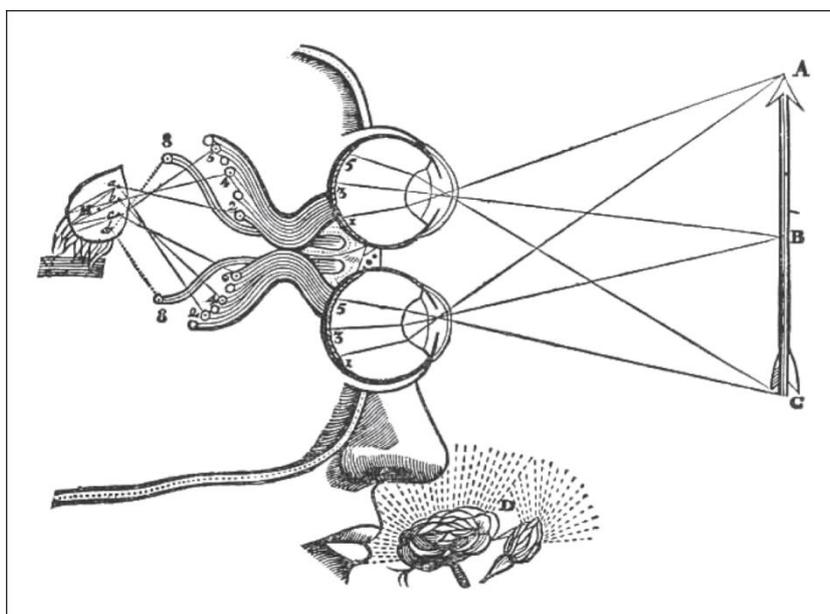




## REAL OPTICAL IMAGE AND ITS VIRTUAL PROJECTION BY PHOTOGRAPHY



or

## VIRTUALITY VS. REALITY

"It's not what you look at that matters, it's what you see." Henry David Thoreau

# Definition 1

---

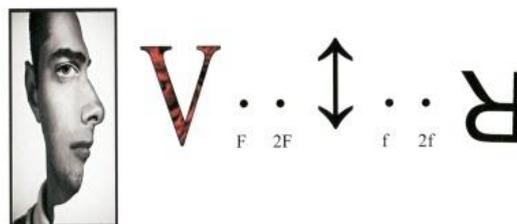
**Photography** is a virtual presentation of real optical images.

*Explication:*

Photography actually captures (fixes) what exists beyond (outside) the centre of the optical projection, i.e., optical picture, but presents (interprets) this picture fixation virtually as something existing prior to the projection. Within the concept of photography, entities exist independently of the optical projection (iconic or iconographic aspect of photography), and entities' existence anticipate the projection per se (temporal or authentic aspect of photography), which is apparently virtual (illusory), as projection and the projected are inextricably parallel phenomena. The interpreted (reflected, subjective) is presented as objective.

By paraphrase, photographic pictures are not perceived as optical and therefore real images. The seeming and subjective is presented as an objective fact. Virtual reality plays the role of reality itself. Photography presents optical images so that we do not perceive them as such, but we see objects that exist beyond optical projection and are independent of it. In general terms, photography plays a representative (substitutive, deputising) role. It conducts a case for something that exists outside the court. It acts as an image that gains its gravely serious "meaning" by being a zero image.

*Prima facie*, this definition of photography is absurd. It makes photography impossible and induces an urge to reject it as an empty speculation. Nonetheless, the definition is correct, since photography is possible and feasible, because its practitioners (photographers) and consumers (observers) feel their way by analogy of common visual perception. An optical situation is associated (in fact unified) with the situation of an eyesight vision and a lens optical image coincides with an image on the eye's retina. By the same token, photography is understood to be a result of objective vision, which is obviously not reasonable. Nevertheless, it does not matter, as the whole situation is irrational and largely unconscious.



**V**  
**R**  


**Virtuality** (mostly naively understood to be objective reality)  
**Reality** of the image field (upside down and left to right inverted)  
**Lens** (centre of projection, lens)  
**Perceiver** (photographer, observer)

Fig. 1: Condition of photography as virtual presentation of real optical images

In this situation, for a professional photographer, who builds on genres, clichés or fetishes<sup>1</sup> (see the list of general photographic clichés and fetishes), there is an inherent uncertainty looming, but the creative photographer can have an air of a healthy self-confidence. For the first one, an apparently solid ground is shaking under his feet, but for the second, a scope for although not unlimited, but certainly unhindered creativity opens. Genre and cliché photographers lose their self-conceit and aegis, but also their “objective reality” alibi. In contrast to this, creative photographers can reflect actual happenings of their camera lens field and report on the encounter concerning both themselves (most of their encounters have unconscious background) and those, who can afford not to see fetishes of things, but images per se that are projected on their retinas by their own eyes’ lens and as such being their own. They can report on what they see and feel, what is nice and ugly, what is touching and depressing. Thus, reflection and treatment of optical images can become a specific form of individuation. The option for image creativity based on individual optical experience and reflection (evaluation) is provided. Thus *opsognomy* is possible.

<sup>1</sup> Jaroslav Pilný (ZONER software, Inc.) enumerates common photographic fetishes, such as *Trips and Holidays; Landscapes; Nature, still life or architecture; Weddings, concerts, public events; Family gatherings or celebrations; Children, animals or street life; Portraits or nudes; Product photos*

## Definition 2

**Opsognomy** is the fixation of a lens's image field aspects. The aspects are distinguished (identified) by the perceiver (observer) of the image field. The perception (observation) of the field is governed by sensory (especially visual, but not only) and pictorial logic and it is an essentially creative process. The result of this process is opsognomy. **Opsognomy is an aesthetic interpretation of optical images.**

### *Explication:*

The starting point of opsognomy is identical to photography, but unlike photography that cannot do without virtuality, opsognomy focuses on real and not illusory aspects of optical images, see Figure 2. The creator of opsognomy focuses on the form and direct perception of optical images and not on the illusion they convey. Opsognomy equals shape. It does not depend on virtuality – it is an independent form of expression. Opsognomic images mean what they are, not what they resemble. They are not mnemonic devices, but aesthetic objects per se.

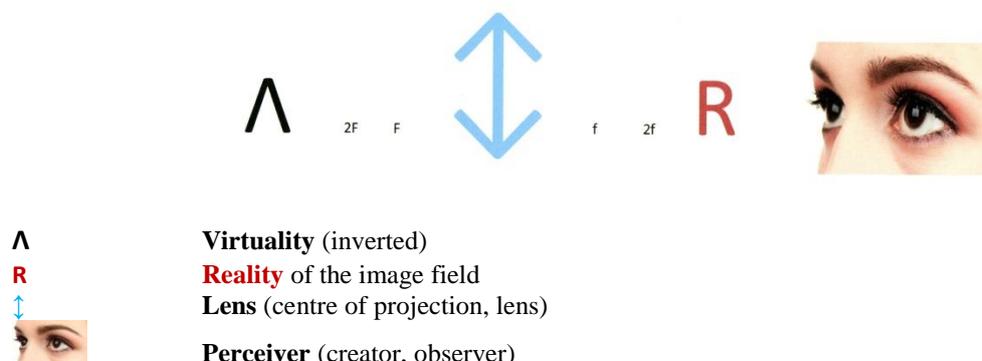


Fig. 2: Condition of opsognomy as aesthetic interpretation of real optical images

### *Specification:*

For opsognomy, the aspect of the lens image field is real and not virtually projective, as it is generally the case. The opsognomy creator takes into account immanent qualities of optical images, not the qualities attributed to them from the outside. The creator treats optical images as forms of actual perception, not

as things (objects, themes, events). It follows from this specification that the creator of opsognomy is oriented by:

### **1 IMMATERIALITY**

Immateriality means autonomy in relation to the objective or, more specifically, consumer oriented meanings of virtuality or the scene, as it is sometimes called. The creator respects illusive transparency of optical images and uses it as one of the typically expressive, but not determining or even final goals. He does not have a feeling of admiration for established genres, clichés, and fetishes. He does not respect virtuality, but uses it fully for his own creative goals.

### **2 VISUAL SPONTANEITY**

Visual spontaneity embodies reverence and utmost respect for a spontaneous visual experience. The creator builds on his actual physical presence at the moment of visual reflection of the lens field and his impulse to fix a particular aspect of this field. The creator can pursue any objective in reflecting the lens image field, but fixation of a particular aspect of the field is determined by an immediate time topicality and an actual witness authenticity. The creator dispenses with the need to consciously control his reflection of the lens image field. He puts up with the situation that aspects of the image field cannot be fully reflected (understood) in situ and that the meaning of the captured aspect can only be evaluated after physically inevitable existence (parallelism) of objective virtuality and visual reality has ceased.

### **3 VISUAL INEVITABILITY**

The visual inevitability follows and is closely related to visual spontaneity. The creator is principally oriented by feeling, not by rational reasoning. Absence of this feeling means a lack of opsognomic relevance, and the optical aspect fixation is aesthetically irrelevant. The visual inevitability represents a certainty of unity and harmony. A mediated certainty of the existence of things is sufficient to make a factual photograph. An immediate certainty stemming from the visual inevitability is essential for making of an opsognomy.

### *Paradigmatic disquisition or breakthrough*

As mentioned above, for opsognomy, the aspect of the lens field is a real entity and not a virtual projection. The opsognomy creator can determine immanent aspects of optical images; she/he can treat optical images as actual forms if optical images are sufficiently visible. Ideally they could do it as demonstrated by Figure 3.



*Fig. 3: Camera obscura in creative practice. The optical image manipulator must deal with the problem of the image upside down and left to right inversion, as well as with the problem of an excessive heat and difficult ventilation. It is vital for the artist and his witness to finish the task as soon as possible otherwise, obviously, heat stroke and suffocation are imminent risks.*

Figure 3 illustrates a direct copying of an optical image. It is rather an overly optimistic depiction, which for many reasons, primarily optical but also practical, is difficult to bring about.

*Camera obscura* itself is a pinhole camera. There is no need to solve the problem of "focusing". Here, the only problem is the lateral and above all vertical inversion of the image relative to the manipulator. If, however, the chamber is equipped with a lens, which is very welcome improvement due to the substantial increase in image brightness and clarity, the problem of lateral-vertical inversion is further complicated by the fact that the image is most distinct (sharpest) in one particular projection plane – the image must be put in focus by moving the plane (the only possible option of our illustration) or moving the lens (current practice nowadays). Fitting the camera with a lens that would produce an image size comparable to the human figure size, i.e., approaching a 1:1 ratio, is extremely difficult or practically impossible. Such a

size would be an option for the camera without lens (Figure 3), but it is rather irrelevant to pictures produced by practically available lens.

Lens optics usually produce only small, very small or miniature images. Nonetheless, due to particularities of the human eye vision, small pictures can be enlarged many times, especially if lens is defect-free or when working in a paraxial (close to the optical axis) space of the lens, that is, when the lens diaphragm's openings are very small (apertures, 22, 32, 64).

To control aspects of an image field, its manipulator should be able to move freely within the image field (or maybe better to say space) itself. This is rather impractical concerning a lens camera. It is impracticable if we insist on a direct manipulation, but if we employ the principle of photography to capture the image chemically, or electronically, then the problem is reduced to the extent to which not a direct manipulation but a direct viewing of the image is possible – seeing the optical image that is about to be recorded. The age of a new way of seeing the world is coming, the age of *homines cameralis obscurus*, people who see the world with an artificial, *camera obscura* eye.



Fig. 4: *Homines cameralis obscurus* in idealistic history and current materialistic practice.

Classical chemical photography (so-called analogue) based on a latent, and thus hidden, invisible image completely excludes direct control of the lens image and a kind of a viewing requisite, the so-called *viewfinder*, is indispensable. Historically, the most sophisticated viewfinder is the single-lens reflex viewfinder, which provides for a quite accurate estimation of what the picture might look like after its latent image has been developed. The form of the SLR image closely resembles that of the lens image proper. It facilitates opsognomic creativity and until the advent of electronic (so-called digital) photography there

was nothing better than a SLR viewfinder. So far (2020) majority of the most technically advanced digital cameras are equipped with it.

From the very beginning, electronic cameras enabled a direct, real time control of the lens image by viewing it on the LCD monitor and it is just this *live preview* that marks a breakthrough – a **paradigm shift!** After all, we are in the situation of that Baroque painter, draftsman or what we would call the artist of the Figure 3. With the Live View, which for him is a matter of fact, we can look directly at the lens image, command its capture and almost immediately observe the result of our manipulation – there is an immediate feedback between the form of the optical image and the form of its manipulation/fixation.

Until recently, it has been the case of the Live View that the monitored image was relatively small, of low resolution, and of unsatisfactory brightness due to interference with ambient light – almost invisible in direct sunlight. No doubt, it is possible to enlarge the monitor image with a suitable magnifying glass and eliminate the problem of the image brightness by isolating it (see Figure 4), but if the monitor resolution is insufficient, the resulting view is not satisfactory. In addition, it is a rather cumbersome solution because the magnifying glass attachment can be larger than the camera itself.



Fig. 4: Camera Sigma DP2 Merrill equipped with magnifying glass adapter; optional (left) and proprietary brand (right). Optional adapters of various brands can be attached to most digital cameras with LCD monitors.

The whole situation has changed fundamentally since the MicroOLED (Organic Light-Emitting microDisplay) technology, suitable for use as the so-called *electronic viewfinder*<sup>2</sup>, was launched onto the market.<sup>3</sup> Indeed and literally just *so-called*, because it is not about a viewfinder, as we have described it above, as

<sup>2</sup> The sensor processes the lens image that is projected electronically onto a miniature screen viewed through an eyepiece. As such it is not the case of a traditional viewfinder that implies usage of optics only.

<sup>3</sup> In 2012, French manufacturer MicroOLED announced a 5 million dot Organic Light Emitting Diode suitable for use as an electronic viewfinder. The 5.2M effective dots mean it can display 1280x1024 pixel resolution in colour, assuming a four-dots-per-pixel layout.

an inevitable necessity if optical images are captured chemically. It is not a case of an analogous assistance, but optical images produced by the sensor are seen directly without the need for any go-between entity. Our eyes are inside the dark room, but our body is outside. We succeeded in what has been impossible in the classical so-called analogue photography.

Optical images can be seen in dark interiors. However, in the light of the exterior, from which it seems to come (sic), the optical image is invisible. In the darkness of the room, the picture was clearly visible, nothing can be distinguished in the light. We can see things (model, scene) that remind them, but the image itself – that is, what we could perceive (see) and control as a visible form in the camera darkness, this is gone.

Nonetheless, the electronic “viewfinder” makes the whole situation fundamentally different. With him, we are simultaneously in the dark room interior, in which we clearly can observe the image form, and at the same time we are in the light of the exterior from which the observed image seems to be coming. An ideal situation for opsognomic creativity and what is more, the electronic “viewfinder” not only makes the optical image visible but also makes its recording instantly visible. There is an instant feedback. We momentarily can see and then check, if we like, the image we have just captured. We are not only iconographically, but also authentically kept abreast of the situation. We are in the right place at the right time. We can not only depict, but we can *create* – create images from and independent of optical images – create *opsognomies*.

### ***Summary:***

In photography, virtuality precedes optical images. What is made up by lens is understood as existing independently of it. Such concept of photography inhibits and often violates freedom of creativity. Opsognomy deals with optical images and handles them as sensual forms. Opsognomy is not controlled or limited by virtuality. Unlike photography, it is not based on virtuality. Opsognomy employs virtuality’s peculiar features or the illusion of the so-called objective reality as a specific means of expression.

Until recently, fixation of optical images was based on latent images made visible by chemical processes. Such fixation processes make any direct contact of a picture manipulator with optical images impossible, which means that

existence of the tools called *viewfinders* is indispensable. Using the viewfinder, the manipulator only deals with optical image analogies anticipating pictures' final form made visible by successive chemical processes. Instant (real time) manipulation of optical images is thus excluded.

A fundamental (paradigmatic) change of the situation has been brought about by the electronic (digital) fixation of optical images, for which a direct observation of picture instantly before and after its fixation is intrinsic. This happens on the monitor and its size and resolution determine the quality and mode of work. A breakthrough improvement has been achieved by introducing a high-resolution micro-monitor. The micro-monitor is viewed through an eyepiece and its image is directly comparable to the final image presentation. Such arrangement allows instant viewing and manipulation of optical images regardless of virtuality. The photo maker and opsogonomy creator can deal with optical images as with momentary forms. Aesthetic interpretation and presentation of optical images is possible.