

Epistemology in the Virtual Reality. – Friedrich Nietzsche and the Natural Science.

Or: Navigation at the Contradiction with the Concept of Nietzsche's "Contrary Character of the Existence".

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I. Critical preliminary remarks

The invention and realization of the technology of virtual reality is going to lead to a remarkable epistemology, provoking the entire natural science. This complicated theory, which is still at its initial stage, can be easily understood by the thoughts of Nietzsche, as it seems, that he has almost considered it beforehand. Unquestionable, the Virtual Reality is a medium – but nevertheless it would be advisable to get the term “medium” explained more clearly. Looking at the epistemology in Virtual Reality it seems probably to be paradox and appears as an immaterial, unreal, *doxale* duplication of the well-known, still exists a theory of knowledge of existence, however it needs some more explanations.

II. a.) Introduction

From my perspective as a physicist seems the following terms, to be used as medium, absolutely incomprehensible: “[...] a chair, a mirror (M. McLuhan), a football, a waiting room (Flusser), the choice system, the general strike, the road (Baudrillard), a horse, an elephant (Virilio) or money, power, and art, religion and love (Luhmann).”¹ This medley gives us the impression, that nobody really knows what a medium is. Moreover, the recent linking of the traditional media with the computer science takes over the modern term of ‘information’ from it, so that the (existing) attempts for its integration into a definition of the term ‘medium’ complicates the understanding at all. It should to be noted that in computer science no generally accepted definition of the term information is existing up to now. One can manage a computer or a software program without the knowledge and the need of the term information! It does not represent an elementary necessity in computer science, as for example the elementary particles in physics. It means, that the term information is just as spongy like the term medium. The transformation and redefinition of these both pure working definitions into a Grand Unification (standardized) Theory of information or media remains a task of the future. The computer itself holds the status of a machine *inter pares*. It is a machine like every one, neither more nor less. The engagement of dealing with machines *per se* or with mechanical engineering in itself as an independent research issue began, historically seen, relatively late, although machines accompanied mankind already since the ancient time. It was just during the lifetime of Nietzsche when time for such reflections and priorities was ripe. At the same time arose the topic of the philosophy of technique, which developed nowadays into a generally very important topic, especially in our so-called information- and communication age. Worthy of mentioning about these matter at that time is the fact of experience for connecting technology with art and aesthetics. For example, how would the

¹ Alexander Roesler, *Medienphilosophie und Zeichentheorie*, in: (ed.) Stefan Münkler, Alexander Roesler, Mike Sandbothe, *Medienphilosophie. Beiträge zur Klärung eines Begriffs*, Frankfurt 2003, 35.

design of adjustment handwheels in the style of Etruscan vases, machine foundations on Greek columns or *turbine* houses as Roman churches fit into Nietzsche philosophy of aesthetic, which demands “*to look at the science in the perspective of the artist, but art in that of life, [...]*” (KSA, GT, 1, (2))?² The preference during that period to design machines in art styles was considered soon as outdated. Notwithstanding, on closer examination it is valid, that technology and the media are never free of the aspect of aesthetics! This sentence applies obviously to the technology of Virtual Reality, to simulated worlds like *Second Life* or computer games. Today’s generally point of view about technology, seen as an organic projection by Ernst Kapp (1808-1896) and later on it was the starting point of reflections by Marshall McLuhan, to be declared only as a means to increase performance of work, depreciate the aesthetic characteristic of technology, as already thought by Nietzsche. Following Nietzsche, this paradigm underestimates the aesthetic characteristics from *within* technology. The starting point of Nietzsche’s thoughts develops from his following basic questions: “How far does the aesthetics reach into the essence of the world? And does exist apart from the artists still any more artistic power? This question was, as one knows, my starting point: And I said yes to the second question; [...].” (KSA, NF, 12, 121, 2 [119]) Nietzsche was successful and recognizes an aesthetic prevail inside the science. As an example, in order to remain within the topic of computer science and the media technology of Virtual Reality, it should be referred to the science of logic: Nietzsche speaks critically of a “misapplication of the logic as a reality criterion.” (KSA, NF, 13, 532, 18 [2]) and states that “the nature of logic is not discovered still yet.” (see KSA, NF, 12, 307, 7 [34]). The possible impression of discrediting natural sciences (and technology) by Nietzsche, does not mean that he ignores them, rather he observes and differentiates them extremely subtly. Nietzsche demands also in this cultural area a necessary “*revaluation of values*”, because, he deplors, from the history seen, a fundamentally and generally “falsification of the epistemology.” (KSA, NF, 12, 293)

b.) Sovereign Uncertainty of Knowledge

The development of technology and science always refers its impulse and its ever-returning reason from the aesthetics: “the abnormality of the absolute will for knowledge, to the true and wisdom reveals itself in its hostility towards aesthetics: [...].” (see KSA, NF, 12, 121, 2 [119]) The deficit state of science and technology is the aesthetics one, – and the decay of aesthetics itself presents just partial as a hostility towards science. This way, technology and science gain an autonomous characteristic like José Ortega y Gasset referring to Nietzsche, or Friedrich Dessauer (1881-1963) describe: “in the nature of the technical object is the reasoning of the independent value order located”³. The correlative constitution of the antagonism “aesthetics and science”, like Apollon and Dionysos, is for Nietzsche an absolute necessity, since its justification remains in his general understanding of means: “a tool cannot criticize its own quality: the intellect cannot determine its own limitation, neither its wellness nor its failure.” (KSA, NF, 12, 133, 2 [132]). Illustrating this impressively, it means for example: “this is more badly than to check up a match, before it will be used. It is the match, which wants to check up itself whether it will burn.” (KSA, NF, 12, 37, 1 [113]). For Nietzsche is every partial knowledge equivalent to an illusory knowledge, like the Greek *doxa*. If one understands the science and the aesthetics as each other excluding tools for obtaining knowledge, what in each case can they cause, what means obtaining knowledge in these two cases? Nietzsche means: “‘Knowledge’ is a referring back: in its essence a

² Cf. Friedrich Dessauer, *Philosophie der Technik*, Bonn 1928, 177. And: Conrad Matschoss, *Die Entwicklung der Dampfmaschine*, Bd. II, Berlin 1908, S. 676 ff.

³ Dessauer, *Philosophie der Technik*, l.c., 134.

regressus in infinitum: That which comes to a standstill [...] is laziness, weariness –.” (KSA, NF, 12, 133, 2 [132]) [p. 309 Kaufmann] This general mode of epistemology leads sooner or later to an unavoidable collision of the different fields of knowledge, and to a steady shift of their limits. Thus, at the limits the different fields will be levelled, since the contrary tools cannot recognize each other – just there. They become fuzzy and exclude themselves from the possibility to gain the ultimate knowledge.

Nietzsche criticizes the usual ordinary sciences in the following point, which includes an important truth, worthy for consideration: “The development of science resolves the ‘familiar’ more and more into the unfamiliar: – it desires, however, the reverse, and proceeds from the instinct to trace the unfamiliar back to the familiar. *In summa*, science is preparing a sovereign ignorance, [...]” (KSA, NF, 12, 189, 5 [14]) [p. 329 Kaufmann] The developing uncertainty and ignorance, which Nietzsche states, plays a crucial role and leads to the trace of the introduced question belonging to this given answer, which will represent a big scientific challenge.

The Technology of Virtual Reality, where arts and science are going well together, may be a first touchstone for this general challenge. Open problems at the end of the solutions, at the answer, and not at their starting points, at the question itself, fails to recognize the fact that in the human existence problems are given, which one cannot leave out: ‘Every single sciences starts to extract a piece from the whole world in order to limit their problem’, – which partly stops by its restricting to be a problem anymore. They just start to select and encircle the problem, and for this purpose the knowledge or the supposed knowledge, on which it may depends most probably, is put at the very beginning. A philosopher looks about his subject from a point of view, which quite differs from all the other researchers and scientists. ‘The philosopher does not know at all, what his subject could be.’ One could describe it like ‘everything that is existing’, – something of which he never will know, whether it is a entirety nor where its limitation will be. Therefore, even the *being in itself* becomes for him a questionable being, a not-being. The philosopher takes from the very beginning into his account, that his subject could be unsolvable. For example, either the human ability for knowledge is limited or that for any reasons the existence is unrecognizable. As a likewise academically trained philosopher, I would like here to point out to the excellent lecture of Ortega y Gasset, named *What is Philosophy?* In Virtual Reality one gets confronted with all these topics above, (with both their pragmatic and their theoretical characteristics), – and, paradoxically, despite or just because it concerns a technology. The virtual reality, a technology, which includes (medial) the sensory organs consciously and intentionally in its starting conditions, raises a philosophical and deeply human problem for discussion: “Why hurt lack of knowledge the human beings like an organ, which they never possessed?”⁴

Nietzsche remarks about this matter: “if we had not remained to some extent *unscientific* men, what meaning could science possibly have for us? Taken as a whole and expressed without qualification: *to a purely cognitive being knowledge would be a matter of indifference.* –” (KSA, MA II, 1, (98)) According to Nietzsche human beings are scientist from the deepest bottom of their nature, and in that way they are natural scientists. As technology is ever more than purely technical inventions for the struggle of the life, it comes out from the nature of the scientist, or generally spoken from the humans, that even “the objectively necessity for humans is necessary only regarding with respect to the redundancy.”⁵ As a result it explains the freedom of the choice for his possible attitude of refusal and the disposition for his own decline, – in Nietzsche’s words called *décadence* –, as well as his claims, his *power to will*, etc. “The will to power can manifest itself only against resistances, [...]” (see KSA, NF, 12, 424, 9 [151]) [p. 346 Kaufmann] –, just as his heroism, his drama, briefly his existence as his own outline for life. Humans are something restless, something that they are not yet;

⁴ José Ortega y Gasset *Was ist Philosophie?*, Stuttgart 1962, 72. (Trans. by myself).

⁵ Ortega y Gasset, *Betrachtung über die Technik*, Stuttgart 1949, 31.

something that they would like to be. A human is a continuous outline of his fantasy. Therefore Nietzsche combines truth and knowledge with those characteristics: “[...]. ‘Let us try it!’ But I not longer wish to hear anything of all those things and questions that do not permit any experiment. This is the limit of my ‘truthfulness’; for there courage has lost its right.” (KSA, FW, 3, (51))

c.) Abolishment of the Term ‘Being’

Let us go now into *media res* corresponding to Nietzsche’s (theoretical) media experiment. In the discussion about the term ‘medium’ it does not matter, how the term will be defined in the context of the virtual reality. I prefer an intuitive understanding of the term ‘medium’, which is sufficient for our purpose. That means: the original interpersonal communication is changed and canalized by an interposed medium, which goes together with a change of reflexivity and of the perspective. A declared aim of the Virtual Reality is to eliminate the character of medium in such a way, that the user thinks there is no medium. It should seem as if a genuine, interpersonal communication took place. It is like a ‘medial turn’, a backward to the roots of communication itself. The future affecting of the Virtual Reality is not only located in the so-called Real Time communication, but primarily in the first possibility of unrestricted and unlimited discovering of human fantasies as well as in the possible new experiences of perception and new perspectives of consciousness by the so-called ‘*Immersion*’, that means to feel real within the virtual reality, – according to its naming.

Nietzsche supports this intention, such a train of thought would come to meet him with much pleasure: “And what subtle instruments for observation we possess in our senses! This nose, for example, of which no philosopher has hitherto spoken with respect and gratitude, [...]. We possess scientific knowledge today to precisely the extent that we have decided to *accept* the evidence of the senses – to the extent that we have learned to sharpen and arm them and to think them through to their conclusions. The *rest* is abortion and not-yet-science: [...].” (KSA, GD, 6, (3)) Nietzsche indicates – interestingly enough – the interpreter or the scientist both as a “*means*” for the “*existence*” (see, e.g., KSA, FW, 3, (54)) and as a *medium*: “the succession of appearances even by describing very exactly, cannot give the nature of the process – however the constant of the falsifying medium (ours “I” –) is there at least.” (KSA, NF, 12, 189, 5 [13]). On the other hand the virtual reality is a technology, that means a tool and it represents at the same time again the context. This instrument, tool or medium, – however one would like to call it –, represents of great importance the unique characteristic of its manner of being a context. If things become so great and multifunctional, that it comes up to its border of complexity, it can change from its function from the tool into the context. It is in the same manner as Nietzsche thinks about the human beings. Now, which kind of science is in the opinion of Nietzsche a not-yet-science? And, which epistemology do Nietzsche has in mind? Another trace and answer one gets with his statement: “The origin of ‘things’ is wholly the work of that which imagines, thinks, wills, feels. The concept ‘thing’ itself just as much as all its qualities. – Even the ‘subject’ is such a created entity, a ‘thing’ like all others: [...].” (KSA, NF, 12, 141, 2 [152]) [p. 302 Kaufmann] If things and subjects represent according to Nietzsche only an imagination, an illusion, the virtual reality form the ideal platform in order to study this virtuality of all things. The developed avatars and the simulated worlds display very clear their connections to the art and aesthetics. Evidence of these surprising variety gives, for example, the simulated world of ‘*Second Life*’ developed by Philip Rosedale, or the scientific use and the product developments of the industrial departments in the so-called ‘*Cave*’, also because of the great demonstrations by the inventor and pioneer of the virtual reality Jaron Lanier.

The subtraction of materiality and of the traditional conception of being of the things, introduced just by the scientists themselves, is a remarkable fact. Nietzsche demands all the time – again and again – all over in his writings the abolishment of the being: “More strictly: one must admit nothing that has being, –” (KSA, NF, 13, 35, 11 [72]) [p. 377 Kaufmann] and “[...] the matter is as much of an error [...]” (KSA, FW, 3, (109)). This corresponds to the well known conception of the term ‘information’ formulated by the cyberneticist Norbert Wiener: “information is information, neither materia nor energy.”

The traditional epistemology (and theory of knowledge) becomes often an ontology, a theory of being. These way of thinking is now with Nietzsche passé. But ‘what’ remains and ‘how’ one can recognize and gain knowledge then in generally, according to Nietzsche, – and especially within the Virtual Reality? Within an Internet of things without materia, being only virtual and not real?

d.) A Virtual Approach for Reality

Nietzsche associates the term ‘*knowlege*’ with the term ‘*probability*’ and on the other side he associates the ‘*life*’ itself with the term ‘*truth*’. (see KSA, MA II, 2, (1)) Noteworthy, taking into account all knowledge theories it is the philosophical question, which has probably the smallest chance for a solution among all possibilities of realization, but ironically the assumed accurate sciences approach more and more the level of the ‘probability’ in their theories and practices: For example in the course of the development of ‘quantum computer’ the question is taken up again about the quantum-theoretical uncertainty in the context of the old unresolved discourses by Einstein's position and classified as an urgent problem. Evolution biologists let themselves be inspired meanwhile rather from the ‘*game theory*’ than from the ‘*selection theory*’, for example Wolfgang Wieser or Brian Goodwin explain, whereby Goodwin explains the evolution with a ‘*dancing metaphor*’ in order to recognize the existing relations between the natural sciences, the arts, and the culture.

The famous computer artist and physicist Herbert W. Franke gives the ‘*accident*’ a basic role within his thinking.⁶ The computer scientist Jaron Lanier prefers, like many other, ‘*statistic techniques*’ in his concept called ‘*Phenotropics*’, that not only considers robot navigation, but also network architecture and programming. Particularly, since the hope died, that computer programs will operate like the language. According to the *cognition psychologist* Roger Schank is the term ‘*information*’ equivalent to the term ‘*surprises*’. The physicist Lee Smolin sketches a cosmic image that can be expressed completely in term of ‘*relations*’, and which represents a whole *network of ‘woven knots and loops’*.⁷

It should be noted, that each sentence marks the interesting circumstance that the term of ‘*probability*’ or ‘*uncertainty*’ does not have any genuine ‘definition’. Nobody knows, what probability will be or could mean, – except an intuitive notion due to the practical handling. It is possible to indicate and summarize these various, new characterisations with the term of the *Aletheia*, which will be soon determined closely. Nietzsche identifies the term probability within an epistemological context as follows: “[...] basically, the action in regard to all actions which can still be expected (action and the probability of similar actions) *in summary*” (KSA, NF, 12, 141, 2 [152]) But, what can be recognized when uncertainty becomes the crux of matter and the bottom line: The answer reads: “What kind of matter can knowledge be? – ‘Interpretation’, not ‘explanation’.” (KSA, NF, 12, 104, 2 [86])

⁶ Concise summary: Herbert W. Franke, *Das Universum – ein Automat? Der Weg zur Weltformel*, in: *Telepolis*, 14.5.2007. See: www.heise.de/tp/r4/artikel/24/24658/1.html

⁷ Further particulars of Brian Goodwin, Roger Schank and Lee Smolin within everybody's grasp and briefly e.g. in: Brockmann, John (ed.), *The Third Culture: Beyond the Scientific Revolution*, New York, 1995.

III. Gain of Knowledge with respect to a Modern Understanding of the Term Aletheia

The ‘*uncertainty*’ becomes a dominating argument in Nietzsche’s philosophy. It will engage us in the ongoing questioning about its function, about the ‘*how*’.

William Gibson, the namer of the word ‘Cyberspace’ characterizes the function, the ‘*how*’ as follows: “he heard, [...] urge him *not* to focus. *What you do, it is opposite of the concentration, but we will learn to direct it.*”⁸ Jaron Lanier, the pioneer of the ‘Virtual Reality’, who coined this expression, characterizes the question about the function, shortly spoken the ‘*how*’, as follows: “[...] – it’s like going on a hike and being the sculptor of the mountain at the same time.”⁹ Nietzsche describes the ideal ‘*how*’ of obtaining knowledge and wisdom as follows: “[...] he is at once subject and object, at once [...], actor, and spectator.” (KSA, GT, 1, (5.)) Each of these different examples arrange together their strange opposed apparently conflicting statements, similarly the oxymoron ‘artificial reality’.

Historical seen the motives of Old-Egyptian image representations reminds, with their typical aspects of the simultaneousness (e.g., the face is seen from the profile together with a frontal, wrong body position etc.), which should present a perspective of a complete *look-around* at once. The multileveled, twisted, unrealistic composition of many perspectives at that time lights up to an important point, namely that a comprehensive knowledge understanding will be possible across paradoxes and contrasts. In its counterpart of the 3-dimensionality, the Virtual Environment, Jaron Lanier noticed (experimentally) that the user has the tendency to adjust the inconsistencies of the technical performance. This phenomenon was already justified by Christian von Ehrenfels (1890), the founder of the *Gestalt psychology*, who wrote: “it works better than it should because your brain wants your reality to look good. It’s a really high priority for your brain to believe in your reality.”¹⁰ It does not concern here by any means neural arbitrary acts of the imagination, but as seen with Nietzsche, a justified check-up for gaining knowledge: “appearance like I understand it, is the real and *the* only reality of things, – something which, belongs to all existing things [...], therefore they are in addition with their opposite characteristics to be designated. By the word however is nothing *more* expressed as its inadequacy for the logical procedures and distinctions: that is in other words ‘appearance’ in relation to the ‘logical truth’ –, however, it is itself only possible in an imaginary world. So, I did not set ‘appearance’ in contrast to ‘reality’, but turn over appearance to reality, which resist to change it into an imaginative ‘world of truth’. A certain name for this reality would be ‘the power to will’, from the inside designated and not from its incomprehensible liquid Proteus nature.” (KSA, NF, 11, 654, 40 [53]) Nietzsche refers to an area, where still a knowledge gap exists, because one did not consider it sufficient. It ranges between the common view of science and usual logic and at the border, which is near-hand to the border of the human experience and realization. This new, unexplored range combines Nietzsche by the name ‘*will to power*’. It represents the total reality. The new extent of knowledge absorbs the well-known common one, and summarizes therefore extending opposite concepts to a new realization, which draws back only if it becomes imaginative, that means a single discipline. It is, when for example, the logic is left out, and hurts therefor the ‘idea of unity’, by reducing the possible extent of knowledge.

It is interesting, to see, in which a way, nowadays in our technological 21st Century, an outstanding scientist, like William Bricken, a Virtual Reality researcher of the first hour, describes his own work: “VR is illogical positivism: if you can specify it, it is meaningful. All empirical hypotheses are true.”¹¹ Without dealing further on with the philosophical term

⁸ William Gibson, *Idoru*, Viking Press, New York 1996, 228.

⁹ Jaron Lanier, *The Virtual Visionary*, in: *The Guardian Saturday Review*, 29. Dec. 2001.

¹⁰ Lanier, et. al., *Virtual Environments and Interactivity: Windows to the Future*, in: *SIGGRAPH Panel Proceedings*, Boston 1989.

¹¹ William Bricken, *Virtual Reality: Directions of Growth*, in: *SIGGRAPH Panel Proceedings*, Dallas 1990.

positivism, will be here emphasized the remarkable fact, that he characterizes the virtual reality as ‘*illogical*’. Only strictly logical mathematical methodology connected with an illogical and unorthodox approach will gain real scientific progress and knowledge. This is identical with the way of thinking about the so-called ‘*not-yet-science*’ by Nietzsche. In the special case of the media and computer science one could call this way in a first attempt according to Bricken’s ‘*experiential computing*’ more generally ‘*experiential epistemology*’, since it is dynamically as well as multi-sensoryly and kin- or synaesthetically. By the turn to the so called ‘*bodyphilosophy*’ (German: “Leibphilosophie”) according to Nietzsche, where the body becomes an interface and invisibly, as it where melt together with the medium, one gets according to Bricken a ‘*experiential semantics*’, he wrote: the “syntacs, the symbol that guide computational activity, is hidden in the background, out of sight.”¹² From this importance results the necessity to reconsider the ‘theory’ concerning the ‘*context*’. Attempts alone, to interpret and understand the illogical structures of virtuality and for the designing of virtual environments, even by use of the common Neuro-and Cognitive Sciences, will not be sufficient enough. At one of the most important SIGGRAPH conferences¹³ William Bricken stated an important sentence, which became a *Credo* of the Virtual Reality: “Psychology is the Physics of VR.” Because: “The most important thing to realize about VR is that it is more than reality, more than a simulation of reality. You add physical realism to a virtual world by adding constraints that reduce the possibilities in that world. [...]. Reality simulation is a subset of potential VR experiences. The least elaborated virtual world is the Void. [...]. Let the borders fall, and you are in somewhat in it, which is a larger area than the physical. We have new liberties, we must new learn.”¹⁴ Properly speaking this understanding of psychology as an epistemological theory is not enough to understand the above statements of Lanier, Nietzsche and Gibson.

Nietzsche recognizes the facts by going back to psychology, but rejecting it however at the same time by broaden and renaming it: “Psychological starting point: [...] Reduction of all organic basic functions to the ‘will to power’ [...] ‘law of nature’: as a formula for the absolute creation of the power relations and degrees.” (KSA, NF, 12, 17, 1 [3]) Nietzsche keeps apart from the markings ‘*will to power*’ and ‘*law of nature*’ a whole number of most different ideas for one and the same thing for the purpose to illustrate and make it understandable. They reach from scientific-sounding names up to mystical ones, for example he puts down: “psychological basic experiences: [...] with the name ‘apollinian’ is named [...] on the name of the Dionysos is baptized, [...].” (KSA, NF, 12, 115, 2 [110]) Nietzsche’s own difficulties with the namings witness of the uppermost difficult task, to which he saw himself posed, to make the novelty and strangeness of its own philosophy concept understandable, that includes so many different and various levels. Nietzsche uses the term ‘*will to power*’ only as a starting point for an epistemological evolution: “I require the starting point of ‘will to power’ as the origin of motion [...] not caused from outside. [...]“ (KSA, NF, 13, 274, 14 [98]) [Cf. p. 295 Kaufmann] By Nietzsche’s very clearly stating the “will to power as knowledge” (KSA, NF, 13, 270, 14 [93]), it becomes evident, that knowledge cannot be gained neither by the traditional nature sciences, that means from the outside nor by the common psychology or the neuroscience, that means from the inside. Rather applies according to Nietzsche: “*In summa*: an event is neither effected nor does it effect.” (KSA, NF, 13, 274, 14 [98]) [p. 296 Kaufmann] What does this statement means in the epistemological context? First, I like to remind about what Nietzsche is concerned with, – it is a matter of a new theory of dynamics, that means a new theory of epistemology as he himself put down: “with the not harmless title ‘the will to power’ is coming along a new philosophy, or more properly spoken, the attempt of a new interpretation of the whole happening: [...].” (KSA, NF,

¹² Ibid.

¹³ SIGGRAPH = Special Interest Group on Graphics and Interactive Techniques.

¹⁴ Ibid.

11, 653, 40 [50]) This strange double-structure of the ‘happening itself’ corresponds to Nietzsche’s negation of any separation of contraries like subject and object, cause and effect, doing and deed, theory and practice, active and passively, hard and softly, and so on, even between Dionysus and Apollo or the being itself and the dynamics. (See, e.g., KSA, NF, 13, 274f, 14 [98]; KSA, NF, 13, 286, 14 [107])

The described fundamental order of the happening itself corresponds to the design and the future-relevant questions and requirements in the virtual reality. A happening that combines various opposites in itself at the same time, requires from the researcher a certain point of view for his orientation, which will be an overview, a kind of a bird’s-eye view, which Nietzsche establishes in his term ‘*pathos*’: “The will to power not a being, not a becoming, but a *pathos* – the most elemental fact from which a becoming and effecting first emerge – ” (KSA, NF, 13, 259f, 14 [80]) [p. 339 Kaufmann] The most essential point of the philosophical thoughts of Nietzsche is the pathos. It guarantees the ‘perspectivism’ of the whole becoming, and determines the novel science, the new research field of Nietzsche’s *theory of dynamics*. “the science of the being, of the thing, of firm units is one hundred times easier than the science of the becoming, of the dynamics,...” (III 883). It differs from the conventional sciences and their understanding of the dynamics of things because they refer (and *recur*) to a firm thing, whereas Nietzsche negates just such things and gives all ideas inherent something indefinite, liquid, briefly, something dynamically. “Is will possible without these two oscillations of Yes and No? [...]: Nonetheless: opposites, obstacles are need; therefore, relatively, encroaching units... localised – –” (KSA, NF, 13, 259f, 14 [80]) [Cf. p. 369 Kaufmann]

Before going on a little bit more detailed with the function of this theory, it may be useful to imagine, how to look at the function of these spreading units as the following example will illustrate us very good: Lanier calls it ‘*postsymbolic communication*’. For a better understanding I would like to quote a few more extended quotations. For example, Lanier describes it in such a way: “[...] a new kind of communication. It’s really putting people inside your dreams, and something that’s very hard to describe, because it’s a mode of communication; I think that’s really different than description.”¹⁵ And: “You’d be using gestures instead of building something stone by stone. When you can improvise while inside it, making it up as fast as you think and feel, you can reach other people. [...]. In the future I see virtual reality as a medium of communications where people improvise worlds instead of words, making up dreams to share. An ideal VR conversation would have the continuity, spontaneity, expressiveness of a jazz jam but the literal content that’s missing from music. [...]. It would be a reality conversation, an objective form of the Jungian dream, the collective unconscious. You might call it the collective conscious.”¹⁶ And: “[...] to communicate without symbols. It has a different rhythm. [...] what you’ll have is nodes of relative static quality vs. periods of very dynamic quality [...]. The idea might turn out to be wrong: [...]. So it’s really a grand experiment, [...]. Of course communication without symbols already happens constantly. First of all, the clearest example of receiving communication that is nonsymbolic is to commune with nature. The direct perception you have when nature communicates to you as you walk in the forest is simply prior to/beyond symbols. There’s no need to prove that. Any linguist who would argue otherwise is beneath contempt. An example of communicating outwards without symbols is when one moves one’s own body. You don’t send a symbol to your arm or to your hand; you communicate prior to symbols to your own body. [...]. Now, of course, those are the purified examples, some purified examples of nonsymbolic communication that already exist. But, of course, all of life is deeply imbued with nonsymbolic communication. A book has its nonsymbolic aspects; [...]

¹⁵ Lanier, *Virtual Environments and Interactivity: Windows to the Future*, l.c.

¹⁶ Lanier, *Interview with Jaron Lanier*, by Doug Stewart, in: *OMNI, Online-Magazine*, Jan. 1991. See also: <http://www.protovision.textfiles.com/computers/CYBERSPACE/lanier.txt>.

Everything has symbolic and nonsymbolic aspects to it. A thing isn't a symbol; it's just that you can use anything as a symbol. The idea of symbol is a use for a thing, but everything is also a thing in and of itself; everything has a primary thingness. (Twisty sentences like that are part of what led me to the search for post-symbolic communication!)¹⁷

Nietzsche means the following about the pathos, or the reality, and its meaning for the knowledge: “Appearance is for me that which lives and is effective and goes so far in its self-mockery that it make me feel, that this is appearance and will-o’-the-wisp and a dance of spirits and nothing more, – that among all these dreamers, I, too, who ‘know’, dancing my dance, that the knower is a means for prolonging the earthly dance to the masters of ceremony of existence; and that the sublime consistency and interrelatedness of all knowledge perhaps is and will be the highest means to *preserve* the universality of dreaming and the mutual comprehension of all dreamers and thus also the *continuation of the dream*.” (KSA, FW, 3 (54))

The statements of the two thinkers seem not unknown at all and are deeply founded in our culture, – and nearly forgotten in our technical world, although we earned our today's development and standard from this *Zeitgeist*. Wolfgang Schadewaldt describes an Old-Greek term, which however is extremely important as follows: “I would say that the term of Aletheia contains a human original experience, which one can find likewise within the sensual as well in the mental or spiritual range. It does not need to happen always in the highest level, it is however extraordinarily significant, nearly something deeply affected is implied. Myself experienced it once during a mountain hike, where one feels oneself completely lost in the fog, each step could lead into the fall down – and then to feel the happiness, if the fog disappears and everything is transparent and clearly visible again, just is here. The naturally feeling in such a situation is the same as in the act of recognition by a research worker, for instance. He collected facts, things are lying in front of him, but they are nebulous, he did not find the real relations between them. Then it can happen – most in one single moment – although nothing had changed, all facts remain the very same ones, but somehow it is, as if the fog is vanished and the relations one was looking for is appearing suddenly as bright and clear, as well as it had happened during the above mentioned hike.”¹⁸

The similarity of these characterisations, made by those different thinkers with the most different fields of activity, is striking. Everyone stresses, for example, the comprehensibility of communication and knowledge, the dynamically spontaneity and the objectivity of knowledge gained this way. Especially remarked is the way, how the scientist Lanier refers to the inherent dynamics, thus point to a novel rhythm, which connects relations and contraries. The term Aletheia, seen as a modified and modern concept, illustrated in the words of Nietzsche, can help to understand urgent questions of the technology of virtual reality, the nature sciences or the artificial intelligence.¹⁹

The Aletheia is something like revelation, – the German term is “Unentzogenheit”, – a “functional encroaching unit (“Zuständlichkeit”), within it can be understood as ‘truly’, but not primarily. It does not deal with the truth of a statement, [...]” The Aletheia lacks, as demanded by Nietzsche, the traditional structure of *materia* as assumed by the general scientists, but however without having lost the logic. This results, because “the sense of becoming must appear justified at every moment, and accomplished achieved.” (KSA, NF, 13, 39, 11 [82]) [Cf. p. 377 Kaufmann]

¹⁷ Lanier, *A Vintage Virtual Reality Interview*, in the journal *Whole Earth Review*, 1988. See also: <http://people.advanced.org/~jaron/vrint.html>.

¹⁸ Wolfgang Schadewaldt, *Die Anfänge der Philosophie bei den Griechen*, pp. 199. (Trans. by myself).

¹⁹ With regard to details: Miriam Ommeln, *Die Technologie der Virtuellen Realität. Technikphilosophisch nachgedacht*, Frankfurt 2005. And: Ommeln, *Nietzsche, der Cyberphilosoph*, in: Beatrix Vogel (ed.), *Der Mensch sein eigenes Experiment?*, München 2008.

Nevertheless, the common laws of nature science can be expressed. Nietzsche states: “There is no law: every power draws its ultimate consequence at every moment. Calculability exist precisely because things are unable to other than they are.” (KSA, NF, 13, 258f 14 [7]) [Cf. p. 337 Kaufmann] Or: “The *calculability of an event* does not reside in the fact that a rule is adhered to, [...]: it resides in the *recurrence of ‘identical cases’*.” (KSA, NF, 13, 276, 14 [98]) [p. 296 Kaufmann] The modifying and changing of the scientific common term causality by the key word ‘*eternal return of the same*’ may be all right for scientists, particularly since the scientists can not define the term causality themselves. But it becomes critical at the point of Nietzsche’s ‘interpretation and process philosophy’, as called by Hans Lenk, whereby a necessary subjective moment plays an important part: “the interpretative character of all becoming. It does not actually exist an event by itself. What happens is a group of features selected and summarised by someone interpreting it.” (KSA, NF, 12, 38, 1 [115]) This apparent arbitrariness of knowledge is going far beyond the possibility of the predictability of the quantum-mechanical observer and measuring problem; however by consistently thinking further, it may be a real epistemological starting point: “the human is a being, who creates figurations and rhythms; he is experienced in nothing better and it seems that he enjoys nothing more than inventing novel shapes. Just watch, with which his eye gets immediately busy as soon as it gets to see nothing any more: it creates something to see for itself. [...]. without the conversion of the world into shapes and rhythms it would give nothing for us to be the ‘same’, thus nothing returning, [...], still more exactly: forcing shapes: – of ‘impressions’ are only speaking the superficial humans [...]. This activity is proper, [...] to value [...] and seen like this, ‘knowledge’ proves only as a means of the nutrition.” (KSA, NF, 11, 608, 38 [10])

This very important anthropological component along every process and status of knowledge, lets illustrate itself in the Virtual Reality, where everything began as a role play. Avatars, games, even the blogosphere, briefly said, the navigation in the interactive Cyberspace reflects clearly by its verbal and non-verbal communication²⁰, in their use of masks, that a training for media competence will not be sufficient alone, in order to understand the behaviour and handling of the users in and with the new media technology. The explanation cuts more deeply into the dynamic medial happening: According to Nietzsche are the “metamorphoses of the one and only will, which inherent all events, the will to power; [...]” (KSA, NF, 13, 44, 11 [96]) a human and scientific fact. This means on a more personal level, that each individual has to change within its own characteristic rhythm, to mask and protect. He must occur into “any role [...]. He enters into every skin, into every emotion: he is continually transforming himself.” (KSA, GD, 6, (10)) One could understand and condemn this acting as deception and lie, – sometimes one could describe it as a lack of social competence –, but getting to its bottom, one will realize, that it is an (real) aspect of communication itself, – moreover, in the ideal case, it favours almost this acting.

“What is the meaning of the antithetical concepts Apollinian and Dionysian, both conceived as forms of intoxication, which I introduced into aesthetics? [...] intensified: so that it discharges all its power of representation, imitation, transfiguration, transmutation, every kind of mimicry and playacting, conjointly. The essential thing remains the facility of the metamorphosis, [...], it possesses to the highest degree the instinct for understanding and

²⁰ For example, Tilmann Borsche refers generally to that: “Nietzsche interprets the intuition of the pure intellect via one of many concepts traditionally opposed to it by understanding intuition as a kind of imagination of the body.” Id: *The Epistemological Shift from Descartes to Nietzsche: Intuition and Imagination*, In: (ed.) Babette E. Babich, Robert S. Cohen, *Nietzsche and the Sciences I: Nietzsche, Theories of Knowledge, and Critical Theory*, Dordrecht, Boston, London 1999, 56.

And, David Best provides some explanation: “It is because the feelings which can be experienced while moving cannot be experienced in other ways”. Id., *Philosophy and Human Movement*, London, Boston, Sydney 1978, 136.

divining, just as he possesses the art of communication to the highest degree.” (KSA, GD, 117, (10)) Not only the communication is promoted und further developed, but the epistemology itself because: “– The sensations of space and time are altered: tremendous distances are surveyed and, as it were, for the first time apprehended [...]: ‘*intelligent sensuality*’ –” (KSA, NF, 13, 294, 14 [117]) [p. 421, Kaufmann]

In such a way the function and the part of the Aletheia becomes more understandable, by its sudden spontaneous dynamics of “*revaluation of values*” (see KSA, NF, 12, 370) – as Nietzsche calls it. Its functional encroaching unit implies a wider horizon than that of the pure logic. It circles and covers the epistemological aspects of creativity, fantasy, intuition, nonverbal communication, and so on, and *at the same time* of the logic, representatively for the abstract sciences at all. The *abolition* and integration of the contraries is given in the ‘*perspektivism*’ – as Nietzsche calls it. It is the guarantee for a circuit of all shifts of relations and forces of all possible events and interpretations. Build up in such metamorphoses the status of knowledge achieves the character of genuine scientific results, since they are periodically and returning regularly, – according to anthropological constants. Therefore is for human beings the area of space, time and velocity such an interesting research field, by which they feel almost magically attracted since ancient time, starting up the media scientists or the artists, architects, mathematicians, physicists till sportsmen. They transform their horizon of knowledge and push their level of knowledge to unimaginable heights and widths.

The ‘intelligent sensory’, as Nietzsche called it sometimes too, cannot stop, it has to be changed its life, its environment, its experiences, its knowledge, even itself again and again and again, all the time and every moment – and even it would be its own decline. Nietzsche states: “*We have need of lies* [...] in order to *live*. – That lies are necessary in order to live is itself part of the terrifying and questionable character of existence. [...], man must be a liar by nature, he must be above all an *artist*... And he *is* one: metaphysics, religion, morality, science – all of them only products of his will to art, to lie, [...]. That the character of existence is to be misunderstood – profoundest and supreme secret motive behind all that is virtue, science, piety, artistry. [...] so many seductions to life! In those moments in which man was deceived, in which he duped himself, in which he believes in life: oh how enraptured he feels! [...] What delight! What feeling of power! [...] The lie is the power. –” (KSA, NF, 13, 193f, 11 [415]) [Cf. p. 451f Kaufmann] And in such a way follows now Nietzsche’s famous consequence and sentence, which does not only refer to the art, but to the interpretation of the happening itself: “Art and nothing but art! It is the great means of making life possible, the great seduction to life, the great stimulant of life...” (ibid.). And which an understandable temptation to the medium of the Virtual Reality, to the modern temptation to the *labyrinth*, the Internet.

IV. Visions

Consequently, the science therefore obtains its content of truth from the lie. If one examines in a mind experiment, what would happen, if one could attain a knowledge of 100%, then for example real experiments with self-learning computer programs demonstrate that it comes to a Crash, instead of a complete knowledge. Knowledge of 100% blocks itself; and is excluded by Nietzsche, as already mentioned before. He analyses the following: “the absolute necessity of all happening does not have anything of a compulsion: the one, who holds a high level in knowledge and wisdom, is the one, who is able to thoroughly understand and to feel empathy with it [...]. ‘To understand everything’ – that would mean to neutralize all perspectives, that would mean to understand nothing, to misjudge the nature of the searcher.” (KSA, NF, 12, 37, 1 [114]) Taking the asking position and the solution from the object of the knowledge and not in the same way from the nature of the searcher, means to deal only with half of the science, to remain in a dead end. It is and will be still the Aletheia, which can point the way in this

conflict, since it confirms and verifies the momentarily believed ‘truth’: “five, six seconds and no more: there you feel suddenly the presence of the harmony. Humans in their mortal body, cannot stand this feeling, and have to transform themselves physically or must die. It is a clear and indisputable feeling [...]. The most dreadful is the terrifying certainty, with which it expresses itself and is going along with happiness. [...]” And he continues in very personally way: “– in these 5 seconds I live a whole human existence, for this I would give away my whole life, it would not be paid too expensive.” (KSA, NF, 13, 146, 11 [337]) This even for Nietzsche unusually pathetic saying underlines the importance of his words and his seriousness. On the other hand, Nietzsche brings up for discussion a knowledge and a feeling that any human knows, – not only the scientist in his direct process of cognition, which gives him the highest evidence of the result, and which gives him additional the necessary courage to communicate it to the social public. It is nowadays just this as unscientifically understood ‘clear and indisputable feeling’, like Nietzsche expressed it, which takes care for the advancement and development of the science and its not-coming-to-an-end. Actually, it always concerns only in each case the momentary conditions of the science, as history easily shows up.

The medium of the Virtual Reality and the Cyberspace points the way to clarify its own ambiguity *as technology* and *as medium*. In the pathos of the distance, justified by the Aletheia, the above characterisations of Gibson, Lanier and Nietzsche will be now obvious, since the virtual reality, as any medial activity, should be hold by the two activities of the active and the passive, like writing and reading belongs together.

The required skill in the Virtual Reality is similar, on the one hand it is the logical programming of the environments as well as on the other hand it is the imaginative, creative use, – which is not illogical therefore, as explained above. The element of the ‘*uncertainty*’ is much more, it is a dominating factor. The intuitive use is not pointed out for nothing by the experts as a main characteristic of the virtuality. The dull-passive consumer may limit himself to a use without obeying this contrary characteristic, what may in a medium, which is used quite often socio-politically (journalism, data security, meetings, etc.) in the long run not very wisely however with regard to the democracy and the self-determination of the individuals.

The Technology of Virtual Reality has the power and the possibility to show up just by its tensions at the social as well as at the scientific level, the future way to a general science coming up in the 22nd Century. Just before finishing, we will look at the aim to obtain results for our acts and works. – One have to put the observer and measuring problem, or more generally spoken, the contrary character of the general happening on one’s epistemological calculation and to spell, that means, to *count and spell at the same time*, – for remaining in the medial picture. “*The beautification of science*. – [...] and to involve it in so much indefiniteness, irrationality and reverie that one can walk around in it as ‘in a wild nature’ and yet without effort and boredom, – that is no small ambition: [...]. – and with that an age may perhaps *begins* which will discover the mightiest beauty in precisely the ‘wild, ugly’ sides of science, just as it was only from the time of Rousseau that one just discovered a sense for the beauty of the high mountains and the desert.” (KSA, M, 3, [427])

In a *new*, genuine Zeitalter of knowledge perhaps then one would be closer to the wisdom as to the knowledge, – since one would have revalued the term knowledge more fairly, – caused and by the means of the Technology of Virtual Reality: “[...] the highest man, assumed that such a term will be allowed, would be a human, who would represent the contrary character of the existence most powerful, [...]” (KSA, NF, 12, 519, 19 [111]) [Cf. pp. 150, 570 Kaufmann].

Abbreviations and references to Nietzsche's work:

KSA is the German Edition of Nietzsche: *Sämtliche Werke. Kritische Studienausgabe*, ed. G. Colli and M. Montinari. Cited as KSA followed by the abbreviation of the German title, the volume number and the page number.

All quotations are found in an English translation, except those which are designed *only* by (KSA, NF, ...). They are '*Nachgelassene Fragmente*' translated by myself, and not found in: '*The Will to Power*' ed. and trans. by Walter Kaufmann.

[cf. page number, Kaufmann] means that I have corrected Kaufmann's translation of this passage according to the latest German KSA-Edition.

III = early German Edition of Nietzsche: *Friedrich Nietzsche*, ed. Karl Schlechta, vol.nr. I-III.

Reference

Best, David, *Philosophy and Human Movement*, London, Boston, Sydney 1978.

Borsche, Tilmann, *The Epistemological Shift from Descartes to Nietzsche: Intuition and Imagination*, In: (ed.) Babich, Babette E.; Cohen, Robert S., *Nietzsche and the Sciences I: Nietzsche, Theories of Knowledge, and Critical Theory*, Dordrecht, Boston, London 1999.

Bricken, William. *Virtual Reality: Directions of Growth*, in: *SIGGRAPH Panel Proceedings*, Dallas 1990.

Brockmann, John (ed.), *The Third Culture: Beyond the Scientific Revolution*, New York, 1995.

Dessauer, Friedrich, *Philosophie der Technik*, Bonn 1928.

Franke, Herbert W., *Das Universum – ein Automat? Der Weg zur Weltformel*, in: *Telepolis*, 14.5.2007, www.heise.de/tp/r4/artikel/24/24658/1.html

Gibson, William, *Idoru*, New York 1996.

Lanier, Jaron, *The Virtual Visionary*, in: *The Guardian Saturday Review*, 29. Dec. 2001.

Lanier, Jaron.; Minsky, M.; Fisher, S.; Druin, A.; *Virtual Environments And Interactivity: Windows To The Future*, in: *ACM SIGGRAPH Panel Proceedings*, 1989.

Lanier, Jaron, *Interview with Jaron Lanier*, by Doug Stewart, in: *OMNI, Online-Magazine*, Jan. 1991. See also:
<http://www.protovision.textfiles.com/computers/CYBERSPACE/lanier.txt>.

Lanier, Jaron, *A Vintage Virtual Reality Interview*, in the journal *Whole Earth Review*, 1988.
See also: <http://people.advanced.org/~jaron/vrint.html>.

Lenk, Hans, *Humanitätsforschung als interdisziplinäre Anthropologie*, Frankfurt 2008.

Nietzsche, Friedrich: *Sämtliche Werke. Kritische Studienausgabe*, 15 Volume Set., ed. G. Colli and M. Montinari, Berlin, München, New York 1980.

Nietzsche, Friedrich, *Friedrich Nietzsche*, 3 Volume Set, ed. Karl Schlechta, München 1982.

Nietzsche, Friedrich, *The Will to Power*, ed. and trans. Walter Kaufmann and R.J. Hollingdale, New York, 1968.

Matschoss, Conrad, *Die Entwicklung der Dampfmaschine*, Bd. II, Berlin 1908.

Ommeln, Miriam, *Die Technologie der Virtuellen Realität. Technikphilosophisch nachgedacht*, Frankfurt 2005.

Ommeln, Miriam, *Nietzsche, der Cyberphilosoph*, in: Beatrix Vogel (ed.), *Der Mensch sein eigenes Experiment?*, München 2008.

Ortega y Gasset, José, *Was ist Philosophie?*, Stuttgart 1962.

Ortega y Gasset, José, *Betrachtung über die Technik*, Stuttgart 1949.

Roesler, Alexander, *Medienphilosophie und Zeichentheorie*, in: (ed.) Münkler, S.; Roesler, A.; Sandbothe M., *Medienphilosophie. Beiträge zur Klärung eines Begriffs*, Frankfurt 2003.

Schadewaldt, Wolfgang, *Die Anfänge der Philosophie bei den Griechen*, Frankfurt 1995.

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