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### FROM THE “CAMERA OBSCURA” TO THE COMPUTER, OR HOW DOES THE IMAGE BECOME AN APPARENT INDEXICAL SIGN

**Abstract:** The triumph of the image in contemporary culture is as obvious as the triumph of the body within the Western civilization. However, what has been less noticed is that it is also as partial and specific. As it is not the body in its metaphysical certainty that had triumphed, but only the body as a register of meanings (only the body as language), what triumphs in this civilization is also only a certain type of image. This is because when we, the Westerners, refer to the image, we inevitably think of the tridimensional space of the Euclidean projection, originating in the Renaissance paintings and backed up afterwards by the photography of the late 19<sup>th</sup> century, by cinematography and by today’s omnipresent television. This is the type of image that has triumphed and that takes under its caring wing everything that resembles it within the visual culture. Consequently, we speak with too much ease about the image and we call almost everything “image” as long as it vaguely belongs to visibility, or even to resemblance in a very general sense, even though we conceive it according to the tridimensional image from the Euclidean projection.

**Key words:** image, camera obscura, analogical, digital, index

## **A short history of the modern meaning of the image**

The first distinction to be made in order to understand what type of image subsumes our visual culture is that between interior, mental images – from the sensory-perceptual, direct-visual ones to mental ones such as dreams, memories, fantasy and hallucination – and the images for which we acquire either a physical support, be it graphical or sculptural, either an optical one, such as reflection or projection. Mental images are at least as characteristic of humans as is speaking. The neurosciences support that in order to generally understand, analyze and conduct interpretations, the human mind links every particular image that it perceives to a great quantity of previously memorized images. Our mind is at least as busy processing images as it is processing words. If the Western thought seems to forget the mental dominance of images, the reason for this is that the effective production of images is quite rare in comparison with the extent of verbal communication. In order to use images the same way as words, the first should be as easy to draw out from the singular individual perception as the latter are. All people possess the capacity to verbally communicate, even if at very different levels, and only a few are able to effectively hold speeches or to produce remarkable texts. The externalization of mental images is much more difficult than that of our thoughts, which can be conveyed more or less accurately by means of our words; images, however, have to be fabricated or recorded and processed, which are laborious and pretentious operations.

Accordingly, the secondary position of images within the economy of human communication is tightly related to the problem of human artifacts, which allow mental images to anchor outside the flow of singular, individual life, in order to be used within the flow of interpersonal and collective communication. It is interesting to observe here that the birth of communicational artifacts, of graphics that externalize visions and thought, is first of all related to images. The ideographic genesis of writing confirms the hypothesis that a long time ago written words were also icons or images. The subsequent evolution of writing in the form of texts, which externalized individual thoughts and feeling, rendered the word the most serious competitor for the image. The arbitrariness of linguistic signs – of the words that made up writing – and the possibilities to elaborate texts have greatly increased both the possibility to control them, as well as that of controlling their effect on the receiver. An entire occidental ideology of reason, which sometimes took theological forms, rendered the text more valuable than the image.

Nonetheless, the decisive blow was delivered by technology. Long after writing had lost its iconicity, printing and its accompanying medium – modern education, have imposed upon humans a selection of their abilities. They have facilitated less contact with images and songs and rendered humans more receptive towards printed texts, towards books. The same was the case with the production of image, although reversely motivated. Because the production of the modern image had to use certain, still primitive technology in the time of the Renaissance, namely the camera obscura, technology could only be manifest in the individual production of the image and not in its mass propagation. Thus, the forced recourse to technology when producing pictorial

modern images has took out the competition of those who did not have the technological means and the related skills needed to produce images in accordance with the new standard.

Images can be fabricated or recorded. Fabricated images copy more or less correctly or put forward a model. It is true that imitation can be so thorough that images become "virtual" and offer the illusion of reality itself, as it is said to have happened with the grapes painted by Zeuxis. But still, recorded images most often imitate what they represent. As representations, images necessarily abide to certain rules of construction and socio-cultural conventions; otherwise, they could not be understood by other humans. One of the conventions towards which the Occident has evolved for a long time is that of the truth, understood as the accordance of the sign with what it represents. What is more, towards the end of the Middle Ages and the beginning of the Renaissance, the instrument that could warrant for such accordance appeared. As it is the case with the manuscripts that, with all the polysemy of their communicational being – the presence of images, the variations in writing, the necessity to memorize –, had anticipated printed books, in a less visible way something has also anticipated the technology of that type of image which we now see as The Image: the camera obscura!

Indeed, David Hockney<sup>1</sup> notices that in the early 1400s painters begin to focus more on the natural representation of light and on the linear perspective. This realism and accuracy – and, with it, the appearance of the modern meaning of the image – asked for an explication which Hockney found in using the camera obscura and other optical auxiliary devices, such as concave mirrors. The principle of the camera obscura seems to have been known in the 5<sup>th</sup> century B.C. by the Chinese philosopher Mo-Ti. It was acknowledged for certain in the 4<sup>th</sup> century B.C. by Aristotle. Ibn al-Haitham, an Arabian researcher, described a functional model of the camera obscura in 1038. Under his influence, Roger Bacon would then create optical illusions by using mirrors and the principle of the camera obscura.

In painting, optical instruments that were derived from the principle of the camera obscura seem to have been used starting with the year 1420. A first clear suggestion in what regards using the camera obscura belongs to Leonardo da Vinci, from his 1490 *Atlantic Codex*, and evidence of using optical projection spread until the academicism of the 19<sup>th</sup> century. This type of machine was used only on rare, special occasions and for topographic papers. In fact, linear perspective was discovered by the architects Brunelleschi and Alberti and only taken up by painters so that they could represent the elements of architecture included in paintings.

The first stage of the presence and evolution of using the camera obscura and linear projection spreads from Giotto to the year 1430. After 1430, even in Flanders a naturalistic representation of the real is massively and quickly adopted, a fact that testifies for the spread among painters of the procedure that made use of the camera obscura. After the year 1500, such characteristics become omnipresent: the explication David Hockney offers is that until then mirrors were used as lenses for the camera obscura and in the 16<sup>th</sup> century lenses became wide enough and were much easily

produced, so that the concave mirror could be replaced. Flat mirrors were also introduced in order to project the image on flat surfaces. Towards the middle of the 16<sup>th</sup> century, more information appears regarding the use of such devices by painters. Still, it is not until the beginning of the 18<sup>th</sup> century that we may say for certain that this happened; later on, Canaletto certainly used the camera obscura in order to paint a perspective view of Venice. We know for certain that these procedures were largely used throughout the 18<sup>th</sup> century in Dutch painting, specifically by Vermeer, at whom the proportions of objects and characters are those from a photograph. Apart from his name, we could confidently add Van Eyck, Caravaggio and Lotto.

What resulted thanks to the techniques of the camera obscura is, beginning with the Renaissance, a painting that we could consider manually recorded and retouched "photography". Recording by means of drawing the image projected through the camera obscura accounts for the position in space of the painter and the position of his work's subject, by introducing a fixed point of view, that of the Euclidean perspective. The natural tridimensional space is represented bidimensionally in the painting, but visually read as being tridimensional, thanks to the conventions of the linear perspective and to the social culture of the image. The tones characteristic of the Western painting from that time actually belong to optical projections: strong light and deep shadows, sfumato, contrasts, chiaroscuro. Moreover, the optical projection facilitated by the camera obscura contributes to the individualization of the characters' faces, whose details may be outlined in more detail and more precisely.

What is important is that this meant the transition from analogical to indexical: if the analog image says something directly, the analogical-indexical image speaks for itself. It is worth noting that the transition from the simple analog images to index analog images occurs technically, thanks to optical devices. Because the image produced with the help of the camera obscura has become the model for thinking the image in the West, even if many divergent evolutions have taken place meanwhile, Flusser was right to say that the invention of photography is as important as the invention of writing. Only that his statement has to be rephrased: the invention of the camera obscura is, by means of its use in the construction of tridimensional images projected on a flat surface, very important because it has modified the status of the image as a sign. Additionally, after successive inventions in cinematography, television and video recording, we now realize that discovering the principles and the invention of the technological procedures in photography are just as important as that of the print. They are as important for the visual signs as Gutenberg's print is for the graphical signs of writing.

All images, from prehistory to the Renaissance, have laid the foundations of narratives, myths, shows or ceremonials, etc. Still, the narrative may be represented through other interpretations or codifications of time and space than those pertaining to us – this is why, although we see them and, according to the actual meaning of the image, we should understand them, it is so hard, and sometimes impossible, to actually comprehend them. The evolution of the image from the functional biological indices, such as women's pelvis or thighs in steatopygous representations, to the realist,

naturalistic images of the Renaissance, testifies for the fact that, as it is the case with every sign, images have no meaning outside their signification system.

From this standpoint, images may be regarded the same way as are verbal signs and the same way as are the texts that result from codifications and syntactic or semantic rules. What blocks our understanding of them is the aesthetic realism induced by the pictorial images of the Renaissance with the help of the techniques pertaining to the camera obscura. The change was so efficient that it even marked the post-Kantian concept of culture, which in the name of a tacit identification of culture with art, has obscured the idea of culture as transmission of tradition, which would have shown that the image also functions as a means of communication, therefore as a sign. Besides, even the opposition between text and image, rooted in the Judeo-Greek age and later on in Christianity – also backed up by the Reformation and the Counter-Reformation – reappears in modernity along with the “photographic” meaning of the Renaissance image.

The whole change is possible due to the prestige as a sign of this type of image, which is “true” in relation to reality. Of course, the signs’ effect of truth and, implicitly, the images’ effect of truth is the result of respecting some codes, some social and cultural conventions. And before this status quo, images drew their prestige from the quality of the socially and culturally codified signs. But alongside this new type of images, which were produced thanks to a primitive technology of photography, a large part of these socio-cultural conventions and codifications have been taken over by the operating rules of machines; they became technical rules. In this manner, the images of the Renaissance have concocted the Western spectator for photography, cinematography and afterwards for the actual mass-media! The difference between the incipient or primitive status of the technical, but still manually elaborated image that was the painting of the Renaissance, and today’s digital image resides in the initial difficulty of producing pictorial images and, consequently, their very few spectators. Produced by an elite and, though seemingly destined for the masses, with restricted circulation (as their production was laborious and their reproduction or communication was impossible in other forms than manual copies), the Renaissance paintings have anticipated and prepared the status of the image in our actual world.

### **From the image as analogy to the image as index**

Along with the Renaissance, within the history of the West the image as a tridimensional projection on a flat surface has triumphed as the image par excellence. What it has in common with other images is its resemblance to what it stands for: an image is something which resembles something else. For Saussure the image, i.e. a drawn or painted portrait, is a motivated sign by means of resemblance, as a footstep is by means of contiguity or causality. As long as it is the representation of something, the image signifies something and refers to something, i.e. it is a sign, and as a sign, it is an analogical sign. Therefore, if in the case of symbolic signs, within which words also fit it, the signifier has a “conventional” relation with what it represents – such as the flag of a country –, and in the case of the indexical signs the signifier has a causal relation of

physical contiguity with what it represents – such as the smoke for a fire –, in the case of iconic signs the signifier has an analogous relation with what it stands for – not necessarily a visual one, but also auditory or olfactory. Even if it does not always stand for something visual, the image borrows some traits from the visual and from the visible, among which a definite but problematic one seems to be the resemblance.

Certainly, Peirce, to whom belongs the most clear typology of signs, mentions that there is no such thing as a pure sign, but only dominant traits: a realist drawing has its part of convention, which is the Euclidean perspective itself; the index may bear an iconic dimension, which allows us to talk about auditory or olfactory images, and conventional signs may have some iconicity, such as the onomatopoeias. Eco observes that in the case of motivated signs, the correlation is established through a certain degree of convention. Nelson Goodman made a similar statement, disagreeing with the attempt to explain the relation of representation through that of resemblance. Nor was for *Groupe  $\mu$*  resemblance sufficient to establish the relation of representation, because it would result only in unacceptable statements: either that every object is its own sign, either that anything may be the sign of a given object, as we may always find at least one qualitative resemblance between the two.

In the case of mirroring and projection, or in that of artistic images, drawings, paintings, sculptures, what rather matters is the analogy with our visual perceptions, an analogy that remains unaltered in the case of mental images, i.e. representations. To what extent does this analogy still work in the case of some images such as the graphical signs, diagrams, maps or, what is more, in the case of some verbal images such as the description, the metaphor, the example, or in the extreme case about which Wittgenstein writes in his *Tractatus Logico-Philosophicus*, in which “a logical image of facts is thought”? Besides, we call “image” not only something visual, but also something acoustic – the auditory and musical image of a well –, gestural – the image of sadness in pantomime – or olfactory – a rose with the smell of a “naked saint” (Cioran).

As a sign, the image is, according to Peirce, an iconic subcategory within which different types of analogies are possible: be it a qualitative analogy between the signifier and the reference in what regards formal qualities (shapes, colors, proportions), or a relational analogy, internal to the object represented through a diagram (an organigramme, an engine scheme), be it, finally, a qualitative parallelism, as it is the case with metaphors as verbal images. The image supports an analogy that begins within the domain of optical reflection and ends within the domain of symbolic parallelisms. Let us remember that the etymological destiny of the image stretches between the *imago*, the wax mold of the deceased’s face, and *icôn*, the icon that, as an image, renounced the indexicality of the mortuary mold in the favor of sacred symbolism. Of course, as representations, images necessarily abide to some construction rules and to minimal socio-cultural conventions, otherwise they could not be signs and could not be understood by other people. But if in the case of the index analogy, the optical side of the matter is more important, in that of non-optical analogies the socio-cultural convention is what primes. The forms of analogy must be clearly distinguished, because the analogy as a principle for constituting the image as a

sign lays tensed between index and symbol, on the one hand until an object as image exists, as in the ideal virtual reality and, on the other hand, until an arbitrary analogy takes place, because an optically arbitrary image is only culturally motivated, by means of convention, as in the case of symbols – if for the Westerners white is the color of innocence, for the Japanese white is a mourning color, while for the Africans white stands for the devil.

The problem of the image directly concerns the degree of resemblance: too much resemblance causes confusion regarding what the image represents, rendering it a simulacrum, a twin brother of the object, while too little resemblance renders the image illegible and questions its representativeness. There are two ways for imitation – one in which what imitates also becomes something else than its own representation, as it is the case with the Death's-head Hawkmoth and the second, in which there is only imitation, the image, which has an exterior and accidental medium, as it is the case with paintings. In principle, the image may be the "twin brother" of the object or its representation. Because the image is not to be mistaken for the original, for Plato the image can only be fake and deceiving, embezzling the truth and seducing the weak parts of our soul. This is why Plato only agrees to "natural" images (reflections and shadows).

Our civilization has educated us to be first of all more exigent, in the name of the truth, towards the images controllable by means of the analogy with what they represent, rather than towards the words which lack this control because of their arbitrary relation between the signifier, on the one hand, and the signified / what is being referred to, on the other. Above this distinction lays overlapped the difference implied by the production of images. Between the fabricated and the recorded images, the recorded ones most often resemble what they represent. As opposed to the fabricated ones, they are traces, indices, before being iconic: resemblance yields to indexicality. The image loses its representative character; it becomes the signal of a situation or even receives the force of the thing itself.

In the Western history, the big event that coined the modern meaning of the image, namely the invention of photography – followed by the animated image of cinematography and television – is in fact a continuation of what the Renaissance painting had achieved by using the camera obscura to project architectural elements and tridimensional statues on a flat surface. If, before this, images received their prestige from the quality of signs that could analogically, thus intelligibly, tell a story, now everything revolves around the "photographic" (indexical) image, because what we call image as sign draws its prestige from its "truth" as sign. Generally speaking, the analogy obtained through technology accounted for the image as more-than-a-sign of a visual, narrative text. Therefore, within our civilization, on the one hand, what prevails is analogy in general and, on the other hand and foremost, what triumphs is the image as indexical analogy. The same type of image based on the indexical analogy fulfills what the prophets and Plato will have had thought of the image: the "photographic" image, thanks to analogy and indexicality, allows less critical perspective and is more fusional than words, hence our difficulty to refuse such images as opposed to words.

## The digital texture of the image in the visual culture

The image is hard to analyze not only because a certain type of image imposes its own traits, but also because the idea of image comprises a level of ambiguity. We call “image” both the visual signs that rest at the same semiotic level as words, as well as the conglomerate of visual images-signs, which is comparable with the text made up of words. The difficulty of theorizing the image stems not only from the repudiation of the image by the text, but also and rather more from the level of ambiguity between the sign and the discourse, which are indistinctly represented by the same idea of image. We have no logical means to distinguish simple visual signs from what tradition calls “works of art” – paintings, sculptures, photographs, photographic images in motion within a film, etc. – as easily as we distinguish words from the text. What is important for understanding the evolution of the image is the distinction between its two levels: the image as visual sign and the image as visual discourse.

Of course, the image-sign in its modern apprehension is neither a graphical sign, pure reference to that which is absent, such as a traffic sign, nor is it a visual symbol, which signifies more than it designates, such as the image of the cross, but rather has a more or less indexical status. Contrary to the linguistic sign, the iconic sign is never completely arbitrary. It is caught in a more tight relation than that of the word and its referential world and is less systemized and formalized as a sign. Most frequently, instead of an explicit syntax, juxtaposition is used for expressing both similarities and causal implications. About the images, one could say what Watzlawick states in the second axiom about gestures: “Human beings communicate in two ways: digitally and analogically. The digital language possesses a very complex and convenient logical syntax, but lacks a semantic adequate to the relation. Instead, the analogical language possesses the semantics, but lacks the syntax adequate to defining relations unequivocally”.

While the arbitrary character of the linguistic sign permits operating some very precise distinctions, which logically support conceptual constructions excluding contradiction, the “language” of the images follows the logic of “both... and...” and bear very faintly determined semantics from a syntactical point of view. This is why commercials may insert by means of images some messages – such as the one that associates smoking with outdoor activities – that are harder to slip in through verbal formulas, as the contradiction would then very easily and rapidly become visible. Even the images that have less of an indexical character, e.g. charts and graphs, may act in the same way, because under the pretext of making arguments visible, they may force the logical algorithm, rendering it fake.

Based on this transition from visual signs to discourse-images, rendered compulsory by the indistinct levels about which we have talked above, we can observe how difficult it is to analyze the visual. Within the forerunners of today’s semiotic analysis of the image as discourse, who have also confronted such problems, are Roland Barthes and Pierre Francastel. Roland Barthes makes a very wise choice when he limits his “rhetoric of the image” at publicity, as in the ‘60s this type of image best anticipates the actual formula of visual discourse. Roland Barthes sees in publicity three types of

messages: the linguistic message, the denotative message and the connotative message of the image. The linguistic message – the text adjoined to the image, which explains or completes it – has an anchorage function and, less common, a complementary function of supplemental explaining. The denotative message results from the illustrating effect of the image.<sup>2</sup> The apparent lack of code in the denotative message naturalizes the message and creates the illusion that we can find cultural signs in nature. But the meaning only belongs to culture and is produced by the connotative message. As long as technology develops communication through images, the meaning does not seem to be built, but rather given. Connotation is paradigmatically definable and creates systems, denotation is only a phrase and associates elements without any system. The embellished discontinuity of connotations becomes continuous within the denoted scene by means of the mere procedure of juxtaposition that we have mentioned earlier.

Alongside Roland Barthes, Pierre Francastel focused on another situation in which the image is discourse: the "plastic language". From a different perspective, a genetic one, he identifies three levels of the language: the first comprises elementary visual signs, the second comprises ruling principles, structures that determine the disposition within the figurative field of the elements pertaining to the first level and, finally, the third level is that of the "Order", i.e. the general principles of connecting and combining signs and structures, the reason of figurative activity within a certain historical age.

The meaning of the two conceptions may be rephrased today thanks to the adventures of a famous quote. Those who eulogize the image as autonomous language cite in different forms an older saying: "A picture is worth a thousand words". The writer William Saroyan gave the best answer to this wide-spread quote: "Only if you look at the picture and say or think those one thousand words"<sup>3</sup>. The visual language only exists if there is an association of the visual signs that constitute the image as discourse and of this image and reality. If we think of images and associate them to reality, this association only takes place thanks to words. It is not a certain object from the environment that the image as discourse focuses on, but the connotations that surround objects, the world to which they belong, a world that only a narrative – those 1000 words Saroyan talks about – may truly invoke, detail and explain.

If the image is related to the narrative – those 1000 words that you must say so that the image may count as meaningful – the true conflict between image and text is carried in the field of memory, of learning and, moreover, of representing the world. The Greeks, who recited the texts, conceived the world as utterance, as *logos*. After the 4<sup>th</sup> century, when the idea of reading silently appears, the world begins to lend itself to being represented through writing, as the text of God. From now on, the written word begins to dominate the spoken one. But memorizing through images, largely spread throughout Antiquity, the Middle Ages and the Renaissance, and often used by orators and monks (the manuscripts were filled of miniatures and illuminations), does not disappear until the apparition of printed texts, of books that preserved tradition in an analytic and precise manner, as a scholarly culture, as opposed to a culture based on remembering images. Within a representation of the world as text, as book, to which the

religions of the book have definitely contributed, people conceive their own lives according to rules and act as if they had imperative roles to play within a scenario, other than those pertaining to their own imaginative subjectivity. This representation of the world as a text implies a certain form of self-understanding and of understanding the other if not straightly solipsistic, then at least reducible to a unique principle.

Relations between the text and the image have fluctuated along history: the first form of recording and memorizing was the image, and writing words has subsequently stemmed from there. After the iconoclast period, the image continues to dominate until the Reformation and the Counter-Reformation and is afterwards obfuscated by text. Nowadays the supremacy of the word seems to have been replaced with that of the image, and McLuhan even thinks that the civilization of the written text has disappeared. Yet, Roland Barthes's opinion is quite the opposite: we haven't even escaped the domination of the printed word, which is present even in the visual messages. I think that a balanced view is more adequate to reality in this case: after more than five centuries in which the text came off victorious, being backed up by the technology of the print, it is now image's turn to be backed up by technology. I think that an initial balance is restored in this manner, after a period of imbalance owing to textual excess. Installing equality between images and texts in the process of communication, after the long domination and putting aside of the image by the word and the text, now creates the false sensation of an imbalance.

As signs, as representations, the images necessarily abide to certain rules of construction and a minimal set of socio-cultural conventions, otherwise – as we have already stated – they could not be understood by other people. The cat does not understand the image from a television, which is encoded for the human eye. But even in the case of these types of coding, is iconicity a general human value, i.e. an anthropological one, or is it rather produced according to cultural, ideological or linguistic differences? I think that the answer also depends on the technologies that assist the production of signs. As we have seen in the case of the text, the arbitrariness of the signs that compose it has increased after the apparition of the print. In the same manner, now the television or the computer image is more of a sign than we would expect, not because the cat does not recognize it, but because it is industrially produced, according to some norms and standardizations.

A long time ago, when the phonetic alphabet was invented, it functioned as a code with the help of which more people would communicate than if they would have used hieroglyphs. Today's digital technological infrastructure furthers the digital coding aspect of the language, despite the omnipresent analogy and the apparent domination of the image. The technology drives to extreme the coding quality of language, with the sole difference that it reduces – records and processes – everything – music, image, text – to a much more simple code, the binary one. The binary code works perfectly as a vehicle for communication because, as the linguistic one, it does not resemble what it communicates. Consequently, language – and text – has won, has totally triumphed. Digital progress resides in the unification of the coding process for all means of communication. Its success is not necessarily a universal language, as

Leibniz's *mathesis universalis*, but rather a (relatively) universal codification, remarkable through its ease of use – you don't need an instrumental "art" anymore in order to produce images and music! In this respect, the computer is for the image more than what the print was for writing because, thanks to the image processing software, it has done more than simply multiply images, as the print; it has offered a digital texture to the indexical photographic image!

The image now becomes more and more a sign because of the fact that the analogy becomes a conventional technological rule. But the image becomes much more than what the text was during the Renaissance, when paintings were some sort of texts. Back then, the yielding to the signified, imposed by the analogy that was technically mediated by the camera obscura rendered them more difficult to be semantically maneuvered and less usable in phrases. Now the image becomes text because of the production means, because one can alter images as easily one could alter texts. The digital image processed on the computer cannot be credited with the same objectivity as the photographic object. The computer brings photography closer to drawing and painting. As the artist of the Renaissance, the digital artist uses techniques and instruments that allow him to retain a part of reality and alter the rest in different quantities. And the more digital is the end texture, the more indexical-analogical may the image be; it may become analogical-indexical, as indexical as possible, as in virtual reality.

The "photographic" image, as a realist index, is now fully brought back as a sign by means of digitalization and processing. Digitalization, our capacity to produce according to our will images ordered only by the rules of signifying, confers upon them almost the same status as verbal signs bear. Of course, apparently the image itself has won and not the text, but the image is produced by digitalized text: now we have more text behind an image than we could have ever imagined. Yet, the theoretical model of the sign has not changed with the coming back of the image; instead it has only raised the interest in the analogical compared with what was the interest in the digital – in the arbitrary signs of the language – in the last half of century. As a sign, the "photographic" image seems to be a message without code. On the one hand, this appearance is the consequence of the denotative character of the analogy as a message, especially of the indexical one. But on the other hand it is a consequence of transferring the coding implied by production, the one that had to be learned by those who produced images, altering it within operations using technology that belongs to machines. The apparent lack of coding in production symmetrically brings forward an apparent lack of coding in receiving. Apparently, the spectator of such an image does not have to know or respect reading rules, as he apparently receives a "natural" image, correctly recorded from a technical point of view.

The image has returned, alongside photography, under the pretext of realism and feeding upon the prestige of the analogy and, as we were saying, even of indexicality, thanks to the technical means of recording and producing it. Actually, the image is an indexical analogy; what triumphs now are rather indices and signals – the perfume, the massage, the touching of the body, the tactile – instead of signs (this is

why the perfume has so much to gain from this tendency: it is, for our civilization, the most indexical image and the most analogical index!). The paradox is that, thanks to the new technological means, these types of signs have a signal value, without necessarily representing an external reality. Likewise, the images generate meaning, but this happens by abandoning any external reference. It is all the more unimportant if an image refers to or represents something outside itself. Representations, be they real or fictional, become more and more virtual. But the virtual takes over thanks to the digital texture which brings near one another the image and the status of the literary text: the autonomy, the non-referentiality of the image, the paradoxical triumph of the stained glass, which depicts itself as world, over the image of a transparent glass, which directs our look to the outer, referential, world, these are similar to the auto-referentiality of the literary text, which most likely creates a world rather than shows one.

The fact that the image became text, the fact that the image has been dissolved within the text, is the greatest victory of textuality; a victory supported once again by technological means. It continues to live its own life as an image, still feeding upon the energy emanated from falling from indexicality to iconicity, to the arbitrary sign. But in this general current, the text itself is not anymore what it has been. On the one hand, because of its evolution as written records, the text becomes more and more intimately connected with the structures of logic, until it reaches the logicism proper to programming languages in some sort of *mathesis universalis*, which technologically fulfills the dream of the old metaphysics. Writing dissolves narration to the profit of logical structures, in order to become the algorithm of computer causality. On the other hand, the text itself acquires the phonetic valences of the image, by using some digital signs (“go4it”) or it stuffs itself with emoticons, or it even dissolves within the image, retrieving the embellishing connotative references of the image. The association between text and image intensifies unexpectedly, so that the hypertext means more than their juxtaposition. In this respect, thanks to technology, the evolution becomes less linear than anticipated and something new happens. Not only the digitalized image becomes more (and differently than before, when it became more or less figurative) of a text, but the text also changes, it becomes something it was not before – hypertext.

### **A culture of the visual or rather an ostensive ideology?**

Therefore, the issue here is not why the analogy, the image, wins in this time when digital technologies prosper and proliferate, but rather how, and the answer is: because images are created to act like texts, initially through technical means, then through electronic and, finally, digital means. Now everything tends to become image because, from a substantial-energetic point of view, it is quite economical – incomparably more economical than before! – to produce signs such as images. But we speak about images and not mere abstractions because it is also economical from a communicational point of view to use images instead of words and from an economic point of view because every image becomes an advertising image!

The first mass-medium dedicated entirely to the image was the television, which has also imposed and brought to awareness the necessity to study the image. In time,

becoming commercial in order to afford development, the television turned into a synonym for publicity. Being par excellence a promotion tool, the television extends the commercial to all its known forms and in the same time resorts, as it is normal for a marketable product, to its own promotion. This is how the transition from textuality to imagology (a constellation of suggestive images as a logical system of ideas which replaces ideology) takes place. Imagology does not only comprise publicity, but, as a communication form founded by television, it also extends to public relations and to the design of the commodities, as well as that of the life style. The ideology triumphed over reality thanks to the force attributed to knowledge; the imagology is stronger than reality because of communication: man does not come to know something from his experience anymore, he has no more direct experience, and thus reality for him is what is being said or, more precisely, shown to him.

The problem posed by Plato, which fuels the argument between the iconoclasts and the iconodules on the divine nature of the image appears because as a sign, the image is a secondary object in relation to another which it represents, and in this respect it is deceiving. Because the image is not to be mistaken for the original, for Plato the image can only be fake and the third biblical commandment regards the image as a statue or god and disproves idolatry through this. For the moderns, the problem of representation passes from the truth as correspondence to truth as coherence. Today, the problem stems from images being given as reality and us not being able to verify neither their correspondence, nor their coherence, as both of these are resolved by the analogical indexical quality of the images. This is to say, one can now digitally and electronically create not only the appearance of correspondence, but also the appearance of coherence.

With the new mass-media, which merge the computer and the television, we communicate increasingly with images and not with texts or images of images, not with images of reality: for the first time the image produces images and does not only reproduce realities. It seems very likely – and some recent cinematographic creations such as *Matrix*, *ExistenZ* or *The Thirteen Floor* are obsessed with this possibility! – that the technological evolution of the digital image may be so advanced that the human being may not perceive the difference between the real and the virtual, and that virtual images may not be differentiated from the perception of the surrounding world.

The Western culture has already undergone a slow transition from the image to the printed text, which took the form of books. We now return in time to memorizing and, most of all, communicating cultural tradition through images. Now the motion is the other way around and much faster: from books we have moved on, by means of the photographic, cinematographic and TV image, towards the digitally-built image. Computers render possible the production and the distribution of images for almost anybody, at a remarkable speed. More than every other technological innovation, computers are responsible for the burst of images and for passing from a passive contemplation to an active use of images. The image, however, acts as any other sign, i.e. while it intensifies some perceptive channels, i.e. the visual one, or is associated with others, i.e. the acoustic one, it also conceals other types of perception, the olfactory and

the tactile ones. Producing meaning through images leads to a visual culture, just as the printed text led to a textual culture. But our access to reality does not anymore take place through cultural encoding, and thus, together with a visual culture structured by the texture of the image, our world, too, is structured in the same manner. Our world does not become more visual, but is rather structured by the digital structure of the image, instead of being coded by the rules of textuality.

What changes first of all as can be easily noticed, is the type of social communication. Actually, it is not the role of the images and their power that have undergone changes, but the type of culture that they belong to, the frame of their cultural evaluation. The images, which are an adequate means of mass communication, are now found in a culture of the masses that values them, unlike the previous scholar-elitist textual culture that neglected them. The culture has been democratized; scholars have lost their elitist and hegemonic function.

Besides language, the image is also a convergence and reciprocal transcendence of the individual and the collectivity. For whom, for what kind of people is the image favorable? Because they escape the constraint and logical or syntactic control characteristic of the verbal language, images become the language of maximized intelligibility, characteristic of mass communication and popular culture. Escaping grammatical constraints, the image is now prone to being decoded individually; it is now apparently adapted more to the individual needs rather than to social exigencies and, thanks to its indexicality, it seems more real. People even hope that, in this manner, the Western cultural tradition will transit more easily from a generation to another and even that this is the way in which we may improve our communication with other cultures.

The text was favorable for the people of the spoken language, of the interior dialogue, of the Apollonian. If in a world seen as text action was scarce, the new communication technologies bring forward the specific rapidity of action and equate communication with action. The image is the idiom of rapid and efficient transmission of meanings. But the rapidity of the cerebral processing of images rules out the analytic and critical functions of thinking, because the speed of the message leaves less time for reflection. Additionally, with the apparition of the digital image, the perception of an image is an instantaneous perception of some embellished and associative point of views, which render all linear and causal knowledge relative. The image favors a certain representation of knowledge, which is not anymore determined by analysis or study, but rather seems spontaneous – a personal ability of a sudden intuition that came out of nowhere.

Conversely put, from the spectator's standpoint, images don't have to "do something" to convince us; their mere presence already has a persuasive effect. For many of us, understanding of the world is offered by reading images and not words. Reading itself loses ground to looking because the latter requires less mental processing. The young adhere to the visual because they associate words with communication and with the traditional social order. Because, as digital signs, words must be learned, they are perceived as being repressive, while images are easy to

understand, apparently with no need for recourse to any particular cultural codes. Visual communication is all the more efficient as it lays aside words and the meaning they offer to images.

Of course, images reproduce the real world and the interpersonal relations of people under a denotative appearance, but they are always already loaded with emotional connotations. The social bond becomes emotional, and consensus is produced by what is felt by all with regard to an actual situation that is perceived as real. The television culture replaces words as an essential factor of social communication. Umberto Eco anticipates the fact that our society will shortly be split – it already is – in two categories of citizens: those who only watch television and will receive only prefabricated images, and thus only prefabricated definitions of the world, with no critical selective power over the information, and those who know how to use the computer, who will be able to select and analyze the information. McLuhan stated that, unlike the collective listening to the religious service, silently reading the Bible or any other book was an individualist act of perceiving the world. The electronic means of communication were in Marshall McLuhan's view the return to the collective manner of perceiving the world. Their manifest ubiquity is what leads to the emergence of the "global village". But, according to Eco, the electronic "global village" lacks precisely the interaction characteristic of any community.

Finally, contrary to what was expected on behalf the text, the image was expected to promote even more fervidly the "truth" of the body. But let's not forget that the image is also a type of sign and, through its defining term itself, the notion of image also relates to the death of the body. Indeed, etymologically speaking, the image has – as the sign or the representation also have<sup>4</sup> – a much more intimate connection with the body than we would have expected, especially with the dead body and what replaces it: *imago* designates, in Latin, the mortuary mask, the wax mold of the deceased's face, worn at funerals by the magistrate and afterwards kept in the niches of the atrium. The representation has the function of a live substitute for the deceased or for death and in this way the image gets associated with the shadow, with halving. The image of the body (effigy, statue, etc.) becomes a "hyperbody", an eternal transfigured body, which preserves the proprieties of the human body. As we know, to this type of "image" only very important persons were entitled, i.e. those persons that embodied something, that were the bodily symbols of some social functions.

In the play of the *imago* as a mechanical copy of a dead body and the icon as impregnation of the body with social symbols, a play within which the destiny of the image itself is at stake, we witness the same mortification of the body, of life and of spontaneity as in the case of every other sign. The body is haunted by the rules of signifying both in the case of the image, as well as in that of the text. The daily life of actors and actresses, which make meanings come alive by means of their bodies, testifies for this! The images of life are inadequate to the purposes of signifying for which images are generally used, because they are grotesque, ugly or insignificant. In return, the images that are adequate to signifying, which become signs, are drained of life and depict dead people or landscapes, dead situations. It is because images depict

dead bodies in publicity that they end up transforming man in an auxiliary object relating to other objects that do not need him in order to evolve.

The ostensive ideology appears on the basis of the body not only as a starting point for communication but also as an arrival point to the analogical, to the image, because the optical – electronic and now digital – technology is organized according to the rules of human perspective, the rules of orientation and even of the interpersonal space, i.e. according to the reality of human experience. Thanks to the image, the Western culture moves from the invisible to the visible within the first thematisation, operates the transition between the inside and the outside within the second thematisation and works its way from the signifier to the signified in the present thematisation. In this manner, the image takes the risk invoked by Marcuse's one-dimensionality: visibility only talks about my present adaptability and takes the general risk of abolishing what is not representable in the favor of what is ostensive.

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<sup>1</sup> David Hockney, *Secret Knowledge: Rediscovering the Lost Techniques of the Old Masters* (New York: Viking, 2001). A Romanian translation has been published by Enciclopedia Rao, 2007. The book is preceded by an article published by D. Hockney and C.M. Falco, "Optical Insights into Renaissance Art", in *Optics & Photonics News* 11 (July, 2000): 52-59. Other information regarding David Hockney's theory is available at <http://webexhibits.org/hockneyoptics/>, <http://www.artandoptics.com/> and [http://www.artkrush.com/thearticles/011\\_woa\\_weschleronhockney/index.asp](http://www.artkrush.com/thearticles/011_woa_weschleronhockney/index.asp). Other texts regard broader aspects: Martin Kemp, *The Science of Art: Optical Themes in Western Art from Brunelleschi to Seurat* (New Haven: Yale University Press, 1990); Jennifer Lee Carrell, "Mirror images", in *Smithsonian* 32 (February, 2002): 76-82; Lawrence Weschler, "The Looking Glass", in *New Yorker* (31th of July, 2000): 65-75. More particular information, such as that suggested by my good friend N.T., regarding Vermeer: Bryan Jay Wolf, *Vermeer and the Invention of Seeing* (Chicago: The University of Chicago Press, 2001) or Philip Steadman, *Vermeer's Camera: Uncovering the Truth Behind the Masterpieces* (Oxford: Oxford University Press, 2001).

<sup>2</sup> Because, according to Kant, we can never directly access reality, images are products of the way in which the receiver has been stimulated by the perceived reality. Accordingly, the denotative level is more of an analytic hypothesis, rather than a reality, as it is hard to imagine any image without connotations.

<sup>3</sup> Deni Elliott and Paul Martin Lester, "Visual Communication and an Ethic for Images", <http://commfaculty.fullerton.edu/lester/writings/imageethic.html>, accessed March 2010.

<sup>4</sup> "Sema" – the origin of the word sign – was the funeral stone or statue that represented the deceased. Later on, in the liturgical medieval language, "representation" referred to an empty, draped coffin used in funeral rituals. "Eidolon" designated the soul of the deceased, which left the body as the form of an invisible, ghostly shadow so that later on, after it will have become and "idol", it may mean image, among other values.