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ICONOCLASM AND BEYOND: VILEM FLUSSER'S CONCEPT OF TECHNO-IMAGINATION

Western thinking about pictures is characterized by a strong tendency towards iconoclasm. Within this theoretical framework any attempt at thinking in pictures ultimately leads to idolatry and irrational behavior. As a reaction to this, some theoreticians writing in the wake of the iconic turn tend to extol what they call pure visibility. Vilém Flusser's writings, on the other hand, deal with the constantly evolving relationship of image and text. He does not simply reject the accusations of the hazards inherent in picture making put forward by the iconoclasts but tries to steer a middle course in an attempt at reconciliation. His concept of techno-imagination is an answer to the invention of the new media of photography, film, video, TV and computer, in an attempt to draw philosophical and ethical conclusions from their use. To be properly understood techno-images need techno-imagination, which is both a reading of pictures and an act of creative pictorial invention bringing out unexpected situations from among a given field of possibilities. Calculated, digital images, in fact, allow a radically new view of the gesture of picture making transcending a purely representational interpretation. Techno-imagination implies a move away from the search of 'objectivity' in favor of an inter-subjective way of dealing with pictures. Picture making has to do with the creation of a new sense of doubt regarding the world by multiplying points-of-view and making them available to others.

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Iconoclasm and beyond : Vilém Flusser's concept of techno-imagination

"We cannot orient ourselves in the world without first creating an image of it.
Thus it makes no sense to prohibit image creation."

Vilém Flusser, *A New Imagination*

As Arlindo Machado pointed out in his essay *O quarto iconoclasmo* (Machado 2001: 6-33) Western society at large has nurtured from its very inception a deep-seated sense of distrust for the world of images. In the Bible, but also in the Koran, the injunctions against the production and use of images are clearly stated. "You shall not make for yourself a carved image or any likeness of anything that is in heaven above or that is on the earth beneath or that is in the water below. You shall not bow down to them or serve them […]." (Exodus 20, 4-5) In ancient Greece, images were not forbidden but the refusal of imagery is central to many philosophical works like Plato's *Republic*. Pictures, so Plato, suggest a similarity to the object they represent, but have no reality of their own. They are mere optical illusions, and fascinate only children and those who lack true understanding. The painter produces a simulacrum, a false representation that does not exist in reality. Pictures are like the fleeting visions in a dream, like ephemeral shadows or passing reflections on water.

Machado distinguishes four moments in history in which the latent but omnipresent iconoclastic tendency surfaced. The first occurred within the Judeo-Christian and Islamic tradition, as well as within the philosophical tradition of Ancient Greece. The second took place during the Byzantine Empire, more precisely between the 8th and the 9th century A.D. and the third in the early 16th century with the advent of the protestant Reformation. The three periods are characterized by a belief in the absolute superiority and transcendental truth of the word, above all, the written word. To set this attitude off from the iconoclastic concept of idolatry Machado calls it 'literolatry'. In the meantime, apart from

brief periods of liberation, images were mainly linked to marginal, underground and clandestine social practices like witchcraft and popular illusionism.

Contrary to the three other iconoclastic phases, which were of wide-ranging collective importance, the fourth and last stage, so Machado, is restricted to present day media-criticism and parts of the intellectual establishment. In fact, while society at large is indulging in unlimited picture production and consumption – as in www.youtube.com or www.flickr.com – the only defensive ramparts of textuality against the dangers of uncritical image practice left are those of a few isolated iconoclasts like Fredric Jameson (Jameson 1997), Guy Debord (Debord 1996) or Jean Baudrillard, "the spiritual leader of the movement", as Machado calls him, "a post-modern reincarnation of Plato" (Machado 2001: 20). These philosophers and their followers turn a blind eye to the ever growing importance and impact of pictures on contemporary culture – their philosophical stance is, in fact, above all a reaction to this social change. By doing so, however, they are placing themselves unwittingly within a secular theological tradition of systematic fight against imagery. Their falsely apocalyptic vociferation, continues Machado, has furthermore never been complemented by any serious analysis of objective data that might prove the tendency detected. "If it is true that more images than ever are manufactured today, it is also true that many more written texts are being printed and sounds recorded and distributed through the radio and CDs, as ever before, with a strong emphasis on the spoken word." (Machado 2001: 16-7) Their refusal of images, however, is final. In his *La société du spectacle*, for instance, Debord does not make any distinctions as far as the quality or status of different image-forms is concerned.

This discourse ignores the fact that most cultural forms of expression are the result of a hybrid combination of different codes or media. Writing, in fact, cannot be simply opposed to images because it actually grew out of visual arts, as a development of iconography. Pictures, on the other hand – despite some recent theoretical attempts at creating a concept of pure visibility (see Wiesing 1997) – always carry traces of graphic codifications (see Leroi-Gourhan 1993) of some sort already within them, as W. J. Mitchell put it: "All media are mixed media, with varying ratios of senses and sign types."(Mitchell 2002: 170)

In *Iconology* Mitchell has described his method as a 'dialectical pluralism' based on two models of dialogue between picture and text. "The first insists on the structural necessity of 'contraries' that can never be reconciled, and whose conflict is necessary to 'the pro-

gression of human existence' […]. The second model is one of conversion […]" and reconciliation. (Mitchell 1987: 207-8) In the same way Flusser considers texts and pictures as fundamentally irreconcilable codes and their constant interaction as the very basis of media-evolution; as Mitchell put it: "to make both our love and hatred of 'mere images' contraries in the dialectic of iconology." (Mitchell 1987: 207) Mitchell is positing here the necessity of a narrative about pictures and texts that does not preclude their constant interaction. Analyzing the dialectic interaction of pictures and texts is, thus, basically about the study of textual pictures and pictorial texts.

Machado retraces the history of iconoclasm above all in order to contextualize and criticize the theoretical limitations of certain representatives of present day picture theory. He is not suggesting that the fourth stage of iconoclasm has the same historical depth and relevance as the other three. On the contrary, the astonishing cultural shift towards a wider and more thorough use of images we are witnessing today, although activating millennial fears about the persuasive and manipulative powers of images is asking for new theoretical responses that go beyond simple refusal or enthusiastic acceptance. Machado ends his essay, accordingly, with a proposal: in order to overcome a "millenary tradition petrified in its iconoclasm" the culture of the early 21st century would have "to learn to think in images and to build with them a complex and captivating civilization." (Machado 2001: 32) To learn to think in images – but also in words and sounds, as the discourse of images encloses a plurality of other forms – would be the prerequisite for a truly legitimate, innovative and not simply repressive 'society of the spectacle'.

Using this brief historical sketch of the philosophical and cultural status of pictures within Western history as a backdrop for my further argumentation, I would like to examine the theoretical relevance of Vilém Flusser's thinking about the role of pictures for contemporary visual studies and the use of images in communication processes, focusing above all on the concept of techno-imagination that he developed between the early 70s and his death in 1991. I am going to discuss in detail three essential texts spanning the period in question: *Umbruch der menschlichen Beziehungen?* – Mutation in human relations? – written in 1973-74 and published posthumously in 1996 (Flusser 1996), *Für eine Theorie der Techno-Imagination* – For a theory of techno-imagination – (Flusser 1998), written for a speech

held on the 22nd June 1980 at a symposium in Vienna, and finally the essay *Eine neue Einbildungskraft* – A New Imagination – (Flusser 2002) first published in 1990.

As the following considerations are going to show, Flusser raised a series of thought-provoking questions about the ontological and epistemological status of pictures and the way this is changing our perception of the 'world' – used here by Flusser in the vaguely phenomenological sense of *Lebenswelt*. Despite the inventiveness of his theoretical approach and the insights that go with it, there is, however, a fundamental terminological problem to be considered. In fact, Flusser's terminology is situated on the borderline of different forms of discourse and sometimes oscillates between philosophical and everyday use. His methodology operates on a shifty middle ground between phenomenology, existentialism, anthropology, information, media and communication theory. This leads to highly ambivalent results: on the one hand, it opens up new vistas of uncharted territory and on the other, it leads to terminological imprecision and a tendency to overgeneralization. Flusser's originality consists, above all, in the novelty of the questions he asks and in the unorthodox connections he draws between heterogeneous fields of thought.

Some of these questions have become particularly interesting in view of the radical technological changes of the last fifteen years. It is, however, important to point out here that most of his texts were written well ahead of the official onset of the iconic turn (see Bachmann-Medick 2006: 329f.) proclaimed nearly simultaneously in 1992 by W. J. T. Mitchell (Mitchell 1992) and in 1994 by Gottfried Boehm (Boehm 1994). Flusser formulated his concept of techno-imagination in the early 1970s continuously redefining and expanding it as he went along. In this sense his writings still carry a sense of freshness even if at times they are intermixed with theoretical imprecision and conceptual shortcomings (see Stiegler 2006a: 22-24 and 2006b: 390f.) some of which I will discuss in the course of my paper.

The development of Flusser's thought about the status of images and above all techno-images (see Guldin 2007) testifies to his own strong ambivalence with regard to pictures, oscillating between criticism and an outright positive attitude. If in the seventies he still concentrated on the hidden manipulative power of technical images the writings of the late 1980s and early 1990s hold a very different message, extolling the innovative potential of digitalized pictures in the creation of new dialogical forms of social exchange and collaboration. By reinterpreting the ontological status of pictures, Flusser manages to

find a way out of his theoretical dilemma: How is it possible to think in pictures without succumbing to their fascinatory power? Or to put it another way: How is it possible to fully exploit the power of images without disregarding the warnings issued by the iconoclasts?

The main questions I would like to pursue here are thus: How does Flusser deal with the iconoclastic tradition and his own ambivalent stance toward images? Do Flusser's analysis of the relation of image and text and his concept of techno-imagination help in any way develop the present day discussion about the role of images in interpersonal and mass media communication? In which ways, do for instance the new digital images have a bearing on our relationship to photography and images in particular as well as our perception of the world as a whole? Has the status of pictures fundamentally changed – as Flusser would have it –, and if that is so, how does this affect communication processes?

To fully understand the following considerations about the role and importance of techno-imagination within Flusser's thinking a few opening remarks about Flusser's model of media evolution are necessary. In *Towards a Philosophy of Photography*, published in an English version in 1984, Flusser develops a history of media from the Paleolithic to the present day based on the relationship of image and text. The first step in this process consists in the creation of significant surfaces whose function is to make the world imaginable by abstracting it. These surfaces were meant to be mediations between man and the world around him, but ultimately tended to hide the world by slowly absorbing and substituting it. Imagination turns into hallucination. "The world becomes image-like […]. This reversal of the function of images may be called 'idolatry' […]." In his interpretation of traditional images Flusser, thus, follows the objections of the iconoclastic argumentation.

His view of traditional images is, furthermore, definitely a weak point within his vision of media-evolution and his general picture theory. Instead of differentiating historically and theoretically between different forms of images, he simply opposes them to texts missing out on a whole series of fundamental questions. In what sense are Paleolithic and Neolithic cave paintings, for instance, influenced by earlier forms of graphism, conceptual moments or aesthetic and magical considerations? What textual traces can be detected in medieval wall paintings or pictures of Abstract Expressionism? The concept of 'text' is

also much too general for an analysis and would have to be reconsidered and duly differentiated.

To counteract the tendency to idolatry inherent in picture making, texts were invented. Their aim was to break up the hallucinatory relationship of man to image and to criticize imagination by recalling its original intention. "Some men […] attempted to destroy the screen in order to open the way to the world again. Their method was to tear the image elements out from the surface and to align them. They invented linear writing. In doing so, they transcoded the circular time of magic into the linear time of history." (Flusser 1984: 7) History, thus, can be defined as the "progressive translation of ideas into concepts" (Flusser 1984: 60), of images into texts.

Texts not only reinterpret images taking up their place. By doing so, images become an integral part of any text. A dialectical struggle ensues: "The explanation for this dialectic is this: although texts explain images in order to explain them away, images in their turn illustrate texts in order to render their meaning imaginable. Although conceptual thinking analyses magical thinking in order to do away with it, magical thinking infiltrates conceptual thinking in order to imagine its concepts. In the course of this dialectical process, conceptual and magical thinking mutually reinforce themselves: texts become more imaginative and images become more conceptual." (Flusser 1984: 8) This inner dialectic reaches a critical stage in the 19th century where "the highest degree of imagination may be found in scientific texts, and the highest degree of conceptualization may be found in images of the kind produced by computers. The original code hierarchy is thus overthrown as if from behind, and texts – which where originally meta-codes for images – may have images for their meta-codes." (Flusser 1984: 8) This stage coincides for Flusser with the invention of techno-images, their first example being photography.

The dialectics of mediation at work in the passage from the first to the second step of evolution leads, in fact, to a second impasse. "The purpose of writing is to mediate between man and his images, to explain them. In doing so, texts interpose themselves between man and image: they hide the world from man instead of making it transparent for him. […] Texts grow unimaginable, and man lives as a function of his texts. A 'textolatry' occurs, which is just as hallucinatory as idolatry." (Flusser 1984: 9) At this precise historical moment "technical images were invented: in order to render texts imaginable again, to charge them with magic, and thus, to overcome the crisis of history." (Flusser 1984: 9)

The same way the pre-historic phase of images was overtaken by a historical phase of texts, post-history takes over from history and by inventing technical images attempts to make texts imaginable again. By doing this, post-history bends the progressive linear development of translation from images into texts back to its origins and beyond. Flusser describes it as a "re-translation of concepts into ideas" (Flusser 1984: 61), that is, of texts into technical images. Technical images differ from traditional images in that the two are the results of dissimilar processes of translation. Traditional images have real situations as their source; technical images, on the other hand, start out from texts, which in turn have been written in order to break up images through translation.

Flusser's reading of media evolution in terms of an ongoing dialectics of image and text has a few theoretical advantages – the main one being the uniqueness of his point of view and the theoretical mix it implies – but evidently also quite a few shortcomings. One problem, for instance, is represented by the status of (traditional) images created after the invention of writing. These images are unfortunately not being discussed at all by Flusser. In one of the passages quoted above, Flusser speaks about their growing conceptual character, but does not deal any further with the issue. In fact, what exactly does it mean that images are getting more conceptual and texts more imaginative? By doing so, he leaves out an opportunity to refine his argumentation. In fact, by comparing the two types of images, he might have managed to clarify what he means by 'texts' and 'concepts'.

In *Umbruch der menschlichen Beziehungen?* , the first text I would like to examine, Flusser introduces his notion of techno-imagination. As the concept itself suggests, techno-imagination is linked to the appearance of technically produced images, that is, techno-images. Because of their radically different ontological status, argues Flusser, photographs, images on TV-screens and computer-monitors as well as holograms require a completely new interpretative attitude.

Flusser's whole argumentation hinges on the radical distinction between traditional images and techno-images, a difference that is still being disputed by many contemporary picture theorists. Hans Belting, for instance, writes in his *Bild-Anthropologie* – Anthropology of the Image: "digital images of present day media" have to be considered "an integral part" of the history of images. There is no need, therefore, to "to raise the big barrier." (Belting 2001: 8)

Flusser has put forward several interlinked reasons for this radical divide, the first one being, as already mentioned, that techno-images are the result of the relationship of text and picture. Flusser defines them also as pictures of concepts, without clearly specifying what he intends by either of them. Belting rightly criticized this conceptual imprecision, pointing out two specific conflicting meanings of the word *Begriff*, concept, in Flusser's texts. "Flusser sees photography as 'a picture of concepts' *[Bild von Begriffen]*, which can be said of most images, if one agrees on the essence of concepts *[Begriffe]*. In the case of photography, they signify 'concepts within a program' *[Begriffe in einem Programm]*. They are, furthermore, notions about the world *[Begriffe der Welt]* that the photographer 'encodes in images' *[in Bilder verschlüsselt]*." (Belting 2006: 215)

There is, however, another more fundamental reason for the difference between traditional and technical images. Techno-images – and this is their most salient aspect – are not representations of the 'world out there' but the result of textual instructions, programs, that is, software. In a section dedicated to the relationship of traditional images and techno-images Flusser tries to show that although the invention of this new type of pictures radically changed the status of the older ones, techno-images, as he keeps pointing out, are mostly still wrongly interpreted within the theoretical scope of traditional images, that is, representationality. It is wrong to ask whether photography is more objective than traditional images. This question is meaningful only within a dualistic perspective opposing reality to fiction. From the point of view of techno-imagination the new pictures are not more objective than traditional pictures. They simply hide the subjectivity of their point-of-view more efficiently and deceive us much better in believing that they truly represent the 'world out there'. To really perceive this novelty, classical forms of imagination based on representational, mimetic concepts are no longer sufficient.

Interestingly enough, it is not from among the producers and interpreters of traditional images – painters, art critics and art historians – that the new form of interpretation, techno-imagination, has arisen. "Only archaeologists or astronomers, physicists or biologists make a 'proper' use of techno-images, that is, as symbols of concepts [*Symbole von Begriffen*]." (Flusser 1996: 162) Techno-images not only negate the simple dichotomy of realism and idealism, they are the result of scientific theories and should be dealt with accordingly. Neither the 'objectivity' of the reality represented in the picture nor the 'subjectivity' of the image producer are the essential point here, but the nature of their rela-

tionship. "A photography made by a telescope is a picture signifying the concepts 'star' and 'astronomer', and it does this by making them both imaginable." (Flusser 1996: 165) When an astronomer deciphers the picture of a star, he first sees a stain on a surface that is the result of a chemical reaction. He knows, furthermore, that this surface was created in order to allow the formation of such a stain and that it is light, that is, electromagnetic waves, that are responsible for its existence. In addition to this, he knows of other texts describing the stain as a symbol signifying the concept star. "He, thus, knows of the exceptionally complex relationship between the visible surface and the texts that have generated it." The techno-image he is interpreting is not reproducing a star, the way a Christmas card would, implying that he is moving on the very "level of consciousness, on which techno-images actually work" (Flusser 1996: 168), that is, techno-imagination.

The same astronomer, however, Flusser continues, who understands the complexity of techno-images within his professional context deals uncritically with them in his everyday existence. He treats them as if they were traditional pictures – as if they were depicting the 'world out there' –, and is, therefore 'programmed' by them. To explain this, Flusser introduces the difference between mass techno-images and elitist techno-images. The first type is everywhere to be seen and easily accessible to everyone, the other, however, can only be understood by trained personnel. "In reality", writes Flusser, "posters are not dealt with the same way x-ray images are. X-ray images are actually deciphered. One knows that they intend concepts and this implies that with these techno-images one knows as well that their deciphering has to be learnt. One must have learnt to read the pictures of an electronic microscope, the curves of statistics and x-ray images. Only experts can decipher such codes. Posters, however, are consumed without having first been deciphered" (Flusser 1996: 148), that is, without using techno-imagination. Techno-imagination is, therefore, also about breaching the difference between mass and elitist techno-images in an attempt to overcome this interpretative split creating a feed-back loop between the two levels of perception. Flusser describes this new attitude as an unfailing phenomenological effort, consisting in a constant awareness of the highly complex artificial side of both mass and elitist techno-images in order to detect the conceptual inscriptions and textual instructions of which they are the result. This constant intellectual epistemological effort is about reaching and keeping up "the level of consciousness of the

astronomer in his observatory" also in everyday life, "as if we were all forced to think like scientists all the time." (Flusser 1996: 169)

Another important point Flusser is making with regard to techno-imagination is that it possesses two sides, a critical, receptive and a creative, productive one. It is, on the one hand, the ability to detect the different 'textual' elements present in techno-images and on the other the capacity to generate images out of concepts, so as to make them imaginable through pictures. Techno-imagination – and this is its utopian dimension – increases, thus, critical awareness and turns, ideally, every picture-consumer into a potential picture-producer.

Towards the end of the book, Flusser dedicated a whole chapter to the concept of techno-imagination in relation to the changes it brings about for the notion of point of view, as well as our everyday perception of space and time. Flusser uses his reflection on media, in this case photography, as a way to philosophize with media.

Techno-imagination denies the existence of an objective point-of-view and of a meta-position from which to consider all other points-of-view. "Each phenomenon is surrounded by an endless multitude of perspectives. There is no phenomenon from which it is possible to step back into transcendence." (Flusser 1996: 211) The multiplicity and fundamental equivalence of these different points-of-view can be deduced from "the manipulative practice of photography, film, video and all other techno-images, since the essential problem of techno-images consists in the angle from which they try to represent a concept." (Flusser 1996: 211) Looking for the truth is, in fact, like the dance of the photographer jumping from one point-of-view to the other, slowly moving around the object in order to add more and more perspectives. "The object of the photographer turns into a photographic object only thanks to the gesture of the photographer and can in no way be pictured 'objectively' before that." (Flusser 1996: 212) By stalking its object, techno-imagination is not trying to reveal its truth "but to generate pictures of it that can be deciphered by others." (Flusser 1996: 213) The denial of objectivity that goes with techno-imagination, thus, leads to the notion of inter-subjectivity. Picture making should not concern itself with the fashioning of objective reproductions of the world but with the picturing of specific points-of-views to be interpreted by others. The gesture of the photographer shows that taking pictures is above all about finding an appropriate point of view with respect to the photographic subject. Taking pictures is a *Sinngebung*, a giving of

sense. Flusser uses the medium of the camera, so to speak against its own objectifying grain, in order to formulate a radically constructivist agenda based on inter-subjectivity and dialogue.

The theoretical link between techno-imagination and inter-subjectivity and the outright rejection of 'objectivity' postulated by Flusser is very thin: the 'angle', the point of view and the dance of the photographer. The relationship between the gesture of photography and the accumulation of points-of-view – between the use of a specific medium and a certain philosophical notion akin to phenomenology – is, furthermore, begging the question: in fact, it is not clear if photography exemplifies an essentially phenomenological attitude or if this conception has simply been projected onto it. Be that as it may, Flusser's metaphorical reading of photography makes a strong point for a radically different conception of image production, exchange and consumption within individual and mass-communication and is definitely worth while pursuing especially in view of some of the questions formulated at the beginning of this paper.

There is a strong ethical bias to be detected in this reinterpretation, and a new sense of inter-subjective responsibility in image making that transcends the simple documentary character still attached to most picture making and exchanging in everyday life. The shift from objectivity to inter-subjectivity is, in fact, motivated by an "attempt to come to terms with others" (Flusser 1996: 213) with regard to the ontological status of the 'world'. Even if the different points-of-view can claim the same consideration they do not possess the same epistemological and ethical weight. Multiplicity does, consequently, not lead to indifference or relativism. On the contrary: It ushers in the notion that "each point-of-view projects a specific value, and conveys a specific meaning." (Flusser: 1996: 214) Picture making has to do with the creation of a new sense of doubt about the world by multiplying points-of-view and making them "available to others". (Flusser 1996: 222)

In the second text I would like to discuss, *For a Theory of Techno-Imagination*, Flusser redefines his concept of techno-imagination referring to an aspect he had not dealt with explicitly so far: the fact that photography has a particular claim for realism because of its strongly indexical nature.

Flusser once more sets out from his fundamental distinction between traditional images and techno-images. Traditional pictures are 'symbolic', insofar as they unmistakably

present themselves as man-made artifacts, whereas pictures taken by a camera seem to have been generated by the object itself. They are symptomatic. Significantly enough, William Henry Fox Talbot called the book he published between 1844 and 1846, the first ever to be entirely illustrated with photographs, *The pencil of nature*. Because of their extreme realism, techno-images are perceived as if they were objective images, that is, symptoms of 'reality'. Both statements require some comment.

Traditional images do not always present themselves as artifacts, but sometimes want to cheat us, as in 'trompe l'oeil' on murals and wall decorations or with foreshortened perspectives. Secondly, the so called self-evident 'realism' of photography very heavily relies on historical and cultural context. Americans, for instance, generally tend to focus on the central objects of photographs, while Chinese pay more attention to the image as a whole. The difference seems, therefore, less evident than it appears. On the other hand, Flusser is right in insisting both on the problems of a naive simplistic view of photography as an objective medium as well as on the chances opened up by techno-images, especially digital ones, to reconsider not only our relation to images but our perception of the world as well. This is probably the most interesting part of his analysis. I will come back to this point at the end of my paper.

Flusser uses the term symptomatic to suggest the particular context out of which photography has arisen, that is, the scientific reflections that have led to the creation of the photographic camera in the first place. What are photographs a symptom of? As red stains on human skin, they testify to a very complex causal relationship that has to be fully understood in order to decipher their meaning. This is all the more compelling as we are deceived into believing in the truthfulness of techno-images even knowing of their fundamentally artificial nature. "We believe, despite better knowledge, to have that which is intended by the image indirectly in front of our very eyes." (Flusser 1998: 9)

Flusser does not care to explain the reasons for our gullibility, our readiness to be deceived. On the contrary, he even goes so far as to define deception as the true intention of all techno-images and our present day civilization of the picture. Techno-images want to deceive us, by "making us forget their hidden symbolic character." (Flusser 1998: 9) They try and do this in two different ways. They hide the fact that they are computations of points and "pretend to possess the same meaning as conventional pictures [and] on a higher level of deception they confess to their origin – to be made out of points – but

only to offer themselves as better images, pretending not to capture a circumstance symbolically, as conventional pictures do, but objectively, point by point." (Flusser 1993: 48-9) Techno-imagination, in a way similar to psychoanalysis, seems to amount to an interpretative practice attempting to unmask hidden intentions by bringing that which is stored away to the fore into the light of full consciousness. But there is more to it.

In order to understand the complex message encrypted in photography one should also study the way the camera has been programmed. The functioning parameters of the camera, resulting from specific branches of scientific discourse like optics and chemistry, are the grammar of the photographic endeavor. Techno-imagination, thus, calls for knowledge of the scientific theories that have made the camera possible. The difference between imagination and techno-imagination, between the deciphering of traditional images and techno-images, is thus one of quality. To understand the intentions of the manufacturer is not enough with techno-images. Here some extra conceptual thinking is required: the study of the scientific tenets underlying the production of technical images. "Techno-imagination is not situated on the same level of consciousness as imagination in the old sense." (Flusser 1998: 13) Of course a similar request could also be formulated to achieve a better understanding of traditional images. Knowledge about the use of color, perspective and artistic tradition would be equally illuminating. Flusser's insistence on theoretical dimensions in connection with techno-images can ultimately only be explained by the fact that they seem to be *the* antidote against the seducing charms of the image. Flusser's own iconoclasm is undeniable here.

In *A New Imagination*, the third and last text selected, Flusser re-elaborates his concept of techno-imagination from the point of view of digital images. He sets out by defining imagination as a complex intentional gesture consisting of two "diametrically opposed gestures." (Flusser 2002: 110). This not only allows him to consider the existence of two radically different forms of imagination but also to rewrite the heavily iconoclastic Western narrative transcending at the same time his own theoretical ambivalences. This development was made possible by the invention of digital, that is, calculated images, as Flusser calls them. These have become a "functional alternative only in the recent past." (Flusser 2002: 110) Flusser calls them calculated because they are generated by mathematical algorithms on which numerical computing is based.

The first of the two gestures of image production came about as a movement of abstraction, a stepping back from the surrounding reality. Theological tradition, writes Flusser, "has raised important objections against this sort of image creation": images are the result of a choice of perspective that makes them ontologically and epistemologically problematic, they are "connotative out of necessity" and, thirdly, they are mediations and as such subject to the inner dialectics of all media – they connect and separate at the same time, that is, they tend to take the place of the objects they are supposed to represent. "Signposts become obstacles. The result is a pernicious about-face of the human being with respect to images […] called idolatry. […] The position I have outlined has been held at least for the last 3,500 years in the West. Taken as a whole, Western civilization can be considered a progressive attempt to enlighten the imagination (to explain images). To do this, linear writing was invented." (Flusser 2002: 111-2) This is basically the same theoretical position I have already sketched at the beginning of this paper. There is, however, as is the case in all of Flusser's obsessive re-elaborations, a new theoretical twist to be detected.

Flusser's rhetorical agenda does not consist in simply refuting these secular arguments. Quite on the contrary, the objections are in his opinion justified, but on the basis of his own anthropological interpretation of man as an image producing animal (see Wiesing 2005: 20f.), what he calls at the very beginning of the essay his "unique ability to create images for himself" (Flusser 2002: 110), which in a way is the other side of man's tendency to step back from concreteness into further and further moments of abstraction, Flusser is looking for an argumentative way out of the dilemma. If it is true that images tend to take up the reality they are solely called to depict and if it is true that the very fact of being human implies the production of imagery what can be done? Traditional criticism consists in a clarification of the ontological and epistemological dubiousness of the perspective of imagination, an attempt at translating their connotative elements into a denotative code and finally in an explanation of their relation to the object represented. This was made possible with the invention of writing. But, this criticism, so Flusser, is not radical enough. It is only with the invention of calculated, digital images that this new form of criticism has become possible, a criticism of the second degree, a critique of image criticism itself, consisting in a further step back, but this time from the critical point of view already taken up. In order to achieve this one has to question the relevance of the classical form of image criticism: linear writing.

This new form of critique implies a radically new form of imagination, diametrically opposed to the old one, and a new use of imagery, ensuing form a calculating, computational gesture. "[…] the result is images that cannot be opposed by the objections of philosophy and theology. […] Even the most orthodox Talmudist could not object to these images, because they do not lend themselves to the ontological error of confusing representation with the thing represented. […] Even Plato could not object to these images, because they are 'pure ideas'. Contemplating them leads to wisdom rather than opinion." (Flusser 2002: 113-4)

What does this reversal of the concept of imagination, as Flusser calls it, consist of? Traditional images abstract and step backward, moving from a four-dimensional *Lebenswelt* to a two-dimensional representation. The new digitally produced pictures, on the other hand, are the result of a gesture that moves in the other direction, a concretizing gesture. Instead of representing another world they project a new reality starting out from zero-dimensional numerical operations.

The intentionality of the two image producing gestures has also essentially been changed. Even if the intention of calculated images can be similar to that of traditional images, that is, to represent reality by creating copies of existing facts in order to use them as models for future behavior, this is only of secondary importance. "The intention behind the synthetic image can be similar" to that of a traditional image, that is, "to produce a copy of a calculation (such as the calculation of an airplane). This image may serve as a model of the future way of dealing with things (such as the construction of airplanes by robots). However, if one produces the new images with this sort of intention, then one puts the new imagination into the service of the old, and one has not yet carried out the radical change to come […]." (Flusser 2002: 115) Media-history shows that new inventions were often misused, in their beginnings for purposes related to older media. Photography, for instance, was used for a long time as a pictorial art. This is also the case with the new digital images. But, as Flusser rightly points out – way before digital photography established itself on an everyday basis –, the appearance of digitally formatted images has fundamentally affected the ontological and epistemological status of all pictures – not only of photography – and the very way with which we approach them. But there is more to it.

"The real purpose" of calculated images, "is to bring out unexpected situations from among a given field of possibilities." (Flusser 2002: 115) Examples of these new pictures are for Flusser the images of fractal equations on computer screens, which do not represent any concrete, tangible reality, but are the result of calculations about chaotic systems. The actual beauty of these images resides partly in the abstract patterns of self-similarity which are typical of fractals. The new imagination concludes Flusser "finds itself in an unsurpassable position of abstraction. At this level of abstraction, images can be designed that have been thoroughly critiqued and analyzed."(Flusser 2002: 116) In Flusser's own terms: by moving further and further away from concrete reality into abstraction a stage is finally reached where a concreteness of the second degree is possible.

In conclusion I would like to reconsider the questions asked at the very beginning summarizing at the same time Flusser's theoretical position. The systematic analysis of Flusser's notion of techno-imagination as it developed over the years can be summed up as follows. A true understanding of techno-images – and implicitly of all images – implies a criticism of their mimetic, representational side, a move from objectivity towards inter-subjectivity, a focusing on the relationship between subject and object and a constant phenomenological effort at deciphering techno-images both within scientific and everyday contexts in order to breach the problematic discrepancy in our dealings with elitist and mass techno-images. It shows, furthermore, that all phenomena are surrounded by a swarm of possible perspectives, creating, thus, a new sense of doubt with regard to the ontological status of the 'world'. Finally, techno-imagination has two sides to it, a critical and a creative dimension. In this context picture making becomes an inter-subjective act of communication bent on generating images of specific points of view in order to make them available to others. The last text considered adds still another dimension to the concept of techno-imagination. Calculated images bypass the old epistemological dualism eluding the criticism of the iconoclasts because they do not represent the 'world' any more and are not models for future action but projects of a new, still inexistent inter-subjective situations arising from a field of possible points-of view.

Flusser deals with the iconoclastic tradition and his own ambivalent stance toward images by developing a series of interpretative strategies aimed at eluding the problem of representation. As traditional images admit to their artificiality, the real problem is repre-

sented by techno-images. In fact, they are still generally being read within a dualistic framework that is ultimately incapable of coming to terms with their radical novelty. The concept of techno-imagination leads to a radical reorientation and redefinition of our way of dealing with pictures and of perceiving the 'world'.

According to Flusser, the new digital images profoundly affect our relationship to photography and images, as well as our perception of the world as a whole. Instead of concentrating on the truthfulness of pictures, we should focus on their artificial dimension. Photography teaches us the art of perception, the dance around the object, and the discovery of its different facets. To fight against our readiness to believe in the 'objectivity' of technical images and to protect ourselves against the charms of hyper-realism we have to shift our point-of-view towards inter-subjectivity. Flusser is suggesting that the way we look at the world is ultimately a question of inter-subjective, that is, dialogic convention.

The status of pictures, so Flusser, has fundamentally changed and this is influencing or at least should affect communication processes on an individual and collective level. Despite the problems delineated – lack of terminological precision and a tendency to oversimplification – Flusser's concept of techno-imagination could help develop the present day discussion about the role of images in interpersonal and mass media communication, in the sense of a radical reconsideration and redefinition of the really important questions to be asked. Of particular importance are, in my view, the move towards an inter-subjective picture theory, the integration of a receptive and creative attitude and the stress he lays on the dimension of responsibility in communicative acts.

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