# Thoughts concerning the Position of Color Painting

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I.
If we define the real in the same way the Radical Constructivists do, i.e., as something that fundamentally eludes our influence, then reality may be perceived as something which we experience about actual circumstances with our senses and which may be processed in our brains into more or less consistent constructs. Just how reality results from the real may be experienced by using pictures as examples: Because a picture not only substantiates a certain notion of the real, a design of the world, but rather also allows its respective special structure to be recognized by means of its facture, i.e. by the specific treatment of the difference between the material the picture is made of and the picture as an image.

Certain factures or pictorial production processes correspond to certain aspects of perceptional capabilities. The parameters of pictorial production processes are the achievements of memory: the knowledge stored in tools, expertise, and patterns, whose application each must be individually learned. In contrast to this are technical pictorial production processes, i. e., the so-called imaging processes, models of organic functions. Their parameters are the natural laws, which their users, i.e. we ourselves, are subject to. For this reason – unlike pictures created as an artisan craft – products of imaging processes are considered as being objective. The first complex technical process for creating pictures was photography: through it, the reproduction process in the human eye was imitated.

II.
The picture world, in which we as members of the post-industrial society operate, can in principle be divided into two large groups of pictures: Into the group of pictures we use to orient ourselves in this world and which cause us to take practical actions where possible; and into the group of all other pictures which do not appear suitable for precisely these purposes. Today, the first group undeniably includes, for example, traffic signs, pictograms, maps, scientific and documentary photographs, pictures for medical diagnostics or certain reports on television, such as the news; by contrast, the second group clearly includes, for example, all pictures which hang, or are stored, in museums today.

However, the boundaries between both groups of pictures are fluid, and not sharply defined. The reason for this is that many paintings which hang in museums today, once served for practical orientation under other circumstances. And even outside of museums there were, and still are, pictures which, granted, clearly have no documentary and informative character, but still cause us to take action, or at least should do so: Pictures with which certain products or services are promised, i. e. advertising pictures. But also religious pictures, to cite only one further category, are among these. Only pictures which bear no reference to something outside themselves, that are non-objective and monochrome, in short, that are concrete pictures, seem wholly unsuitable for motivating us to any type of action or practical orientation in the world. As such, they give rise to questions related to their sense or their meaning.

III.
Concrete art is – and this is a first thesis – a phenomenon which developed as a reaction to and reflex of the fact that we live in a world increasingly determined by realities we have created, not lastly by producing pictures with documentary-informative character. These pictures confront us as a second nature. Like skin they cover the surface of the real, at the same time sealing off our admission to it and hampering immediate and

direct experiences with and in real. But it is not only remarkable that we increasingly substitute the view to real with the view of pictures. What is even more confusing is the fact that these pictures stem almost exclusively from more or less identical imaging processes, i.e. have the same technical facture and demand of us a corresponding functional perceptional behavior.

However, in recent years with the commonly available possibility of being able to store and manipulate pictures electronically, we have been experiencing a far-reaching change in the way we deal with pictures, in particular, those which stem from imaging processes. To the extent it is possible to change such pictures using technical processes (and not only through external manipulation), they may not be categorically differentiated from those where traditional techniques of picture production were used (such as painting, for example).

With this, however, the notion that technically, in a mimetic-realistic produced pictures mode are able to render the real objectively becomes null and void. And thus, the insight becomes imperative that with any type of pictures we are always dealing with constructions whose relationship to the real may only be determined by an interpretation of them, i.e. by dealing with them. In other words: only viewers versed in the analysis of factures can judge what pretensions certain pictures have as to the real. For the capability of making such judgments, however, - and this is a second thesis – the fine arts and the theory developed from them remain the yardstick for the time being – and concrete art is probably their most important instrument.

The reason for this is that concrete art, and above all, concrete painting, focuses on an element of the picture, which appears almost archaic in connection with the progressive de-materialization of pictures we use to orient ourselves with in the world: the materiality of color. Thus, a theme can be made of something which otherwise gets increasingly lost in the electronically unified imaging processes, the facture, the treatment of paint as a material and the production of pictures as a direct confrontation with their reality. It is precisely this aspect, for which the paintings gathered together in this context serve as a prime example: they are visual objects for immediate experience.

IV.

The difficulties we have in dealing with concrete, in particular, monochrome paintings, are due to neurobiological factors and therefore, these difficulties apply to all of us. The core statement of the corresponding research is unambiguous: Perception is the verification of hypotheses. This is based on findings that, first, the brain is never at rest, but rather constantly generates highly complex stimulation patterns, even in the absence of external stimuli; and that, second, at least 80 percent of these synapse connections in the cerebral cortex take place reciprocally and only 10 to 20 percent of these connections are coupled to the sensory organs and feed signals into the cerebral cortex from the environment. The conclusion is that the brain is mainly concerned with itself; that it finds itself in continual inner monologue, and that its own activity may merely be modulated by sensory signals stemming from external stimulations. From this, it follows cogently, as far as the explanation of the process of perception is concerned, that the brain formulates hypotheses concerning its surroundings upon the basis of its previous knowledge (genetically supplied and acquired through experience), i.e. it has an inherent initiative, instead of merely reacting to stimuli.

Thus, neurobiological research surprisingly plainly confirms the saying: You only see what you know. And therefore, it is fairly clear why concrete, and especially monochrome, pictures seem foreign to us initially, frequently encountering spontaneous rejection: It is very simply for the reason that they do not depict or represent anything that one could know, because they push the universal capacity of our way of dealing with the world by forming hypotheses beyond all limits, and because they give us no reason

or chance to activate ourselves in a perceptual way that we would normally employ with success when encountering our surroundings.

But what then is the sense of such pictures? What do they accomplish for perception? And how can one deal with them appropriately, even if they may not be “understood” in any conventional sense? How can we make their viewing worthwhile for our experience?

V.

Before we can pose such questions, the question must be answered as to how pictures are created that elude the mechanisms of the brain and its demand for understanding or, put differently, which are created in a way that, by looking at them, we become conscious of how our notion of the world functions, thus making possible new experiences and insights. Such a task may only be solved by using a novel methodical approach that systematically pursues certain aspects of the real independent of previous knowledge in a way that its entelechy is accentuated. For me, such an approach has been realized in color painting, or in other words, in the varying positions which were developed by painters in this context.

VI.

The question as to how we perceive color is one of the most interesting questions concerning the attempt to understand how perception functions at all. It leads us to an extremely complicated and complex field of problems that famous scientists, theoreticians and artists have been dealing with repeatedly for many years. Nevertheless, even today we still do not understand completely what we see when we perceive color and how we perceive it. And we are not only dealing with physiological or neurobiological questions here. At this point the act of seeing color may serve as an example of the theoretical circle of knowledge we stand within if we wish to understand how we perceive things. There is no so-called cosmic viewpoint, from where we can perceive, independently of our perception, the way we perceive our world. Our world of perception is the only world we are able to perceive; a world independent of our perception does not exist for our experience, even if we can surmise its existence for good reasons, and in this much we are fundamentally unable to determine whether what we perceive is actually the way we perceive it, or in other words, whether what we perceive is real.[1]

Using the act of seeing color as an example, we most readily and immediately experience that what we perceive does not exist the way we perceive it. In turn it is easiest to take the phenomenon of the so-called “color constancy” to realize the fact that we are able to perceive certain colors despite the fact that their quality constantly and measurably changes depending on the changing daylight. For example we see a sheet of white paper in early morning under clear skies as being just as white as in the afternoon when we view it under a leafy, green tree. The production of color constancy is so deeply rooted in our perceptional ability, functioning so perfectly, that many, if not most, people are not conscious of its actual illusory character. What is more, it is also totally unknown to most of us as a prerequisite for the act of seeing color; just how unknown is most clearly demonstrated by the fact that we consider colorfulness to be a physical characteristic of the material world or, put differently, we do not want to recognize that the world is in real colorless and that no colors exist except for those we perceive. And thus, even at times when we are unable to see color, i.e. at dusk or in the dark, we cling to the notion that the objects maintain their color, attributing the apparent loss of color to the properties of our vision.

The fact that what we see at very best corresponds to individual aspects of how the world is really constituted, i.e. that what we perceive of the world is a more or less autonomous

[1] See Gerhard Roth, *Aus der Sicht des Gehirns,* Frankfurt 2003, p. 73

construct of our brain, which has merely been modulated by our sensual impressions, is also be recognizable in other phenomena of perception. An example of this would be the phenomenon of the so-called after-image or in more general terms, the physiologically determined antagonism of color, which is, among other things, manifested in the fact that the three organs with which our eye perceives the three colors blue, green and red, namely the so-called cones for relaying the color information to the brain, not only produce three, but rather four color values – in addition to blue, green and red precisely also yellow, for whose perception we have no pigment in our eye.

Proceeding a step further, to the molecular level, at the point where light meets the light-sensitive molecules, the pigments, triggering chemical reactions there that are then changed into electrical currents, then it becomes clear that what we perceive is a construct which does not even occur in unified form among us humans. Thus it has been determined, and I refer here to an article by Ernst Peter Fischer[2] from 1994, that the human population only disposes over a single blue gene and a single green gene, but has two genes for red, which means nothing other than that we all see the same blue (and most likely the same green) but with respect to red, we fall into two groups who view red differently or view a different red. The reason for this is that both different genes for red lead to pigments which have their highest sensitivity at wave-lengths shifted to one another by 5 nm, which is, granted, a minimal, but yet clearly perceptible difference tending towards burgundy red. Consequently, we live in different worlds of color, depending on the red-pigments we possess, and a very special and yet insufficiently researched constellation arises from the fact that – because the red genes are located on the x-chromosomes and women, as everyone knows, have two x-chromosomes – women, unlike men, dispose over two red genes and are thus, "tetrachromatic" and possibly experience red in a much more differentiated way than men do. I do not wish to speculate here what effect this may have for painting – let alone what possible insights result for the cohabitation of men and women. But what I would like to stress here is that even at such a basic level the reasons for the construction of different worlds of perception may be ascertained and that, due to our genes, we are unable to determine what the world is really like.

The possibly gender-specific difference in the perception of red just mentioned is an indication of how you can free yourself from the vicious circle you can get into while reflecting upon perception: By consciously constructing an other, a second world of perception. Such a second world of perception is the scientifically-based world of sensory physiology. In this world, the actions of immediate perception themselves and the resulting deceptions, if they can not be eliminated completely, are at least identified and regardless of what we humans feel, registered, measured and compared as to what happens physically or what phenomena come into play when we speak, for example of light or of red. Accordingly, compared with our world the most significant difference of this second world of perception is that it is more precise and standardized than the world we experience, and it is able to record and document phenomena, such as infrared, which are not visible to our own eyes.

What I would like to emphasize, however, is the role that the artistic confrontation with color plays, or least can play, in this connection. Working artistically means operating, so-to-speak, on the opposite bank of the mighty river of sensory data that the natural sciences attempt to analyze and classify, thus providing the basis for its canalization— whether consciously or unconsciously is not the point here. This canalization is the construction of a technology-based nature, which increasingly also comprises a technically construed world of color and pictures and which as such, more and more frequently comes between us and the real, or even replaces it entirely. It begins with artificial lighting, i.e. the light from bulbs and tubes which not only replaces daylight in many buildings, but which also establishes constant lighting conditions which never

[2] Ernst Peter Fischer, „Die Farben der Dinge – vom wechselnden Licht zur konstanten Empfindung", in: Narciso Silvestrini, *Idee Farbe. Farbsysteme in Kunst und Wissenschaft,* Zurich 1994

change instead of the constantly changing natural light. This is continued in the light of the screens of televisions and computer monitors and with the light registered by the chips in electronic cameras. Here as well we only ever encounter unchanging standard colors, and thus our capacity for perception is, so-to-speak, short circuited with the products of its scientific findings. The technical reconstruction of the world culminates at the moment however in the digital integration of various analogous picture production and reproduction techniques.

VII.
By way of a summary: Seen physically our world is colorless; the colors we see do not exist as a material inventory. What rather applies is that the material inventories in the world each possess a different surface structure, a different texture, which, depending on its nature, absorbs, allows to dissipate, or reflects, certain portions of the sunlight which hit it. The respective reflection of these textures is what we perceive as color.

Light is what we can see. Light consists of electromagnetic oscillations spreading in waves. For this reason light, like any other oscillation, can be defined by the wave-length, i.e. the distance between two wave crests. In accordance with the wave length these electromagnetic oscillations have various effects, light being only a small part of this phenomenon.

When light falls onto an object, three things can happen: First the light can be absorbed and the energy is transformed into heat, such as happens, for instance, when the sun warms something; second, the light can shine through the object like sunrays through water or glass; and third, it can be reflected as from a mirror or any light object, for example a piece of chalk. Often two or all three processes take place simultaneously. Thus, the green leaf of a plant absorbs long-wave and short-wave light, while it reflects light of medium wavelengths; an object that seems red, on the other hand, absorbs light of short and medium wavelengths, and reflects long-wave light.

A substance which absorbs a portion of the light which hits it and reflects the rest is called pigment. If some of the wave-lengths within the area of visible light are more heavily absorbed than others, then this pigment appears colored to us. What color we perceive is thus not only determined by the wave-lengths alone but also depends on the spectral composition as well as the characteristics of the objects and that of our visual system. Color quality is therefore, already at the level of physical descriptiveness, a correlation between the object to be perceived and the sensory organ that does the perceiving, and only then is it physiologically constituted.[3]

The scientific research on the “actions of light” as well as its processing in our perception created the foundations for the construction of a second nature, which is attuned to our possibilities and modalities for perception. In this second nature we catch sight of what we can see and what we want to see. Thus, we come from an epistemological into a technically construed vicious circle: we fall victim to a grandiose narcissism we have created ourselves.

The loss of reality which is destined to result from this may, I believe, only be countered by turning again towards to the real and by coming to grips with what has fallen through the grid of its scientific research. Dealing with color as a quality which defies any norm, which may only be construed to a certain degree and even less preconceived, is thus today more important than ever. The creation of surfaces and textures, which have not been produced according to technical norms, but rather emerged from freehand actions with the material, from open-ended experimentation, is a prerequisite for making pictures possible which free themselves from mechanisms of the brain and its demand to

[3] Concerning The section, see: Ulrich Oevermann, „Die Farbe – Sinnliche Qualität, Unmittelbarkeit und Krisenkonstellation. – Ein Beitrag zur Konstitution von ästhetischer Erfahrung“, in Michael Fehr (Editor), *Die Farbe hat mich – Positionen zur nichtgegenständlichen Malerei*, Essen 2000, pp. 426 – 473

be able to understand. In other words, they are pictures which are created in a way that we may be made conscious of how our notion of the world functions just by looking at them and thus, make possible new experiences and insights. Work which has this as a goal is on a par with scientific works, but it generates wholly different results, results which are perhaps able to reflect the conditions of scientific work itself. The artists' works gathered in this context demonstrate this in a convincing manner.