood puberty, giving cyberspace a constant boost, an inner drive to develop in an ever-increasing speed. Everything about to happen is better than the present.

The difference between Kittler's scheme and cyberspace is probably, that on the Internet it's mostly the written text that matters, not the oral language. As noted earlier, the continuum from the dawn of the printing era has led to the situation, in where the national, "official" languages are confronted with the "personal" languages of the individuals. The very basis of this kind of real-time situation based on specifically written text is somewhat a new one. Before electronic communication, the written communication was all about arguments and counter-arguments. In cyberspace there's literally no time and space for that anymore.

This sets some news demands on what one tends to call the "political". Between infinite spheres of the monadic individual and the universe exists something, which for example Hannah Arendt called the "public sphere". However, it could be argued, that the Arendtian (ideal) self-revealing was to be primarily accomplished with the oral language. Of course, the idea of storytelling also consisted written texts, but Arendt saw also this as a "personified" process, through which the individual tells something about herself. As argued, the national written languages, along with the development of printing and the emergence of mechanized inscription, have been developed in order to create one of the building-blocks of the State, a common means of communication, signs, and inscription.

Arendtian storytelling, as an ideal form, is thus something, which has basically had to adapt this. The borders of "private" and "public" shimmer, when private things are expressed with the written language, based on the Ramist process of teaching and education. Also, the communication in cyberspace in its present form is based on the sovereign hegemony of the English language, putting the other languages clearly aside. So the self-revealing is in most cases reduced to the limits of one's skills in a certain single language.

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[161] This notion could also include the idea of the Oedipus complex. After all, if the matrix is seen as a motherly entity, the Son in the matrix would be a perfect example of Oedipus complex, in a form of Son taking over a motherly sphere.

So, if participation, like Arendt argued, is the "essence" of the political, defining the premises of that participation - the construction and modification of language, and, especially in this case, the situational aspect - "imagining" cyberspace as a "happenstance" - along with the technological abilities to possess, would probably fall into the category of "politics of politics".

7.3 The Virtual Class

Mastering the skill of computer language, or simply "computing", is something, which divides people in cyberspace quite radically. It could also be stated, that the art of programming is the *virtú* of the virtual world, the very power to be achieved and used to gain hegemony. So, who are those, who can be considered to be the "Pros of Cyberspace", the ones who can master that sphere better than others? In her book *World Class* (1995) professor of Business Administration at Harvard Business School, Rosabeth Moss Kanter, presents her viewpoint by defining the three c:s, with which one becomes a member of "cosmopolitans", "the world class of cyberspace". The others, claims Kanter, remain in the class of "localists", whose contributions are very local in terms of their abilities and resources.

The first c comes from *concepts*, the best and latest knowledge and ideas. The other one is *competence*, the ability to operate at the highest standards of any place anywhere. The last c is *connections*, the best relationships, which provide access to the resources of other people and organisations around the world. The localists are those, whose skills are not particularly unique or desirable, whose connections are limited to a small circle in the "neighbourhood", and whose opportunities are confined to their own communities, whether physical or virtual.[162]

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[162] Here, one can see an analogy of the traditional USA/Europe dichotomy in a way, that the U.S. would be the "cosmopolitans" and Europe would be given the role of "localists". In an interview by Sarah Powell, Kanter argues for example, that "we in USA have an entrepreneurial culture; we value things that are new and different; we value business start-ups. We don't believe in life-time employment. We have a creative, imaginative, can-do entrepreneurial spirit that is currently the envy of Europe." The whole interview can be read on
http://www.managementfirst.com/practical_management/kanter_interview.html

Kanter also sees difference in the *ethos* of these two groups in a way, that not all the people able to become cosmopolitans actually do so, because they favour the values of the localists. She states, that cosmopolitans often value choices over loyalties, even in terms of which relationships deserve their loyalty. Local nativists, on the other hand, value loyalties over choices, preferring to preserve distinctions and protect their own group. Cosmopolitans characteristically try to preserve and even erect new barriers. Belonging to the class of cosmopolitans means at the same time, that one must constantly be able to assimilate oneself with new technical inventions and at the same time to be able to produce new ideas for using the latest solutions. In practice this leads to cosmopolitans being in a constant mutual struggle about hegemony, where everyone is a potential enemy, but also a valuable ally.

It is important to make a definition between "access to" and "access in" when talking about cyberspace. "Access to" cyberspace means, that one has the external technical possibilities to get logged into cyberspace (for example a connection, a computer, software etc.). Even this excludes some half of the world population out of cyberspace. Even more people are excluded, if one thinks about "access in" cyberspace. "Access in" could be defined as having the proper individual skills and resources in order to realise one's intentions in cyberspace. For example, an individual may possess an access to cyberspace, but he may no be able to gain access in for example software he'd like to, because he doesn't have the required information about finding that software. This "access in" is much discussed when dealing with the illegal use of the Internet in for example distributing digital music files without paying proper copyrights. However, seeing a single skill as such omnipotent a way for gaining power and, what more important, seeing programming as a way to heavenly Utopia, would probably be quite naïve.

As Arthur Kroker points out, it is amusing to realize that there are still techno-fetishists filled with enthusiasm about how technology is going to fulfil their pre-pubescent dream, which they assume unthinkingly that every one inevitably shares with them. Against democratic discourse, the virtual class institutes anew the authoritarian mind, projecting its class interests onto cyberspace from which vantage point it crushes any and all dissent to the prevailing orthodoxies of technotopia. For the virtual class, "politics" is all about

absolute control over intellectual property by means of war-like strategies of communication, control, and command. Against social solidarity, the virtual class promotes a grisly form of raw social materialism, whereby social experience is reduced to its prosthetic after-effects: the body becomes a passive archive to be processed, entertained, and stockpiled by the seduction apertures of the virtual reality complex. And finally, against aesthetic creativity, the virtual class promotes the value of pattern-maintenance (of its own choosing), whereby human intelligence is reduced to a circulating medium of cybernetic exchange floating in the interfaces of the cultural animation machines. The key to the success of the Krokerian virtual class is its promotion of a radically diminished vision of human experience and of a disintegrated conception of the human good: for virtualizers, the good is ultimately that which disappears human subjectivity, substituting the War Machine of cyberspace for the data trash of experience. [163]

The high-speed information highway is the ruling metaphor of the virtual class. As the class that specialises in "virtualized exchange", the information superhighway allows the virtual class to speak in the language of encrypted data, circulate through all the capillaries of digital, fibre optic electric space, and float at hyper-speed to the point where data melts down into pure virtualities. The information superhighway is the "playground" of the virtual class, but at the same time it is also the privileged monopoly of global data communication. As the sphere of the virtual class, the information superhighway is in where the virtual class "live".

Kroker argues, that there are two possible strategies for resistance in cyberspace. First, one can try to become a "neo-luddite", rejecting new technology and all it stands for. The other method would, according to Kroker, "consist of embracing the race to virtuality and hope, that the existing power relations would also become virtual".[164] That kind of sabotage has already been done for example against commercial corporations' (and also governments') databases. The pioneers of cyberspace are in large amount people not interested to submit themselves to some common "ruling" of the virtual world. The rules or "codes of behavior" are nowadays mostly defined by cyberspace users so a realization of a new set of common rules aiming at homogenizing the Internet

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[163] Kroker: *Data Trash: the theory of the virtual class*, 4-26.
[164] Mehta & Darier 1998, 113.

would indeed be hard. However, as the commercial importance of cyberspace increases, the amount of those demanding for safer and more predictable and reliable cyberspace will also increase.

As a sphere, cyberspace offers both a theoretical platform for the McLuhanian global village, and a chance for the "virtual freemasons" to gather. The possibility for "encryption" (encoding messages so that only the sender and the receiver can decode them) both protects privacy and realizes secrets in a sphere supposed to be the cradle of openness. The classical example of such "secret community", often used by those wanting to limit the possibility for encryption in cyberspace, is a terrorist group planning a hit via the Internet. Of course, the group doesn't actually need worldwide publicity beforehand (although after the strike, it would be ideal). With encryption, the messages can be encoded so that other users cannot read them. The terrorist community uses cyberspace like metropolis, where an individual or a small group of people easily both emerges suddenly from out of the blue and vanishes back into the crowds. Also, as a sphere of individual interface (after all, the machine used is a *personal* computer), the monadic/nomadic cyberspace gatherings are quite something else than that is usually considered a "community".

7.4 "When the body speaks, all else is hollow"

The role of the body in cyberspace discourse is often put aside. However, as digital as we would become, our physical appearances will still be there, maybe not "there" in Negropontean sense, but still present somewhere. A body is literally a "must". In Leibnizian view, the body is placed into the lower floor of the matter, laying the basis for something more "spiritual". That's way the monadic view does not necessarily describe the idea of body but the ones body gives life to: the monadic Cartesian minds.

But a question could be set: where do we need our bodies in cyberspace? It cannot enter cyberspace itself, although we sense cyberspace as a sphere through. But, as one could futuristically argue, nothing in cyberspace is directly attached to anything bodily. Also, as Deleuze notes, our every perception about cyberspace is

"virtual" because perception has no object. Conscious perception does not refer to a physical mechanism: it refers only to "the exclusively physical mechanism of differential relations among unconscious perceptions that are comprising it within the monad".[165]

Cartesians had testified to a "geometrism" of perception, but through which clear and distinct perceptions were apt to represent extension. As for obscure or confused perceptions, they were operating only as conventional sign stripped of their representativity, hence of resemblance. Leibniz' point is quite different, since neither the geometry nor the status of resemblance is the same. These are affective qualities, confused or even obscure perceptions that resemble something of a virtue of a projective geometry. From then on they become "natural" signs. They resemble neither extension nor movement, but matter in extension.

When defining the essential characters of bodies, Leibniz assigns two of them, the power of diminishing infinitely (by virtue of their infinitely small parts), and the power of being in constant "flux" (to have parts that never stop coming and going). Physical mechanism do not work by differentials, which are always differentials of consciousness, but by communication and propagation of movement like ripples that a stone creates when it is thrown into water. It is even in this sense that matter is full of organs, or that organs fully belong to matter because they are merely the contraction of several waves or rays: the nature of a receptive organ is to contract the vibrations that it receives. However, as Deleuze notes

> "...there exists a great difference between an always extrinsic physical causality, which goes from one body to all those for which it receives the effect, and an always intrinsic physical causality, which goes from each monad on its account to effects of perception of the universe that it produces spontaneously, independently of all influx from one monad to another. Despite primary matter, bodies are "receptors" that receive these "vibrations"."[166]

The physical mechanism of bodies is not identical to the psychic mechanism of perception (differentials). Using resemblances as a model, God creates a matter in conformity with what resembles him. In short, God endows the monad with organs or the organic body corresponding to its perceptions. Thus, as Deleuze concludes it, I have a body because I have a clear and distinguished zone of

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[165] Deleuze 1993, 93.
[166] Ibid., 97.

expression, like Caesar as the spiritual monad who, with his body, clearly expresses the crossing of the Rubicon. The monad expresses the world "according to" its body, according to the organs of its body, according to the action of other bodies upon itself.

8. Cyberspace and the Political

"Every breath you take
every move you make
every band you break
every step you take
I'll be watching you."
Police: Every Breath You Take.

No one ever talks about "teletyranny" or "teledictatorship": only the word "teledemocracy" has been used to describe the potential of cyberspace in enhancing democratic development. Is democracy somehow inherent in cyberspace?

8.1 Click Here to Start a War

The Internet is allegedly the most democratic of all communicative technologies, allowing any person with access to the medium to reply, although messages are

addressed to nobody in particular. In *Strong Democracy*[167], Benjamin Barber takes seriously the possibilities offered by the new communications technology in enhancing the conditions of "strong democracy", as he calls it. However, he is not in favor of for example increasing plebiscitary poll-like voting by telephone (or, in his later work, by computer and the Internet). Instead, he argues, that soliciting instant votes on every conceivable issue from an otherwise uninformed audience that has neither deliberated nor debated an issue would be the "death of democracy". He also argues, that the problem with reducing decision-making to mere voting means, that information is minimized and the paradoxes of fixed options are maximized. As Barber notes, wide-scale plebiscitary democrats would be "enthralled" by interactive instant polling and imagine a time when private consumers make precedent-shattering public choices with no more serious thought than they give to which button to hit when they are surfing a hundred-channel cable system or use his computer for another purposes.[168]

Barber also warns, that extensive home voting might further "privatize" politics and replace deliberative debate in public with the unconsidered instant expression of private prejudices, turning what ought to be public decisions into private consumer-like choices. However, he argues, that deliberative polling can offset such dangers, while the use of the Internet for deliberation across communities can actually render decision making less parochial. Strong democracy calls not only for votes but good reasons: not only for an opinion but for a rational argument on its behalf. As Barber discloses himself, "deliberation does require intervention, education, facilitation, and meditation - all anathema to devotees of an anarchic and wholly user-controlled net whose whole point is to circumvent facilitation, editing, and other "topdown" forms of intervention".[169]

Perhaps the most troubling issue of cyberspace politics is its relationship to real-world practice. As Anthony Wilhelm forms the question, "will virtual debates and discussions percolate the political agendas and choices effected in traditional decision-making channels, or will they remain sealed or even vicarious

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[167] *Strong Democracy* was published in George Orwell's famous year 1984, about ten years before the emergence of cyberspace. However, William Gibson's novel *Neuromancer* was released in that same year.

[168] A voter at home would have to choose for example between whether he wants to participate in making a decision to ban abortion, or whether he wants to use that same amount of time and effort for playing computer games.

[169] Barber 1998, 586.

simulations of the real thing?"[170] John Streck argues, that "there seems to be the built-in implication that democracy in cyberspace means democracy in the world".[171] Streck believes that the issues raised in cyberspace are generally non-issues to those outside it. While this is partly an empirical question, the issue of efficacy also relates to the idea that a person changing channels on television and clicking hypertext in cyberspace might, as Streck argues, mistake these activities for political action.

8.2 The Politics of Judgement

But what kind of judgement is valid in cyberspace? In Benjamin Barber's opinion, to be political is to have to judge, to choose, to act when the grounds of choice are not given a priori or by unimpeachable cognition. It is to have to make judgements without guiding standards or determining norms, yet under an ineluctable pressure to act. Here the concept of "political judgement" becomes imminent. Roland Beiner defines political judgement by claiming, that all political judgements are - implicitly at least - "judgements about the form of collective life that it is desirable for us to pursue within a given context of possibilities".[172] The reason why public judgements are possible in the first place is, that the objects of those judgements are shared by those who judge. In Beiner's opinion, these things concern all of us who participate in these traditions, laws, and institutions, and therefore share them in common meanings. Such judgements concern not merely "what I want", but rather, entail inter-subjective deliberation about a common life; namely, "how we should be together"?

In Barber's work, political judgement is defined by activity in common rather than by thinking alone. For Barber, it is what politics produces and not what produces politics. Thus, political judgement is something produced by politics rather than by cognition. He defines the relationship between political judgement and citizenship by arguing that political judgement is the sovereign faculty of the

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[170] Wilhelm 2000, 140.
[171] Streck 1998, 40.
[172] Beiner 1983, 138.

body politic, operating through its citizenry as a single whole. It integrates us, making individuals into citizens. Barber takes a stand against Beiner by arguing, that treating judgement "exclusively as a form of reason, as Beiner... appears to do, destroys its political character by reducing it to a problem of individual cognition". [173]

Machiavelli and Rousseau (among many others) have noted that "the individual is often foolish, the multitude wise".[174] If Barber is to believe, political judgement means the same as the "multitude deliberating". Hannah Arendt argued, that the only place, where an individual could disclose him- or herself, was the public sphere. For her, the concept of "public" meant, that "everything that appears in public can be seen and heard by everybody and has the widest possible publicity".[175] For Arendt, action was the way of making oneself memorable in a sense of history. In acting and speaking, says Arendt, we show who we are by revealing actively our unique personal identities and thus making our appearance in the world.

If one takes under consideration Michael Oakeshott's distinction between the tradition of political thought based on Reason and Nature and that based on Will and Artifice (characterizing respectively the ancient and the modern conception of politics), it would appear Arendt fits more easily into the latter, since for her politics was always "an artificial creation, a product of action and speech, and not the result of some natural or innate trait shared by all human beings".[176] Politics, in this respect, is a matter of people sharing a common world and a common space of appearance in which public concerns can emerge and be articulated from different perspectives. For politics to occur it is not enough to have a collection of private individuals voting separately and anonymously according to their private opinions. These individuals must be able "to see and talk to one another in public, and to meet in a public space so that their differences as well as their commonalities can emerge and become the subject of democratic debate".[177]

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[173] Barber 1988, 210.
[174] This is by no means a universal truth. For example, in social psychology, the concept of "groupthink" is used to describe the situation, where a group of people makes a common decision by luring themselves into a false mental state of omnipotence. Usually this kind of behavior has tragic consequences.
[175] Arendt 1958, 50.
[176] Passerin d´ Entrèves 1992, 150.
[177] Ibid., 152.

8.3 Libertanism Online

The ideology of libertanism[178] has played an important role in the "Battle of Cyberspace". As Tim Jordan notes, libertanism speaks "both to individuals and to the cyber-elite".[179] At the level of the individual, libertanism connects to the powers individuals gain to construct their communities. Individuals are under assumptions of creating their own communities, and the attractions of an ideology that seems to place their individual liberty before any thing else is obvious. "No government or state", in Jordan's words, "is needed in a frontier society that allows individuals to create and participate in communities as they wish".[180] The technopower elite will also feel attractions to libertanism because of its relationship to the free market. As a class, the technopower elite can justify its control over the fabric of cyberspace by pointing out it was gained within an equal contest on the level playing field of a free market.

For Terence Ball, the supporters of liberalist views are

> "...passionate advocates of what appears to be an impeccably libertarian form of politics – they want information technologies to be used to create a new Jeffersonian democracy where all individuals will be able to express themselves freely within cyberspace. The utopian vision depends upon a willful blindness toward the other; each member is promised the opportunity to become a successful high-tech entrepreneur." [181]

Thus, if one would happen to fail, it's because one's own personal fault, because that person was totally in charge of his deeds.

As noted, in libertanism the concept of the individual is above anything else. In Rousseau's words: man is born free yet everywhere he is in chains. That statement refers to the human condition prior to society. William E. Connolly argues also, that with that Rousseau's statement "we are on our own, released from enclosure in a set of divinely ordained customs."[182] However, this potential freedom makes the world also more threatening. Many liberal theories define citizenship with negative rights, and linked to that, the democratic process in liberalism means the process of reaching for compromise between private

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[178] Sometimes - depending on theorist - also referred as "libertarianism" or "neo-liberalism".
[179] Jordan 1999, 215.
[180] Ibid.
[181] Ball 1995, 218; Barbrook & Cameron: *The Californian Ideology*, 45-53.
[182] Connolly 1988, 43.

interests. The state and is more or less defined by being an apparatus for public governing, and the civil society is a network of market-based private individuals or different associations. As Friedrich Hayek emphasized, for (neo-) liberalism, freedom is no more a natural attribute of *Homo economicus*, the rational subject of interest but a manufactured artefact.

8.4 The Communitarian Tradition

If the liberal tradition of democratic theories is polarized, the opposite viewpoint would probably be the communitarian tradition. In communitarism, the public autonomy of the citizen is primary to the pre-political liberties of the people. The Common or The Community and its well-being is central in communitarism. The content of communitarian democracy is all about ethics and discourse. The political rights thus become rights to participate and to communicate in public, which - compared to liberalism - could be defined as more positive rights. Chantal Mouffe, on the other hand, criticizes this by arguing, that it is impossible to combine democratic institutions with a sense of common purpose. This, on the other hand, has been recently challenged by for example Quentin Skinner, who has argued that there is no basic necessary incompatibility between the classical republican (however, not necessarily the same as "communitarian") conception of citizenship and modern democracy. He has found in several forms of republican thought, particularly in Machiavelli, a way of conceiving liberty, though negative, including political participation and civic virtue. It is negative, because liberty is conceived as the absence of impediments to the realization of our chosen ends. So the idea of a common good above our private interests is a necessary condition for enjoying individual liberty. Skinner's argument thus becomes important, because "it refutes the liberals' claim that individual liberty and political participation can never be reconciled".[183]

John Dryzek formulates the traditions of political theories by outlining the theories of democracy into liberal and participatory democracy. At the same time

[183] Mouffe 1992, 227-228.

he argues that these kinds of dichotomies are by no means undisputable or clear. These kind of formulations are always ideal, nowhere to be found in empirical, experimental forms. In Dryzek's definition, "the liberal democracy theory is dominated by voting, strategy, private interests, bargaining, exchange, spectacle and limited involvement. In participatory democracy, politics becomes increasingly discursive, educational, oriented to truly public interests, and needful of active citizenship".[184] On the other hand, "the participatory strand of democratic theory has strong historical associations with Rousseau, who thought its aspirations could be achieved only in societies encumbered by complex problems".[185]

However, calling Rousseau a communitarian would be wrong. As William Connolly reminds, "if Rousseau was a communitarian, it would be a community in which public politics is minimized, tradition controls much of life, and citizens subject themselves to self-control in preparation for the occasional call to validate through formal action principles already in the common life".[186] These principles show themselves clearly for example in Rousseau's attitude towards religion. Basically, Rousseau was tolerant of religious differences as long as all members endorsed the core set of beliefs.[187] However, this rules the agnosticts and the atheists out of Rousseauian politics, because they are "adversaries of faith and thus enemies of civic virtue".[188]

The same kind of rough dichotomy of political theories have been presented by Offe & Preuß by the terms of the American and the French traditions of democratic theory. In their essay they state, that the American democratic model relieved the sovereign people from the heavy burden of a nearly sacred task to define and implement the common good. Instead, the model restricted itself to the task of devising institutions (such as the natural right to private property and the division of powers) allowing the individuals to pursue their diverse interests and their particular notions of happiness, thereby at the same time avoiding the danger of an omnipotent government imposing its notion of collective happiness upon the people. Instead of "unifying" the people on the basis of some collective will, it

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[184] Dryzek 1990, 13.
[185] Ibid., 126.
[186] Connolly 1988, 60.
[187] Rousseau sketched a form of "civic religion", which was similar to Machiavelli.
[188] Connolly 1988, 62.

seemed more promising to the framers to move in the opposite direction of promoting the diversity and fragmentation of interests. On the other hand, the French tradition of democratic theory is firmly tied to a collectivist notion of secular salvation through social progress, with the constitution being considered as machinery for promoting this encompassing vision of the common good. For the French tradition, the problem is not how to check and neutralize the dangers of faction, but how to enable citizens to be "good citizens" - i.e. citizens committed to the common good. Given the fallibility of the will of the popular sovereign, the task of the constitution becomes one of the overcoming this fallibility.[189]

8.5 Power as Relation

In this thesis the concept of power is defined in a Foucauldian manner. In his work, Michel Foucault presented power as a relation, but as Alan Hunt points out, we know from Foucault's work more about what power is not than what it is. We know, as Hunt describes, that power "is to be discovered at play within discourses; that it is constitutive of strategies; that it manifests itself in constellations of force relations and, finally, that it is productive".[190] Yet this formulation leaves many open questions, one of for example what is the "certain type" of relation Foucault defines as power.

Linking to Foucauldian concept of power is, course, his work on *governmentality.* From Foucault's work on Bentham's panopticon to his last lectures on governmentality, Foucault revived the spectre of the "totalitarian" Rousseau. As Terence Ball points out, "Rousseau, on Foucault's retelling, advanced a nightmarish vision of virtuous citizens "normalized" and subjugated through the power of all over each".[191] Foucault sees the kind of society described in *Du Contrat Social* as "the completest and most perfect despotism yet devised, precisely because each members will for all, and all for each, and all think

[189] Offe & Preuß 1991, 145-153.
[190] Hunt 1997, 57.
[191] Ball 1995, 128.

themselves free and autonomous".[192] In society like this, everyone is constantly under the gaze of everyone else, and everyone is subjected to examinations and inspections of the most invasive sort. Ball states, that on Foucault's reading Rousseau's republic of virtue is "the forerunner of the carceal society or the panoptic machine"[193] in which Foucault thought people nowadays live. For Foucault, in Rousseauist dream "each individual, whatever position he occupied, might be able to see the whole of society, that men's heart's should communicate, their vision be unobstructed by obstacles".[194]

Laws and disciplines play a major role in Foucauldian governmentality. Therefore a temptation to counterpose law and politics emerges, but, as for example Hunt argues, "laws and politics are both techniques of power".[195] Despite laws, having certain disciplines means also having different kinds of regulations. Apart from actual laws, Hunt defines regulations as "a specific style of purposive, instrumental, and policy-oriented mechanisms of control seeking to avoid negative or prescriptive impositions of rules in favour of regulatory negotiation".[196]

As Hunt points out, there are no natural social objects and hence no ready-made objects of regulation. "Selecting" or naming the objects of regulation, therefore, is a power of greatest kind, and therefore a constant subject for political contest. After that, the regulatory agents are required in order produce regulatory knowledge via reporting, surveillance and inspection. The more information one has about the objects of regulation, the better and more efficient the actual regulating can be realised.

As noted earlier, the political *ethos* of in cyberspace is often considered as being part of the liberal political thought. Mitchell Dean emphasises, that laws are transformed by liberalism in that its function as an instrument of the exercise of sovereignty becomes linked to a complex set of disciplinary and governmental apparatuses. "Despite the proliferation of codes", argues Dean, "constitutions and laws, liberalism has no necessary affinity with law".[197] As a product and critique of bio-politics, liberalism has more in common with the "norm" than with law,

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[192] Ibid.
[193] Ibid.
[194] Foucault 1980, 152.
[195] Hunt 1997, 70.
[196] Ibid., 73.
[197] Dean 1999, 118.

transforming law into one component of a set of regulatory mechanisms concerned with the government of processes.

8.6 The Nomadic/Monadic War Machine

In their *Treatise on Nomadology* (1987), Deleuze & Guattari present two axioms regarding what they call the War Machine. First, they argue that "the War Machine is exterior to the State apparatus". Second, they note, that "the War Machine is the invention of the *nomads* (insofar as it is exterior to the State apparatus and distinct from the military institution)".[198]

What is notable with this concept of "War Machine" is, that machines, and more accurately, engineering, has been tightly associated with the development of the military. As Alistair Wechman reminds, for example in John Milton's *Paradise Lost* (1667), written on the threshold of the industrial revolution, it is Satan and his cohorts who "mobilize a devilish enginery".[199] Thus in the seventeenth century "engine" was a concept reserved only for the military industrial. Thus the very concept of an "engine of war" is somewhat a pleonasm.

In Deleuze & Guattari the nomadic role of the War Machine is exemplified by the role of the Romantic nomadic warrior in mythology, and also by the various kinds of "occupation" of space in war games such as the Chinese-originated Go,[200] and chess.[201] However, the Western chess, as we know it, is

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198 Deleuze & Guattari 1987, 351.

199 Welchman 1997, 212; Milton: *Paradise Lost*, VI, 553.

200 Go came to existence over 3000 ago in China, where it was given the name *weiqi*, the "surrounding game". This is, in some sense, important, because it's main goal is to surround enemy, not to destroy it by an attack, as for example in chess.

201 The origin of chess is usually located to India, but this view is based solely on the work of H.J.R. Murray. Murray's main source was H.J. Raverty, a nineteenth-century British army officer, who served in the perpetual wars against Afghanistan. Murray couldn't read a word of Hindi, Urdu or Sanskrit so he had to rely totally on Raverty's word on the original scripts. The story Raverty provided to Murray is quite an unbelievable one: that a sage named Shashi, living in Sind region, invented the game in a single night for his king, and demanded one grain of wheat to be placed in the first square of the chess board, two on the second etc. First of all, the Sind region is not in India but in Pakistan. Second, even today the vast majority of the people living in that region can neither read nor write, not speaking about playing chess. However, chess, if it was played there, was a hobby for the noblesse, so it is possible, that the game was either exported or imported there by the trade merchants. The Western chess, as we know the game, is probably a combination of some of the chess-like games known in history: Chinese chess *chu chi*, the Japanese chess *shogi*, Thai chess, Turkish chess etc. More about the history of chess, see Sloan, Sam (1985): *The Origin of Chess*. Sloan Publishers.

much more war-orientated than Go. The main goal in chess is to destroy the opponent by making a checkmate, forcing the king to surrender. In the case of Go, the leading idea is the potential to destroy, not the actual realisation of it. As in chess players try to erase the opponent's pieces, in Go it is all about gaining territory. In Go players "capture" the opponent's pieces by surrounding them, and, thus, taking their "liberty". All the black and white pieces of stone used for playing Go are equally valued, and therefore they are to be used as a "network of stones" in order to succeed in game. Also, unlike in chess, suicide moves (the ones that lead to unavoidable destruction) are forbidden by the Go rules. In chess, sacrifices are a major part of the game, opening possibilities for victory. Also, chess pieces are implicitly qualitatively encoded (a Rook is implicitly more valuable than a Pawn), but the Go pieces, as equally valued as they are, have, in Leibnizian sense, the whole in themselves.

The Go pieces are empowered not by intrinsic rules but more like by situational properties. Unlike chess, there are no front lines or battles in Go, which operates within a "smooth" space. Chess is a war game with clear rules and codes of behaviour, whereas Go, often misunderstood as a war game, has no exact battles. In Go, it's all about simulating certain tactics. In Go, maintaining the possibility of war is more important than the actual realization of it. Also, Go pieces are anonymous. "It" is moved in Go, whereas in chess it is always some certain individual piece, a King or a Knight, which is moved. Chess moves, "pre-coded" as they are, can be observed both by opponent and outsiders. The economy of chess aims at arranging a closed space, occupying the maximum number of squares with the minimum number of pieces.

Go moves are more unpredictable. They don't aim for immediate attack or defence, but the same move can be considered as a move for example for either bordering, shattering, or encircling, depending on the situation. There may even not be a clear goal for a certain move, because the upcoming situations bring up contingent elements, realising the future potential in pieces and moves seen meaningless in the former situation. Go pieces can be "re-coded" depending on the situation. Therefore, they exist in the present time without any necessary encoded goal. They are not attacking or even about to attack, but they may be about to become non-passive in one form or another.

In the case of these two games, the comparison between chess and Go allows a metaphor for comparing the features of chess-like striated "State space" and the Go-like "nomadic space" of the War Machine. In a sense, the *nomos* of Go and *polis* of chess form a dichotomy, against which the issues of Foucauldian governmentality can be projected. In Deleuze's & Guattari's words

> "...chess codes and decodes space, whereas Go proceeds altogether differently, territorializing or deterritorializing it (make the outside a territory in space; consolidate that territory by the construction of a second, adjacent territory; deterritorialize the enemy by shattering his territory from within; deterritorialize oneself by renouncing, by going elsewhere)".[202]

Drawing from the work of George Dumézil[203] on Indo-European mythology, war is positioned outside the binary poles of violence that are accessible to the State. Either the state channels war through its police force, whose operations are "seizures", which prevent combat, or else it acquires an army upon which it imposes juridical and institutional rules. Thus the War Machine is never reducible to the State apparatus, but the State constantly appropriates the War Machine to serve its mechanics of violence and control. In short, the State divests the War Machine of its power of metamorphosis, its romantic "nomadicism". It is worth noting also that the War Machine does not have war as its object, but it more like necessarily adopts it as its object when it allows itself to be appropriated by the State apparatus. The abstract machine Deleuze and Guattari describe is "destratified" or "deterritorialized", with no form of its own. The abstract War Machine "is not semiotic but diagrammatic, operating by matter, not by substance, and by function, not by form.[204]

Probably the most interesting aspect of these kinds of abstract machines is its way of organising. If different living systems are such machines, then they basically need to be understood not in terms of "components" or "parts" but in terms of "relations", as Foucault suggested. As Pearson notes, only this way "it is possible to generate the desired notion of dynamism (*entelecheia*)."[205] Machines - whether abstract or concrete - are usually considered as systems of concrete "hardware", through which different "software" is run. Seeing machines,

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[202] Deleuze & Guattari 1987, 353.
[203] See for example Dumézil, Georges (1969): *The Destiny of the Warrior.* The University of Chicago Press.
[204] Pearson 1997, 193.
[205] Ibid., 194.

particularly the abstract ones, as different relations would give quite different an outcome. Such machines would basically be organized as a "network of processes", producing the components, which continuously both "realize" the network of processes, and at the same time constitute the machine as concrete "unity".

Deleuze & Guattari also refer to the works of Pierre Clastres who proposed that so-called "primitive" societies are not only societies without a State, but that they have complex mechanisms for warding off the formation of a State. In his book *Society Against the State* Clastres notes, that like the striated space in chess, the space in "primitive" societies are usually defined as agricultural terms: there were "secured spaces", villages with fields, surrounded by the "dangerous space", the wilderness of forests.[206] However, as Clastres found out in his research on the Guayaki Indians, the Indian tribe considered space to be situational: for example some space was sometimes "feminine", if it included in that time some activities done by women. No predefinition for different spaces thus existed, because no difference of spaces existed. Hence the nomadic, Go-like nature of the Guayaki space.

Further, Clastres concluded, that war in primitive societies is the surest mechanism in preventing the formation of the State. In words of Deleuze & Guattari, war maintains the "dispersal segmentarity" of groups, and the warrior himself is caught in a process of accumulating exploits leading him to solitude and a prestigious but powerless death. This organisational form is closer to that of bands and packs than to the organs of power in any State apparatus. Leadership is a volatile relation between pack members, and does not necessarily promote the strongest but instead inhibits the installation of stable powers. Thus, instead of an institution of power structures, which "pre-exist" their occupation, power is a fabric of immanent relations, constantly undergoing metamorphosis and threatening the dispersion of the pack. This cannot be seen simply as a mere "unevolved" system, but is instead a complex assemblage of multiple micro-mechanisms that prevent the formation of power institutions proper to the State.

Thus, by breaking with the evolutionist's position of "from bands to kingdoms", a certain self-sufficiency of the bands is assumed and the emergence

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[206] Clastres 1987, 104.

of the State is transferred to entirely different mechanisms. As argued, the War Machine does not have war as its "object", but rather as its means of averting the formation of "organs of power". While the nomads can be accredited with the invention of the War Machine, they cannot be accredited with its secrets, as any ideological, scientific or artistic movement can be a potential War Machine, to the precise extent to which it draws, in relation to a "phylum", a plane of consistency, a creative line of flight or a "smooth space of displacement".

Then, it is not the nomad who defines this constellation of characteristics: it is this "constellation that defines the nomad, and at the same time the essence of the War Machine".[207] War only becomes its object when it is directed against the State apparatuses. The War Machine is inherently volatile and the power relations within it are necessarily fragmented or distributed: it is this tendency to rupture that prevents the formation of power-hierarchies and the State apparatus. The ruptures and schisms that guarantee the metamorphosis of the War Machine are essential to maintaining the exteriority of the War Machine to the State. And it is the operation of the State to "reterritorialise" and appropriate the War Machines that "deterritorialise" or escape from it in its attempt to disempower them. Thus, without the internal ruptures of the War Machine that ensure its nomadic movements, it would inevitably be conquested by the State apparatus, either by capture (a police raid etc.) or domination (military destruction etc.).

Cyberspace has so far been sketched by the visionaries as a State-free sphere, but if Deleuze & Guattari are to believe, this does not mean that the War Machine would not be able to exist also in cyberspace. The recent examples of spreading illegal material on the Internet, for example music files or racist material, have led to a situation, where states and corporations, through legal measures, have intruded cyberspace. So, in this sense, the disciplinary, somewhat self-regulated cyberspace has become a more controlled sphere because of its increased economic importance. Using the metaphor of frontier, one might argue, that the time for outlaws is over, and the Gary Cooper-like Sheriffs, the "equalisers" of cyberspace are moving in, in the name of Barlovian "civilization", giving the creeps for the digital successors of Foucault.

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[207] Deleuze & Guattari 1987, 422-423.

As Deleuze notes:

> "In the societies of control...what is important is no longer either a signature or a number, but a code: the code is a password, while on the other hand disciplinary societies are regulated by watchwords (as much from the point of view of integration as from that of resistance). The numerical language of control is made of codes that mark access to information, or reject it. We no longer find ourselves dealing with the mass/individual pair. Individuals have become "dividuals", and masses, samples, data, markets, or "banks". Perhaps it is money that expresses the distinction between the two societies best, since disciplines always referred back to the minted money that locks gold as numerical standard, while control relates to floating rates of exchange, monetary mole is the animal of the space of enclosure, but the serpent is that of the societies of control. The disciplinary man was a discontinuous producer of energy, but the man of control is undulatory, in orbit, in a continuous network."[208]

This "mechanization" of man is something Deleuze clearly detests. Also, the idea of lack of conflicts seems to worry him. If one thinks cyberspace in a Clastresian way, the Bill Gates-like attempts to unify cyberspace into a homogeneous sphere (with Microsoft products only) is the ultimate spectre what Deleuze could probably think of. The individual, in this view, has been reduced to a mere chess piece on the board, something to be actualised by the players (Gates and his Gatesian rivalries). The point here is, that both Gates and the Gatesians want to diminish the role of the State as the board, because for them, as libertarians, the State is a limitation for their financial pieces to move. Hence their massive economical support for all kinds of projects aimed at benefiting from cyberspace.

However, as business entrepreneurs the Gatesians are, the ultimate goal of their game would be creating a Gatesian "Monopolis", in which individual action would always be something submitted to the pre-defined well-being of the Gates Community. The Gatesian world is all about capitalism becoming a "virtual futures market", where nothing is true and everything is permitted. Through this process, the Gatesians would be able to establish their object of desire, the "sameness of difference", where separate, individual-seeming actors are collected under the same world of Gatesian values. However, no Bill Gates as a person would be the King of Monopolis but rather the faceless construction of Gatesianism. The reason for this would be quite a practical one: if this kind of system would be a "headless" system, then it could not be shut down by merely striking down the king as an individual (or his company, Microsoft Corporation, would T.W. Arnold probably note).

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[208] Deleuze 1992, 3-7.

Also Pierre Clastres would probably have a say considering this situation. Bill Gates has made a serious attempt in defining the "total social facts" through his vision of "digital nervous system". What Gates seems to share with for example John Perry Barlow, is the compulsory need to "civilise" cyberspace. After all, in Clastres' words, "a society is primitive if it is without a king".[209] However, the scheme sketched by Hayden White in the beginning - the idea of the Romance in a society scale - would now present itself in a different light. The idea of "civilizing" is something practised by a certain civilization. If societies without the State, as Clastres argues, are considered to be "incomplete" and "not civilized", "civilising" them would appear for those practising it almost as a Holy Crusade. Thus, "to civilise" would actually mean the same as "to conquer", because the "civilization" imported would always be implicitly better than the "original" one. At the same time the conquerors deny, in a Huntingtonian manner, the uniqueness of the society about to become conquered.

One specific aspect concerning cyberspace peeks out from this line of discourse. The Barlovian "civilizers" of cyberspace are in a constant collision course with the "new civilizers", demanding more legal measures and control in cyberspace. With the increased significance of money came the need for laws and the creation of civil society and politics, as Locke would put it. In cyberspace, with this line of development something dazzling happened. The original "pros", professionals and inventors settling cyberspace, have more or less become the "cons" of cyberspace, literally criminals by law, by not accepting for example to obey certain copyright procedures, because it is against their common sense.

Thus it can be argued, that the "metallurgy" of the War Machine in cyberspace consists of governmental (laws) and corporate (indirect regulations and codes of behaviour) intrusions, producing *status*, Mannerism, and "assembling" the digital monads/nomads to suit their preferences. In Deleuze's and Guattari's terms, the "motive power" of the concrete technical machine (cyberspace as an environment of information technology) requires the "formative power" of the abstract "social machine" for its actualisation. The social machine thus determines what is the usage, extension, and comprehension of technical elements. A machine is always social before "becoming" into a technical one.

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[209] Clastres 1987, 205.

Therefore, speaking about cyberspace as an independent sphere, whether technical or social, is somewhat naïve, because technology always refers to some social machine, which is, in Leibnizian manner, separate from it, but into which it can be connected through an "interface".

Also, if one goes back to the former Go/chess discourse, an interesting viewpoint emerges. As argued, in Go there is no absolute centre of the game like it can be found on a striated space of chessboard. Whereas in chess the "components" of the game are "pre-articulated", in Go both the terrain and the pieces are "strange attractors", constantly reproducing their *status* in different situations. The same goes to the concepts of cyberspace. As the pieces in Go, the concepts can in some situations be neglected by current discourses, but in the next situation the same concept-pieces are suddenly able to "surround" something considered important. The "target" then becomes "politicised" through situational articulation, and the value of the concept-pieces is radically increased. As in Go, nothing itself carries the status of "value" or "politics", but in certain situations anything can become "valuable" or "political". Therefore, the importance of the processes or relational organisations of "making" something valuable or political - the "politics of politics" - becomes uttermost important.

If cyberspace were seen as a "melting-pot" for different entities, the role of authoritative instances would, in Deleuzian sense, be "dictative" and "inscriptive", defining the preferred form of the "liquid" Go-like "freespace", poured into a pre-created, striated "mould". In the age of "digital money", this can be seen as an analogy to capitalism. Like in the Castellsian informational space of flows, in Deleuzean nightmarish cyberspace we are seen as mere pre-coded pieces for economical transaction, without any distinctive concept of Self, or, with that, any "human" value. In Deleuzean nightmare individual play - whether with chess pieces on board or pieces of ideas in cyberspace - becomes meaningless, because someone else is pulling the "structural strings", and the situational element - a precondition for evolutional irruption - simply vanishes. When everything is territorialized or "unitisized" in order to create new things for transaction, it basically means the intrusion of capital(-istic) *Ordnung* into the non-linear Deleuzean "politics of Desire". No further individual judgement on any subject's nature would be required in this Ultimate Checkmate.

9. Conclusions

"Amen yeah."
Elton John: Amen.

So, what to make of all this? With the emergence of cyberspace, are we entering Heaven or Hell? Or is cyberspace just some kind of digital re-creation area with no potential to become a sphere for something "real"?

9.1 Beyond the Politics of Judgement

One could argue, that in cyberspace, the question of "we" wanting something is at the same time important and irrelevant. As noted earlier, one of the best theoretical models about cyberspace was developed by G.W. Leibniz some 350 years before the concept of "cyberspace" emerged. The Leibnizian monadic world was operated under the guiding hand of God, settling the self-dependent monads to the *Cité de Dieu*. Following this, the monadic individuals in cyberspace are

indeed a part of a network, into which they can, through the interface, connect. Still, the realm of cyberspace in its present form can be argued to be a realm with folded "Many-Ones". Those Many-Ones can communicate, but they cannot be joined under any earthly entity. Only God would be able to create such mutual harmony. This has been noted also among corporations. As Thurman Arnold puts it, the corporation as "One", the "corporate religion" can be seen as a part of "our present religion".[210] Also, considering cyberspace as terms of Hayden White, Romance presupposes emotional objects, to which "One" can focus on with one's feelings. Like the central computer emulated Case's loved one in William Gibson's *Neuromancer*, cyberspace itself can be argued to emulate the object of the Romantic desires of the "Many-Ones".

As noted earlier, sometimes one confronts shadows instead of "real" in cyberspace. What cyberspace gives possibility to is play:[211] play of thought, play of identity, playing with something considered ambivalent, inappropriate or even dangerous. In the "digital moors of Jutland" people can momentarily take a vacation from the Deleuzean Mannerism of their everyday lives, their social hierarchies and disciplines. Also, the Barlovian pioneers of cyberspace never forget to emphasize the role of freedom or "freespace" when talking about developing new inventions. Wilderness, they claim, is where wild things grow. Wilderness brings forth the unpredictable, the unexpected. For them, the ideal form of cyberspace is one including unexpected connections and non-hierarchial communications, made possible by the virtual anonymity of cyberspace.

This romantic ideal, flourished by Jeffersonian cyberspace pioneers like John Perry Barlow, lies on the assumption, that cyberspace automatically produces such consensual codes of behavior, which benefit all the cyberspace individuals. The Barlovian pioneers are more than reluctant to give up on this ideal, because through different offline authority intrusions, they claim, the inherent creativeness of cyberspace would be destroyed. In this sense, for the pioneers, cyberspace is not anything "high-browed", but more like a consensual

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[210] Arnold 1968, 205.

[211] For example, In the original meaning of the word *hackers* are enthusiastic computer programmers who share their work with others, not computer criminals. Also, as Linus Torvalds describes this in his foreword to Pekka Himanen's book *The Hacker Ethic* (2001), the element of play has been crucial in computer development. Steve Wozniak, claimed to have been built the first personal computer in the world, describes, how this "world was simply the most fascinating one". Tim Berners-Lee, the man behind the World Wide Web, called his the first prototypes for Internet "a play-with software".

virtual cafeteria table, "deliberate waste of time", in order to create the ultimate sphere for new idea(l)s. As young Jonathan Harker writes in Bram Stroker's novel *Dracula*, "As I must do something or go mad, I write this diary".[212] The Peircean Musement, confronting virtual problems of mind with free association, and "abducting" possible patterns of solution, is inherent in the "essence" of cyberspace. Of course, the romantic undertone of Musement can get tragical connotations. The possibility of turning abduction into addiction can't be ruled out from cyberspace: after all fulfilling one's passions is not a game of judgement and reason but of intuition and impulsive emotions.

9.2 The Situationalism of Cyberspace

In *The Langoliers* (1990), a short story by Stephen King,[213] a small group of aeroplane passengers wake up from a light doze to discover that everyone else on the plane has vanished. All that is left from those people are the artificial parts they had (toupees, protégés etc.). Running out of fuel, they manage to land the plane, but once grounded, the mystery only deepens. There doesn't seem to be anyone left on the planet. All electrical equipment has ceased to work, the sulphur in matches refuses to burn, carbonated drinks have gone flat, the food is tasteless. In its every form, life has left the world.

One of the passengers, a mystery writer, poses a theory that they are an insignificant amount of time in the past, a point in the ongoing time line where life has moved on and the world is just an empty lot. It also becomes imminent that the distant but closing rattling sound they hear comes from the closing *langoliers*, eating the old time, leaving nothing behind them. After several attempts, the group thrown into the past manages to retain their position in time. Actually they reach the same airport they were in past, only a bit earlier in time that they intended to return. Then, the feeling they experience is quite opposite to their recollections about the past. They see the world building itself around them: first one color, then one smell, one sound etc. When they reach the Benjaminian

[212] Kittler 1990, 354; Stoker, Bram: *Dracula*, 344.
[213] The story is available also in a collection *Four Past Midnight.*

Jeztzeit, they slip into that moment, starting to follow the world at the same pace all others do.

One could argue, that when logging into cyberspace, the same kind of phenomenon emerges as did in *The Langoliers*. Everything one confronts in cyberspace has been pre-created by someone else. Also, it is not necessary only the user that accesses to cyberspace but at the same time cyberspace accesses to the user. Some of his files become available for download, the user can be contacted by other users online etc. In other words, he has, via logging in, started to exist to others. He has "slipped into" cyberspace. Once the user logs out, he leaves some traces about what he did in form of scraps of computer code, but as the past coffee without taste or lame colors in *The Langoliers*, those bits of information are lifeless remains of some individual, traces of something that used to be. In time, those bits simply vanish into cyberspace, because they cannot be found in any way any more. They are like the sound of fallen tree in Bishop Berkeley's forest, just before the echo of the crash fades out forever.

Nowadays cyberspace, given here the form of the Internet, is considered as a sphere, where the freedom from all kinds of governmental power flourishes. This conception originates from the early days of cyberspace, when the pioneering settler spirit was the dominant *ethos* in cyberspace. The current amount of users on the Internet is around 500 million; the pioneers of cyberspace are an ever-vanishing minority compared to the large public, wanting safer and easier solutions. It basically means, in one form or another, the intrusion of the Deleuzean War Machine, with which some kind of structured governing would be created, and with that some legal forms of controlling cyberspace.

From the viewpoint of cyberspace, a kind of "rebirth" happens every time an individual logs in. An individual may recollect, what he did when he logged in the last time but the cyberspace he visited the last time is somewhat different a sphere the next time. One moment someone with a valuable piece of information is online, but the very next moment he's gone, taking the information, the life of cyberspace, with him, leaving practically no traces of being there at all. An entity encountered in cyberspace, whether an individual or for example a web site, can in one moment be a "1", a Leibnizian monad, but in the following moment the same entity is "0", not a "no-thing" but "offline".

This makes the "mapping" of cyberspace practically impossible from any other viewpoint but the monadic individual, who, as a part of the network, has the whole in himself. Everything else is nothing more but of a self-stated promise for a better future, leaving the very possibility, that after a while something even more useful and important will emerge. From this romantic viewpoint, cyberspace promises an eternal, constantly updating Holy Grail.

The romantic call for adventure is well inherent in cyberspace. Cyberspace appeals to the adventurer in us because it has no single authoritative center, conception of morality, or practice of reason, as argued. Nor is it a single, top-down system. In cyberspace there is no single Archimedean point from which one can "peer down to see everything."[214] Also, with one single logging in to cyberspace only reveals the current state of a tiny part of the whole cyberspace in a certain time and date. Therefore, exploring or "browsing trough" cyberspace is practically eternal a quest.

In cyberspace the concept of "trust" can be questioned in a way that the subjects observed by others in cyberspace may not be bound to the individuals behind them. Here, also another thing, the non-linear "discontinuity" of cyberspace sets some new demands. Under these conditions, putting data in some certain universal order becomes practically impossible. In cyberspace, literally everything, starting from the users, is constantly updating, and as being digital exchangeable information, the past leaves no remaining traces of itself in cyberspace. As economical a sphere cyberspace is, it is not an unlimited "bank of memory". Once logged in, the individual can familiarize oneself only with the most recent history, still partly online, as the lifeless remains of the digital past. Everything happened before that has vanished, eaten by the digital *langoliers*.

Cyberspace is not "multitude deliberating", but rather "solitude standing by". The monadic ahistorical subjects in cyberspace can do hardly anything more than stand back and watch by "browsing" through the endless-seeming contents of cyberspace. Also, the basis of cyberspace experience is not reason. Moreover, it is an aestethic one. Arguments and counter-arguments don't matter much in everyday non-linear life of cyberspace, where everything is "folded" in Deleuzean

[214] Heim 1998, 158.

manner. In cyberspace everything is a matter of interpretation, a Leibnizian point of view.

No universal "codes of decency" or "configurations of behavior" exist in cyberspace: it's all like the "New Adventures of American Adam", a narcissistic story of the Total Individual, roaming in the digital frontiers. Different layers of monadic structures perceive other monads through an "interface", which they use in browsing. These "digital nomads" gather information by accidentally bumping into it, and collecting it literally bit by bit through downloading.

Also, the very idea of an "interface" gets somewhat new connotations in cyberspace. Traditional conception of a technological interface is usually seen as a relationship between a human and a computer. In cyberspace, through network, one can't really hold as self-evident, that the others online are what they claim to be. Also, quite a large part of the network communications is based on two computers changing information. The computers can understand each other, although there was a Finnish user trying to download an image located in hard drive of a Liberian girl. This "x/second" -interface reduces even the most beautiful paintings in the world into binary bits. Once satisfied, the user can disconnect the interface, although some other monad wouldn't like him to. In cyberspace, you don't have to think about the others unless you specifically want to, and vice versa. Unlike in the real world executions, in a tragic cyberspace Romance, the loved one gets electrocuted when the power is switched off.

Spending time in cyberspace is something of a paradox, because, as argued earlier, time does not exist in cyberspace the same way it does in "real" world. In cyberspace, time is an infinite set of discontinuous situational "events", forming the informational space of flows, as Castells likes to call it. The "machine time", then, becomes separated from our biological time.

Also, cyberspace as "space" cannot be reduced under the concept of "place", as noted earlier. The existence of cyberspace as a non-linear sphere is not based on the linear idea of a process. Cyberspace is not a caravan heading West or anywhere else. Nor is it, at least for now, a system with some kind of common set of rules. The question "how cyberspace is" is both situational and an individual one as the Leibnizian monadic points of view appraising cyberspace. Also, because of the constant updating of cyberspace, the answer is updated in the same

way.[215] Trying to put information in some kind of order for making some kind of logical argument is more or less useless in cyberspace: "well-formation" in a sphere without a solid form is something not to be achieved by any individual. The answer for "how cyberspace is" has to be rediscovered every time one logs in. In this sense, one could argue, that cyberspace as a sphere goes beyond the traditional forms of judgement. No one but God would be able to fully unfold this situational "informational space of folds". Everything else is human abduction.

9.3 A Stranger in Town

As noted in Chapter 6, most definitions of cyberspace, made whether by sci-fi writers like William Gibson, idealistic pioneer visionaries like John Perry Barlow, scholars like Manuel Castells or corporate leaders like Bill Gates, emphasize, that cyberspace is a total, and what more important, primarily an economical sphere. This is, somehow, a surprise, when one thinks about the hopes and dreams that have been linked to its emergence. On the other hand, at least Barlow and Gates are clearly reviving the idea of the "Grand Narrative" when concerning cyberspace as a sphere, in which we are offered scenarios of transition to a "higher level" of being, based on "machine intelligence" and "global consciousness". Of course, this can also be seen as one aspect of the economical development of cyberspace. These kinds of fetishisms of technology are an essential part of capitalism's transcendental illusion.

However, the general attitude towards cyberspace is indeed hopeful. The dream of getting rich is just one dream cyberspace has been linked to. For a lonely person the Internet may offer a dream for finding a perfect husband or wife. For a human rights organization in Turkey, cyberspace offers a sphere in where the Turkish government can't censor them (although they might have to locate the actual server abroad). The appearance of cyberspace depends on whoever is watching. This is possible, because cyberspace's limits and possibilities are yet

[215] One aspect often neglected when discussing cyberspace is, that the constant updating of software and hardware leads to a situation, where the new computers and programs are simply unable to read the old files, because all the standards for storing information have changed. It is just like trying to play a cd with an lp-player.

largely untested. Therefore, the politics of Desire are nowadays allowed to have a major foothold in cyberspace. In cyberspace everyone is on quest for something - only the actual/virtual objects for the quest vary.

However, the Leibnizian dream of unifying the world under *characteristica universalis* seems to remain a dream. There is neither common language nor any common code of ethics to cyberspace. Moreover, cyberspace appears as building the digital Tower of Babel, a romantic project aimed at reaching Heaven:

> "And they said, *Go to,* let us build us a city, and a tower whose top may reach unto heaven, and let us make us a name, lest we be scattered abroad upon the face of the whole earth. And the Lord came down to see the city and the tower which the children of men builded. And the Lord said, Behold the people is one, and they have all one language; and this they begin to do; and now nothing will be restrained from them which they have imagined to do. *Go to,* let us go down and there confound their language, that they may not understand one another's speech. So the Lord scattered them abroad from thence upon the face of all the earth; and they left off building the city."[216]

In his essay about the Tower of Babel,[217] Thomas Paine notes, that it is like the building of the tower would have made God jealous and angry about the peoples' disbelief for His omnipotence. Hence its destruction and confounding the universal language. However, Paine had faith in men, and he argued, that instead of making people separate, increasing the peoples' difficulties would actually bring them tighter together. The people, who could not anymore understand each other because of different languages, had to "re-learn" to understand each other in order to get along.

However, the digital Tower of Babel would be seen as the very construction the Gatesians are trying to build. What would be more efficient platform for virtual transactions than a homogenic sphere, in where individuals have been "unified", or more accurately, "unitisized", moulded into units of exchange. In this Kindom of Gatesian Desire, the holy things would become profane, and all solid profane things would be melted to fit the Gatesian scheme of digital nervous system, erasing the need for individual judgement. At the same time, two current problems blocking the Information Highway would be vanished. First, the problem of God could be replaced with a single Network. Second, the problem of

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[216] The Bible, Genesis xi.

[217] In Wheeler, Daniel Edwin (ed.) (1908): *Life and Writings of Thomas Paine.* Vincent Parke & Co., New York.

the political in the Network would be replaced with the construction of *le volonte digital.*

Keeping this in mind, one could argue, that "unifying cyberspace" in the name of individual liberty is more or less counterfactual. In Clastresian manner, one could actually argue, that it is not its potential homogeneity but its fragmentary diversification that makes cyberspace special a sphere. However, one could also argue, that the Battle of Cyberspace between the visionaries of equality and straight democracy and the representatives of State and corporate interests is, not in progress, but already over, and the corporate interests prevailed. The element of play is still there, but nowadays more and more people play with real bets, so to speak. As noted earlier, where the dream lies, the money will follow. And, as Marx would probably add, where there is money, more money will follow.

In its current form, cyberspace is like a traffic system about to succumb into chaos. Before the era of metropolises, when the amount of motor vehicles in traffic was small, the "pace" or the general speed of the traffic was slower. Hence no common rules were required.[218] Also, leaving one's home was then always some sort of an adventure. The means of transportation, the sailboats, steam trains, horse carriages, and alike, were not always on time, so traveling became an experience itself.

In the early frontiers of cyberspace, anyone could lead his own way like the American Adam stereotype Marlboro men in the famous tobacco commercial. Since that, the large masses have settled into cyberspace, jamming the connections and generally messing things up with their lame skills of using computers.[219] Their presence is considered as unwanted by the network professionals, whose interests require fast connections. This is somehow important, because this act of exclusion may lead to a situation, wherein those wanting to recreate the old frontier-like virtual environment will separate from the

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[218] For example, until the end of the nineteenth century, traffic in New York City was largely uncontrolled. Carriages and wagons dashed about in every direction, and runway horses added to the chaos with alarming frequency. By 1912, the number of motor vehicles in New York City had already mushroomed by 1912 to 38,000. (Today there are over 2 million vehicles of all types registered in the City, in addition to the uncounted vehicles that commute from the suburbs every day). More about the subject, see *The History of the Traffic Control in New York* in:
http://www.ci.nyc.ny.us/html/nypd/html/transportation/newpage5.html.

[219] Actually, "lamers" is the name *hackers* call such users.

present, somewhat chaotic a sphere.[220] This line of thinking sees the large masses' opinions as mere "noise", which is an uttermost political act. However, most of the "governing" in cyberspace is still put on a form of a friendly advice or an unofficial policy, but demands for more exact regulation increase as the importance of economical aspect of cyberspace grow.

For utopians, cyberspace is the ultimate sphere combining the world under a universal entity, just like for Leibniz the idea of monadology was a way of creating a theology-based philosophical system in order to unify Europe. For the Jeremiad dystopians of cyberspace, the increased use of information technology forms the ultimate gap, not to be crossed or circled around in any way, for those without the required resources of technology and skills. One fact, well seen in this thesis also is, that the development of cyberspace has been a very U.S. -centered process. This has also obviously labeled the discussion around it. The public or social aspects of cyberspace have so far been clearly overshadowed by the private: issues of privacy and individual liberties, both characteristics of the American liberal tradition of discourse.

This is why the dystopian visions of cyberspace as a "virtual panopticon" can be seen, as worst-case scenarios, but also as reviving mythological spectres with which the libertarians have tried to argue their point of view about cyberspace's structure. The American liberal *ethos* has always emphasized creating "light" or "simple" forms of governing. However, the problem of simple solutions in cyberspace is, that no single set of rules is legitimate in such complicated a sphere. This has not however stopped visionaries like John Perry Barlow from trying at the same time to "civilize" cyberspace, to formulate some kind of universal consensus-like liberal codification for all cyberspace users, and to try to limit the offline institutions' existence in cyberspace.

The general discussion around various computer-related new technologies tend to revolve around the notion of interactivity and the possibility that various machines will be enhanced by being linked up in ever more powerful computer networks. However, the commercialization of cyberspace has also had effect on the nature of technical development. Non-profitable projects like networking some local community in the name of "teledemocracy" have had to depend mostly

[220] Several plans for the Internet 2, a network for mainly scientific purposes, have already been presented. The Internet 2 would not have free access like the Internet now.

on small public funding, while the large companies have concentrated on making products for the entertainment markets. In a way, this is important. Some time ago, many of the new inventions were somehow linked to war, now they are linked to the War Machine of the entertainment business. Nowadays, many of the new inventions are developed straight into mass consumer products, in order to make money. The same goes to the value of information. A scrap of code which makes an animated mouse move smoothly on the screen is probably worth more money than for example inventing a revolutionizing network solution which would make it possible for the citizens to participate in their city council meetings via Internet.

Cyberspace has also developed a division of labor with its attendant inequalities, and it already has heard the call for laws and regulation and the protection of private property. It is not unjustified saying, that cyberspace, as being a frontier for the settlers for only some years ago, has since then somehow been "normalized". This doesn't mean something "normal" but more a "norm" or a standard. There are certain standards for commercial companies to exist successfully in cyberspace nowadays, and it is practically a norm for traditionally "offline institutions" to have presence on the Internet in order not to look outdated. Different Web sites are designed to present coherent positions, with clear message of what they're after. In order to enhance the institutions' or corporations' "brand", these web sites are professionally produced. Therefore, a lot of the content on the Internet is really quite something else than "cyber-anarchist" material.

In David Lynch's film *Lost Highway* (1997) the main character Pete (Bill Pullman), after getting mysterious video cassettes with the morning mail, filmed inside their home, showing for example him and his girlfriend sleeping, meets a strange albino man in a party. This Mystery Man, shaking hands with Pete, asks: "*We've met, haven't we?*" When Pete denies this, the man smiles, knowingly, saying: "*Don't you remember, Pete? In your own home. You invited me.*"

As unclear a movie as *Lost Highway* is, it is perfect an analogy, when one thinks about the Information Highway, as some people call cyberspace. Like art, cyberspace embraces things behind our "mental maneuvers": things we can sense but do not "know". Both *Lost Highway* and Information Highway have been "invited". Cyberspace is a result of separate monadic minds having worked on

different technical problems and future possibilities. There's no clear map for it, because cyberspace cannot be ceased in time. We know, that we invited cyberspace, but we don't know what we've actually invited. In Deleuzean manner, cyberspace is an "outside", opening the becoming onto an unknown future. There's a stranger in town.

9.4 Further Research

As noticed, the question of citizenship and its legitimate expression in cyberspace is an intriguing and challenging question. The *netizen* discourse will probably be something, which would be an interesting research dilemma for further research, when one thinks about cyberspace from the viewpoint of political science. Also, a concept left maybe too much in the background in this thesis, the equivocal concept of "technopower" would make a rewarding research question to continue.

It is also more than interesting to follow the discourse on "natural" cyberspace. However, even those longing for the "original" cyberspace will have to acknowledge, that realizing their vision, as the others', would require concrete actions. This kind of inscription of both the current state and the future prospects of cyberspace is, of course, political. The role of the rhetoric in this process will no doubt be a major one. Also, the concept of "war" in cyberspace is an extremely interesting theme. Both the role of information in wars and the "inner war" for hegemony in cyberspace are themes yet widely unexplored by the scholars.

Of course, a number of interesting scholars and thinkers had to be let out of this thesis. Cyberspace is probably a fruitful target for browsing it from the viewpoint of for example Pierre Teilhard de Chardin and his construction of "noosphere". From the view point of "situationalism", an attempt to juxtapose Leibnizian cyberspace with Alan Turing's work would with no doubt be interesting.

Comparing cyberspace to the earlier historical changes caused by new information technologies like for example printing press and television is indeed interesting, but at the same time one should recognize, that the possibility for concrete interaction gives cyberspace a special touch. This "real-time" interactive

element is one that also puts pressure on the traditional definitions of a "community". Exploring these frontiers of research would also with no doubt make a worthy challenge.

10. Epilogue: High Hopes

"Beyond the horizon of the place we lived when we were young
In a world of magnets and miracles
Our thoughts strayed constantly and without boundary
The ringing of the division bell had begun

Along the Long Road and on down the Causeway
Do they still meet there by the Cut

There was a ragged band that followed in our footsteps
Running before time took our dreams away
Leaving the myriad small creatures trying to tie us to the ground
To a life consumed by slow decay

Looking beyond the embers of bridges glowing behind us
To a glimpse of how green it was on the other side
Steps taken forwards but sleepwalking back again
Dragged by the force of some inner tide

At the higher altitude with flag unfurled
We reached the dizzy heights of that dreamed of world

Encumbered forever by desire and ambition
There's a hunger still unsatisfied
Our weary eyes still astray to the horizon
Though down this road we've been so many times

The grass was greener
The light was brighter
The taste was sweeter
The nights of wonder
With friends surrounded
The dawn mist glowing
The water flowing
The endless river

Forever and ever."

Pink Floyd: High Hopes.

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