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## **THE SCOPIC PAST AND THE ETHICS OF THE GAZE**

A plea for the historical study of ocular perception

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Ivan Illich

## THE SCOPIC PAST AND THE ETHICS OF THE GAZE

A plea for the historical study of ocular perception<sup>1</sup>

We want to treat a perceptual activity as a historical subject. There are histories of the rise and fall of the Roman Empire, of the formation of a working class in Great Britain, of porridge in medieval Europe. We ourselves have explored the history of the experienced (female) body in the West. Now we wish to outline the domain for a history of the gaze - *der Blick*, *le regard*, *opsis*.<sup>2</sup> The action of seeing is shaped differently in different epochs. We assume that the gaze can be a human act. Hence, our historical survey is carried out *sub specie boni*; we wish to explore the possibilities of seeing in the perspective of the good. In what ways is this action ethical? The question arose for us when we saw the necessity of defending the integrity and clarity of our senses - our sense experience - against the insistent encroachments of multimedia from cyberspace.

From our backgrounds in history, we felt that we had to resist the dissolution of the past by seemingly sophisticated postmodern catch phrases, for example, the deconstruction of conversation into a process of communication. Here we invoke the past to verify trust in the flesh of our senses. Authors who have recently dealt with the so-called inevitability of media have given us reasons to reflect on the possibility and necessity of an *askesis* (discipline) of the gaze; this leads to the ethical cultivation of the glance.<sup>3</sup>

To our surprise, we discovered an uncharted territory. The activity of gazing - *opsis* - as opposed to either the interpretation of light - optics or its representation, perspective - has remained marginal in the writings of historians. We construct our argument in the space marked off by the tangents others provide. Their findings and discussions are so attractive that only a strict control can keep us to the point. Therefore we begin by listing the blinders by which we guard ourselves from distraction. Only then will we be ready to utilize the insights we have gleaned from the recent literature: from writings on the history of art, science, theology and culture that point toward the past of the gaze. We group these writings into eight perspectives, each differently relevant to an ethics of the historical gaze. First, however, a few preliminary remarks.

### BLINDERS

Before blinders were attached to traffic lights, they were leather shields that kept a skittish horse from shying. We watch lest our eyes be distracted by fascinating side issues, such as the following:

1. Much has been written about the inner eye, the eye of the heart, and the eyes of the mind.<sup>4</sup> In this essay we limit ourselves to the activity of the carnal eye, but the eye of a reflective person.
2. We stay within the tradition of the West. Its enrichment by Jewish, Muslim or Persian influences in the time of Hellenism will not lead us to emphasize exotic gazes.

<sup>1</sup> The text was written after discussions with Barbara Duden, Mother Jerome, O.S.B., and Lee Hoinacki.

<sup>2</sup> The OED devotes over eight pages (three columns on each page) to "look," over seven to "see," and six to "eye." "Gaze" is defined as, "The act of looking fixedly or intently." Usage examples for all four words assume a *human* act, and most imply a moral sense. For example, "if looks could kill," "A maid should be seen and not heard," "to turn a blind eye," "Who was this to whom His followers turned their last gaze?" (Farrar, 1838).

<sup>3</sup> Vilém Flusser, *Ins Universum der technischen Bilder* (Göttingen: European Photography, 1990).

<sup>4</sup> Waldemar Deonna, *Le symbolisme de l'oeil* (Berne: Francke, 1965). Two good contributions are: Wolf Gewehr, "Der Topos 'Augen des Herzens' - Versuch einer Deutung durch die scholastische Erkenntnistheorie," in: *Deutsche Vierteljahresschrift für Literaturwissenschaft und Geistesgeschichte* 46,4 (1972), 626-649; Conny Edlund, "Das Auge der Einfalt," in: *Acta Seminarii Neotestamentici Upsaliensis* 19 (1952), 23-27. See also: Gudrun Schleusener-Eichholz, "Auge," *Lexikon des Mittelalters*, vol.1 (Munich: Artemis Verlag, 1980), cols. 1207-1209.

3. We further abstain from studying the gaze or light as metaphors for truth or cognition.<sup>5</sup>

4. Much more difficult is the task to stay out of the shadow of those optical disciplines that monopolize the explanation of vision since the seventeenth century. Johannes Kepler can be considered the founding father of an optical interpretation of vision. He explicitly distinguishes between optical phenomena, on one side, and the gaze (*opsis*) on the other, by separating the fractures and reflections of light rays from actual perception. In his two optical treatises, he limits himself to the former, and relegates all reflections on the act of seeing to the domain of "the physicians."<sup>6</sup> Kepler thus marks the beginning of a road that ultimately leads to a neuroscience based on information processing and systems analysis. Kepler's understanding of the retina as a canvas, and vision as ray-tracking, implies a certain scientific paradigm. This casts a shadow in which it cannot but seem absurd to discuss vision as a moral act.

5. We also want to avoid anything that smacks of a technotrope ethology of vision that peddles the enhancement of speedy recognition in this age of instant communication. Such research in pattern recognition, speed reading, the training of detectives or sharpshooters, and the development of pop icons for interface screens only leads to ocular gymnastics, competitive targeting and increased image consumption.<sup>7</sup>

We are interested in the gaze that throughout western history has been the subject of those normative, ethical considerations that encourage us to cultivate glances of the blessing eye and to avoid those of the evil eye. We work on a history of *opsis* because we want to gain the distance necessary to explore the conditions for a moral gaze today.

## 1. THE HESITANT SKEPSIS

In 1994 Alain Besançon published a very unusual book on iconoclasm, one that does not quite fit into any conventional discipline.<sup>8</sup> His theme is a certain kind of gaze when one faces the image: a hesitant gaze. Finding this kind of gaze, he concludes that iconoclasm is of the essence of what is usually called, the West. Iconoclasm runs as a thread connecting Anaximander to Mondrian. We can thus interpret and enrich a polemic concerning cyberspace and the Internet against this historical background.

Known for his studies on Russian cultural history, the author divides his new book into three parts. In the first, the competent Byzantine scholar speaks on antiquity. In the second, the literary scholar examines the fourteenth and fifteenth centuries of the Lollards. The third, which takes up more than half the book, deals with modern art from the German romantics to Kandinsky (d. 1944). Incidentally, the Russian painter, in his condemnation of imagery picturing the invisible, was no less violent than the Byzantine emperor, Leo III. Besançon establishes that iconoclasm has one history from antiquity to the present. This is the controversy about representing the divine, the ultimate. Obviously, such a history has a strong ethical dimension.

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<sup>5</sup> Hans Blumenberg, "Light as Metaphor for Truth: At the Preliminary Stage of Philosophical Concept Formation," in: David Michael Levin, ed., *Modernity and the Hegemony of Vision* (Berkeley: University of California Press, 1993), pp. 30-62. An introduction to the history of light: Werner Beierwaltes, "Licht," *Historisches Wörterbuch der Philosophie*, vol. 5 (Basel: Schwabe & Co., 1980), pp. 282-290; and, Klaus Hedwig, "Licht, Lichtmetapher," *Lexikon des Mittelalters*, vol. 5 (Munich: Artemis Verlag, 1979), cols. 1959-1962.

<sup>6</sup> Johannes Kepler, *Ad Vitellionem paralipomena, quibus astronomiae pars optica traditur*, vol. 2, ch. 5 (Munich: C. H. Beck'sche Verlagbuchhandlung, 1939), pp. 151f. (Originally published in 1604.)

<sup>7</sup> For an introduction, see: John R. Cronly-Dillon and Richard Langton Gregory, eds., *Evolution of the Eye and Visual System* (London: Macmillan, 1991); and, Alastair G. Gale, *Vision in Vehicles*. Conference on Vision in Vehicles. (Amsterdam: Elsevier Science Publ. Co., 1991).

<sup>8</sup> Alain Besançon, *L'image interdite: Une histoire intellectuelle de l'iconoclasme* (Paris: Fayard, 1994).

Besançon begins his story with the iconophobia of the pre-Socratics. He interprets their dis-regard of the gods as a programmatic an-iconism, as a form of ascetical gaze, as a hesitant skepsis in front of any image. The gods disappear from the horizon of Greek thinkers at the same time that the "technologization" of the word sets in. Walter Ong describes how foolproof sound recording by means of the alphabet visibly clipped winged words.<sup>9</sup> Thus Sappho's epic songs were encapsulated in written poetry, and living myths were fixed in Herodotus's history books. At this same time, the archaic, stiff statue of the god as a presence is transformed into a more "realistic" figure representing the god.<sup>10</sup>

As the Greeks thus created their late classical sculpture - which influenced the Romans so strongly - their philosophers presented an attitude toward divinities that is in stark contrast to the way in which the gods appeared in Homer or Hesiod. Besançon interprets the formation of philosophical concepts as an analogous transformation in the world of thought: Philosophers shy away from gazing upon the gods, and thus acquire the freedom to focus on abstract entities instead. The source of reality is no longer Helios, but fire; no longer Venus, but love. Ideas now stand for the gods.

None of this critique of the image can be found in Hesiod's *Theogony* (c. 800 B.C.).<sup>11</sup> The gods are born out of Eros, and *theoria* is equated with the spectators' sensuous experience of the gods' dancing appearance and flow. However, barely 200 years later, with Anaximander, this contemplation of *arché*, of the beginning, has given way to meditations on the endlessness (*apeiron*) containing all possibilities, all forces that mate and reabsorb each other. Here, for the first time, the gaze upon the gods is turned into an idea, the idea of "the divine." With this notion comes the first of the monotheists, the poet Xenophanes of Colophon, who refers to an abstract entity: "the greatest among gods and humans, utterly unlike any mortal in aspect or in thought."<sup>12</sup>

Another hundred years, and Empedocles (490-430 B.C.) teaches that God is a lofty spirit of unfathomable might who can be represented by the emblem of an invisible sphere, a perfectly rounded, happy sphere in pure rest. Philosophy, the love of wisdom, is henceforth connected with disciplined dis-regard, the hesitant gaze, the commitment to downgrade the image. According to Xenophanes, if oxen had the hands of a sculptor, they would shape oxlike divinities. The philosopher aspires to reach a truth that lies beyond the eye.

From here the road continues to Plato (see the *Timaeus*), for whom the visible world is a pale reflection, a colored shadow, of ideas. With Plato a paradox comes to be established that is still with us: The certainty that our whole being yearns for the vision of the ultimate good, while the visualization of the good, the divine, is not only impossible and sacrilegious but simply out of the question.

## 2. THE FINGERING GAZE

"It seems as if the problems arising in the natural philosophy of antiquity have not been discussed except in the categories of modern physics, mechanics or optics."<sup>13</sup> Gérard Simon breaks with this convention against which, even before Thomas Kuhn,<sup>14</sup> objections had been voiced by a historian of science, Pierre Duhem,<sup>15</sup> and a poetic philosopher of science, Gaston Bachelard.<sup>16</sup> With Simon,

<sup>9</sup> Walter J. Ong, *Orality and Literacy* (London: Methuen, 1982). See also: Eric Alfred Havelock, *The Literate Revolution in Greece and its Cultural Consequences* (Princeton: Princeton University Press, 1982); Rudolf Arnheim, *Visual Thinking* (Berkeley: University of California Press, 1969).

<sup>10</sup> Jean-Pierre Vernant, *Myth and Thought Among the Greeks* (London: Routledge & Kegan Paul, 1983).

<sup>11</sup> Besançon here follows Werner Jaeger, *Die Theologie der frühen griechischen Denker* (Stuttgart: W. Kohlhammer, 1953).

<sup>12</sup> Antonio Farina, *Senofane di Colofone* (Naples: Libreria Scientifica Editrice, 1961), p. 46.

<sup>13</sup> Werner Kutschmann, "Wissenschaft des Blickes: Eine Studie über die antike Optik von Gérard Simon," *Frankfurter Rundschau*, Sept. 30, 1992.

<sup>14</sup> Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1970). Originally published in 1962.

<sup>15</sup> Pierre Duhem, *Le système du monde, histoire des doctrines cosmologiques de Platon à Copernic* (Paris: Hermann, 1954-1959); Duhem, *To Save the Phenomena. An Essay on the Idea of Physical Theory from Plato to Galileo* (Chicago: University of Chicago Press, 1969).

<sup>16</sup> Gaston Bachelard, *Les intuitions atomistiques, essai de classification*, 2nd ed. (Paris: J. Vrin, 1975).

however, unease with the prevailing exegesis of Greek authors turns into a competent and radical review of classical optics. The title of his book makes the intent explicit: It deals, not with classical optics, but with the gaze, opsis:

What counts for the historian of optics is its localisation within the constellation of knowledge in a given epoch ... thus the archaeology of the gaze, man who gazes and this man's relation to the realm of the then visible.<sup>17</sup>

Simon is a recognized Greek scholar; we can trust his conclusion that the object of optical treatises from Euclid via Ptolemy to those of the high Middle Ages is not light, but the ray originating in the eye. These ancient authors study the reflection of the gaze in a mirror, the refraction of the gaze when it hits the surface of water, the confusion of the gaze when it pursues a flying bird, and the illusion induced by paintings. These entrapments, seductions and distractions of the visual ray are examined because they constitute obstacles to right, fitting and honorable use of the visual sense. In this way the science of optics came to be understood as the basis and guide for a cultivated human activity, ultimately for ethics.

In contrast to previous studies, Simon advances the thesis that

... none of current notions like "ray," "image," "field of vision," "binocular sight," even those of "object" and "subject" can be used uncritically in the interpretation of classical or medieval texts.<sup>18</sup>

The ethology of vision is an eminently historico-cultural phenomenon, and cannot be reduced to neurological processes set in motion by electromagnetic stimuli. By inverting the history of optics in this way, Simon reveals the unexamined adherence to ahistorical contemporary certainties, even among eminent scholars. For example, Albert Lejeune, editor of the definitive edition of Euclid and Ptolemy, in his introduction and notes, treats these authors as precursors of modern opticians.<sup>19</sup> Vasco Ronchi, to whom we owe the standard history of light,<sup>20</sup> and even Charles Mugler, compiler of a 450-page historical dictionary of Greek terminology for light,<sup>21</sup> are indicted by Simon because of the violence they do their subject.

According to Simon, ancient optics has as its object an effluvium of the pupil, a ray originating in the eye and deals only tangentially, if at all, with light, which itself is conceived as the effluvium from the heavenly eye, as a ray coming from the sun, the face of Helios. Euclid's merit consists in having given a geometrical shape to the human gaze, portraying this effluvium as a conical figure having its apex in the pupil and its base on the object that the gaze embraces.

All opticians of antiquity are interested in what happens at the base of the visual cone where it fastens on its object. They agree that something on the surface of the object mingles with the ray emitted by the eye. What is this something? It is color. Color is conceived as a quality in the object that is kindled and forced to the object's surface because it has been warmed by the gaze of the sun. No matter the school to which the antique opticians belong, they all agree that the gaze reaches out, projects itself in an organic erection of the eye; that it is the projection of flesh into the world. For all of them, the visual ray - that ejaculation of the visual sense - is itself organic, an organ that is awakened when the lids are opened.

<sup>17</sup> Gérard Simon, *Le regard, l'être et l'apparence dans l'optique de l'antiquité* (Paris: Éditions du Seuil, 1988).

<sup>18</sup> Simon, *Le regard*.

<sup>19</sup> Albert Lejeune, *Euclide et Ptolémée, deux stades de l'optique géométrique grecque* (Louvain: Bibliothèque de l'Université, 1948).

<sup>20</sup> Vasco Ronchi, *The Nature of Light. An historical survey* (London: Heinemann, 1970). Italian original, 1939.

<sup>21</sup> Charles Mugler, *Dictionnaire historique de la terminologie géométrique des Grecs* (Paris: Librairie C. Klincksieck, 1958).

It follows from the exegesis of texts from Plato to Galen that sensation could take place in "ecstasy," that it could occur beyond the limits of the skin. The visual ray was conceived as an ephemeral organ that exists as long as it is actualized by its mingling with the colors brought forth by the light of the sun. Although the soul inhabits the body, not all its potencies are circumscribed by it.<sup>22</sup>

The Greeks could not have conceived of vision without a dissymmetric intercourse between the bodily eye and the illuminated object. Various, these old authors speak of the visual ray in terms of an ocular finger, a limb of the soul, a psycho-podium that is saturated in grasping colors in an act of perceptual commixture. Philosophical schools differ on the location of the encounter, but for all of them it is "outside," lying beyond the skin. For Aristotle, the mingling of flesh and world takes place on the object itself; for Plato and, later, the Stoics, the encounter happens halfway, where the eye meets the colored shadow thrown by ideas or there where the scales detached from the objects by the sun are encompassed by the gaze.

### 3. LIBIDO VIDENDI

In the Middle Ages, people speak about visibilia (Latin: visual images) and, in antiquity, about emphasis (Greek: appearing in a smooth surface, presentation, exposition, meaning), but we have no word for this type of outward appearance or "setting forth." It is the result of a complementarity between the outgoing glance and colors elicited by light shining upon an object. Emphasis/exposition welds the two: the glance colored by the world, and the world colored by the glance. It is a cosmic event, the fruit of the fit between two dissymmetric complements. Cosmos comes from kosmein, the Greek word for lining up two sides or faces: two armies, shores, sky and soil, eye and colors, ear and harmonic sound. The fit then results in a battle, a river, the universe, visibilia and music. A sense for this kind of mutually constitutive dissymmetric complementarity, for such ontic proportionality, is not included in those axioms that determine the mental topology of modern times. No wonder, then, that Gérard Simon's history of opsis is not easy to digest.

The classical conception of the gaze proved itself insufficient for confronting an intellectual challenge in late Byzantine antiquity, an event contemporary with the Merovingian Middle Ages in the West. The issue presented itself as the difference between emphasis and an artifact, namely, the icon. The pre-Socratics had cultivated a dis-regard of the gods, so as to focus their mind on the concept of entities. Thus, sculptures were no longer viewed as gods, but as symbols for the invisible: divinities, or the forces they represented.

Christians initiated a completely new kind of hesitancy in face of a graven image. Their ambivalence stemmed from their faith. Jesus, the Word of God made flesh, from earliest times on had been called the Image of the Father. The son of Mary, the carpenter from Nazareth, was coequally God and man. God, without losing or diminishing his divinity, had been touched, heard and seen by ordinary people. The Word of God could be grasped, not only by the ear, but could also be seen, tinging the gaze with color. Christian hope was oriented towards the vision of God's face; Christians thus derived their desire to worship the divine emphasis in the icon. But the unquestioned presence of icons in Christian worship suddenly became problematic in 726 with the outbreak of the iconoclastic dispute. Traditional scopic hesitancy in front of an image was raised to a new level of analytic discourse. For the first time, image and the lust of the eye, the libido videndi, became an explicit object of philosophical reflection under the eminent leadership of a Church Father, John of Damascus.

This is not the occasion to delve deeply into the history of iconoclasm; our task is to present an outline, indicating an entry into the history of the gaze. A study of the libido videndi is a life project and passion of a Dominican friar, a Sorbonne and Strasbourg professor, François Bösflug. He has dealt monographically with the history of ocular desires, starting in late antiquity and including an analysis of

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<sup>22</sup> Simon, Le regard.

Mitterand's election posters.<sup>23</sup> His book on a late flare-up of iconoclasm in the midst of the Baroque period nicely presents an introduction to his story.

In *Dieu dans l'art*, he comments on a papal encyclical published in 1745.<sup>24</sup> Its author is Benedict XIV, one of the few intellectuals who have occupied the papal throne in recent centuries. He felt the subject to be of such urgency that he sacrificed his summer vacation in the mountains of Albano, locked himself in the Vatican library and, in the oppressive heat of Rome, fulminated against the graphic representation of the Holy Spirit as one in a triplet of young men, supposed to represent the Holy Trinity. The encyclical reads like a summary of almost exactly one thousand years of theological iconology.

Ever since the Second Council of Nicea (787), at the height of the Byzantine iconoclastic disputes, the pictorial representation of Christ's humanity had been accepted as an icon for orthodox worship.<sup>25</sup> The representation of God the Father as a bearded Patriarch appeared in some western altar paintings, and had been legitimized as an obvious metaphor. But the third person of the Holy Trinity, the Holy Spirit, the mutual Love of Father and Son, symbolized occasionally by the shape of a dove, had never been clothed in human flesh. This is the innovation to which the pope strongly objected.

The historical background is curious. A young peasant girl from Swabia entered a convent in Kaufbeuern, north of Lake Constance. There, as a nun, she had recently been visited in a vision by "Divine Love in the image of a most delightful young man."<sup>26</sup> Almost overnight, thousands of attractive prints of this vision were churned out by local shops. By this time the Reformation despoliation of churches, beheading of statues and destruction of images were things of the past; the post-Tridentine explosion of Baroque imagery was at its height in Catholic regions. More importantly, a new technique had come into being: flat, angular woodcuts were replaced by realistic copper engravings. These cheap reproductions gave the image a new kind of presence in every household and prayer book. The pope reacted vigorously, not only to an iconographic motif, but also to a new technogenic flooding of visual space by reproductions.<sup>27</sup>

After concluding this excursion into early modern normative iconology, Böspflug launched an international symposium on a new interpretation of the Byzantine events of a thousand years earlier. In 726, the emperor Leo III had the icon of Christ torn from the tympanum of his palace's bronze gate, to be replaced by a naked cross. In this event, three distinct currents find a common expression: the Old Testament awe rejecting any visualization of the Word of God that touches the flesh, the heart of the believer; the later Muslim exaltation of the sound of the Koran with whose majesty and beauty no picturing of the Almighty could possibly compete; and, of course, the Greek ikono-skepsis, the philosophical hesitancy in giving the weight of truth to representations. Out of this challenge the Church Fathers formulated the first icon ontology, the first great theory about the relation of the gaze to the image which, of course, above all spoke of the gaze of the believer.

According to a canon of the Nicean Council, the believing gaze, falling upon the painted representation of Christ, his mother or a saint, is tinged by the emphasis, the appearance of the invisible reality represented. The icon thus leads the believer from the typos to the prototypos of the risen Christ, from the object in time to the reality in eternity. The icon is thus seen and interpreted as something quite other than a statue of Caesar or Jupiter, or Saint Peter, meant to make their majesty present; as something else than a mere painting suggesting some likeness or explanation. It is understood as a threshold between two incommensurable worlds, from the perishable and provisional to the imperishable and eternal; from the world of death into the world of life.

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<sup>23</sup> François Böspflug, *La rue et l'image: espace public et circulation d'images, une question d'éthique sociale* (Paris: Éditions du Cerf, 1990).

<sup>24</sup> François Böspflug, *Dieu dans l'art: Sollicitudini nostrae de Benoît XIV (1745) et l'affaire Crescence de Kaufbeuren* (Paris: Éditions du Cerf, 1984).

<sup>25</sup> François Böspflug and N. Lossky, eds., *Colloque international Nicée II* (Paris: Éditions du Cerf, 1987).

<sup>26</sup> Böspflug, *Dieu dans l'art*.

<sup>27</sup> No pope since then has had anything approaching the classical sense for iconodule tradition, and sufficient intellectual distance to make any similar pronouncements about photographs, television or the Internet.

A great merit of Böspflug consists in the addition of a new facet to the history of the gaze: Iconology begins with a theory - a manner of viewing, of experiencing skopos - which unlocks the horizon, interpreting the gaze as a kind of homesickness for the beyond. This desire to look into eternity has become a constant in western thought, but it has also given rise to the pretension of bringing whatever can be known into the scope of visualization. The libido videndi can go in either of two directions: through an icon to the unknown beyond, or into the fascinating artistry of the representative image. One can compare the austerity of an early eastern icon to the succulence of a Velásquez nude.

#### 4. FROM LUMEN TO LIGHT

The hesitancy of the western gaze in front of the image, between Nicea II and the nun of Kaufbeuern, is a constant that survives a major inversion of vision during the very same period.<sup>28</sup> The story begins with Al-Haytham (Latin, Alhazen, c. 965-1039) who, like the two other towering opticians before him, Euclid and Ptolemy, was a citizen of Alexandria. According to a legend, he was such a famous mathematician that the Sultan had expected him to regulate the Nile. Having understood the futility of such an undertaking, he stayed away from the court and created for himself an "instrument" to study the eclipse of the sun that he had predicted. What he did was this: He used an Egyptian tomb as a camera obscura. With a tiny hole, he produced an image of the sun on the back wall of the dark chamber, which he could look at without being blinded.

What makes him into a revolutionary is not the use of this instrument, but a new understanding of the gaze he derived from the event. He noticed that the after-image of the partially eclipsed sun remained in his eyes even when he closed his lids. Reflecting on what happened when he did not open but closed his eyes, inverting classical practice, he was led to invert classical theory. His intro-spection, which stands in stark contrast to earlier ways of proceeding, made him also turn the construction of the visual cone end for end. He placed its base on the eye, and its apex in the object. He transformed optics from a science of opsis, which means vision, into photics, a science about light rays and what they do. Henceforth, vision is examined and experienced as the result of what light brings into the eye, not what the gaze goes out to fuse with.

We have already remarked that even in antiquity there were sages who claimed that objects exude something that the eye captures: scales or emanations called simulacra. However, until Al-Haytham, the place at which their capture, called perception, happened, was out there, not in the eye. After his work was translated into Latin, with his name being changed to "Alhazen," all this changed, not suddenly but relentlessly. The place of incorporation or in-formation was moved into the eye, was believed to occur in the crystal body behind the pupil.

This inversion of vision is reflected very clearly in the change of epistemology taking place in the course of the thirteenth century, the peak period of scholastic thinking.

- Cognition in Thomas Aquinas, the great Italian Dominican scholar, is still modeled on the scopic regime of tradition. The intellectus agens behaves like the visual ray of the classical gaze. It goes out to reach the object, and by illuminating the object forces it to show its universal characteristics; it's as if the intellectus agens is the sun "forcing" objects to show their colors. The "acting" intellect abstracts these universal characteristics from the object of cognition. Analogously to the visual ray tinged by a color, the intellect is informed "intentionally" by these characteristics which, then, by reflection, it unites with the spirit from which it had been sent out.
- By the end of the thirteenth century, the great Franciscan scholars in England, principally Roger Bacon and William of Ockham, are already marked by the new scopic regime attributed to

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<sup>28</sup> The best introduction is: David C. Lindberg, Theories of Vision from al-Kindi to Kepler (Chicago: University of Chicago Press, 1976). See also David C. Lindberg, "The Science of Optics, in: David C. Lindberg, ed., Science in the Middle Ages (Chicago: University of Chicago Press, 1978), pp. 338-368. And, Gudrun Schleusener-Eichholz, Das Auge im Mittelalter, 2 vols. (Munich: W. Fink, 1985).



Alhazen. They try to understand cognition as the result of a so-called multiplicatio specierum, a kind of metaphysical simulacrum swarming out from the object of cognition to be grasped, embodied and named by the knowing subject.<sup>29</sup>

Another result of this inversion appears clearly in the treatment of light in painting. Wolfgang Schöne has examined such light as a transition from the luminous to the illuminated object.<sup>30</sup> When we contemplate a medieval miniature or mosaic, what we see are radiating colors: objects are intrinsically alight, phos-phorous, light-carrying entities. They throw no shadow, there is no shading, no indication of a light source causing this luminosity. Things appear in their Eigen-licht, their own sparkle. This changes, not as fast as in philosophy, but just as inexorably. By the end of the fourteenth century, painters acquire competence in shading. Not long afterwards, they paint objects in such a way that the viewer clearly notices the location of the source - extrinsic to the objects - that illuminates them. Artists paint the shadows that things throw. The painter restricts himself to what a fixed light shows (Zeige-licht) and illuminates. The source of light has become this-worldly. The image bespeaks the transformation of the gaze from the outgoing act of a touching grasp to a reception of things that light brings into the eye.

The new scopic regime is also reflected in ethics. One of the first authors to incorporate Alhazen into a Latin treatise was the dean of medicine at the University of Paris in the time of Ockham.<sup>31</sup> Peter of Limoges's De oculo morali appeared as a manuscript around the year 1281 when the papal court was being held in Orvieto, at the same time as the optical treatises of Johannes Peckham and Roger Bacon. Unlike Peckham and Bacon, Peter was interested in the training of preachers for Avignon, not in the science of nature. He continues the tradition of optics as propedeutics of ethics and does so, surprisingly, in spite of the new paradigm of vision that he adopts. The majority of his chapters begin with a summary of "what the learned opticians teach us," which he always transforms into a moral parable. Thus, each chapter on scientia optica leads to a commentary on the guard of the eye. Gazing, looking, facing, glancing are interpreted as fully human activities that can be morally good or bad. They are understood as something one does, not something that happens to one. Various kinds of seeing are presented as acts whose performance can be shaped by vigilance, training and the formation of virtuous or the acquisition of dissolute habits.

Two distinct Latin words were used for the outgoing and incoming light: lumen and lux, respectively. The lumen oculorum, lumen intellectuale, lumen fidei and the illuminatio from the page were not only discussed, but also experienced. This experience was profoundly different from the only light we moderns seem to know.<sup>32</sup> We have gained lux and lost lumen. The implications for the possibility of ethics are profound. A person capable of exercising a lumen is a far different creature than one passively receiving a lux.

## 5. THE INSTRUMENTATION OF THE GAZE

Historically, instruments pried the gaze away from the visibile. Alexander von Humboldt recognized this as the onset of modern science: "They equip man with new organs, make him see the previously unknowable. They sunder the eye from nature and feign to guarantee new knowledge."<sup>33</sup> For two millennia, Aristotle's position had defined the relationship between episteme and techne, knowledge

<sup>29</sup> Katherine H. Tachau, Vision and Certitude in the Age of Ockham. Optics, Epistemology, and the Foundations of Semantics, 1250-1345 (Leiden: E. J. Brill, 1988). For the philosophical fruits following Al-Haytham's reception, see: Mark A. Smith, "Getting the Big Picture in Perspectivist Optics," Isis 72 (1981), 568-589.

<sup>30</sup> Wolfgang Schöne, Über das Licht in der Malerei (Berlin: Gebr. Mann Verlag, 1954), pp. 20-81.

<sup>31</sup> D.L. Clark, "Optics for Preachers: the 'De oculo morali' of Peter of Limoges," The Michigan Academician 9,3 (1977), 329-343, and Gudrun Schleusener-Eichholz, "Naturwissenschaft und Allegorese: Der 'Tractatus de oculo morali' des Petrus von Limoges," Frühmittelalterliche Studien 12 (1978), 258-309.

<sup>32</sup> Schleusener-Eichholz, Das Auge im Mittelalter.

<sup>33</sup> Engelhard Weigl, Instrumente der Neuzeit. Die Entdeckung der modernen Wirklichkeit (Stuttgart: Metzler, 1990), p. 9.

and the arts. The eye did not need, nor could it possibly use any crutches, because nature had endowed it with connaturality. The eye and its object were connatural, thus excluding the existence of things beyond the eye's range.

Eye and world, gaze and appearance (emphasis), stood mutually in a natural proportion, conceived as the proportion of the side and diagonal of a square, or of the fifth that is the result of a 3:5 division of a sounding string. The gaze could be impure, the eye distracted, the look broken, but it could never be inadequate.

From very early times, Greek philosophers had spoken of a dis-regard for images, since these were viewed as irrelevant to truth. Christian Revelation instilled a qualified contempt for this-worldly things. The training, that is, askesis, of the gaze became a necessary condition for the eyes of faith if one hoped to reach out toward the threshold of eternity, the icon. The icon oriented, but did not instrument the gaze. However, one needed a certain preparation to look into the typos, the eyes of the image.

A little book by Engelhard Weigl is a delightful and competent guide into the new age of instrumented perception. He stresses the parallel between the novel concepts of both reality and truth fostered by a new reliance on technically equipped natural science. One example may suffice to document the transformation: The theories that traditionally competed for the explanation of the then obvious fact that spring water is colder in summer than in winter time.<sup>34</sup> They were ultimately based on an elementary antagonism of the seasons, reflecting the opposition of the fundamental qualities, hot and cold. These theories dominated discussions until a measuring instrument, the thermometer, abolished the fact (of difference). With an instrument, the exegesis of sense perception of warm and cold was replaced by the heuristics of a recording, the conclusion henceforth called temperature.

In an analogous fashion tools empowered, nay, armed the eye and transformed the gaze. The scalpel, the coultter, opened the belly to expose the innards; chalk drawings, xylography and, soon, etchings gave to the bloody entrails the appearance of organs that impressed their shape upon the gaze. At first, these drawings confirmed the "view" that the written authority of Galenic anatomists had imposed on tradition.

Gradually, during the sixteenth century, draughtsmen ceased to record what they "knew," and began to see in "natural" perspective. Anatomical science arose out of hesitancy, and the subsequent denial of Galenic imagery that had been transmitted, not in pictures, but in texts. Truth henceforth was not what the eye has seen, but the result of observation. The use of the term, observation, is new; it designates vision with reference to an instrument. This amounts both to a degradation and an exaltation of the gaze: progressively, the eye itself was degraded into an observational device. Sight was disembedded from synaesthesia. Vision, thus made independent of touch or taste, was exalted as the main tool of observation. The eye lost connaturality with its objects and, at the same time, was assigned dominance over the other senses.

The invention and use of lenses in the form of the telescope and microscope is usually treated as both the motor and the key symbol of the early modern type of iconoclasm and iconodulia, now in the service not of faith but of science. As effective as this focus is for the discussion of the succession of scientific paradigms,<sup>35</sup> it is useful only for a history of optics, not of opsis. Galileo made the discoveries described in the Sidereus Nuncius because he had acquired a new gaze by learning the technique of shading as a student in the art academy of Florence.<sup>36</sup> Others were also turning telescopes of the same quality toward the moon at this time. Galileo, however, discovered the mountains because his art training enabled him to draw and shade what he had watched in his instrument in successive observations.

A new kind of iconoclasm allows us to recognize that a new hesitancy in the face of traditional mental images paradoxically paved the way towards an inversion of the gaze. The new hesitancy called

<sup>34</sup> Weigl, Instrumente der Neuzeit, p. 11.

<sup>35</sup> Paul K. Feyerabend, Against Method, rev. ed. (London: Verso, 1988).

<sup>36</sup> Hans Blumenberg, "Das Fernrohr und die Ohnmacht der Wahrheit," in: Blumenberg, Galileo Galilei, Sidereus Nuncius. Nachricht von neuen Sternen (Frankfurt am Main: Insel-Verlag, 1965), pp. 7-21, and Werner Kutschmann, Der Naturwissenschaftler und sein Körper: die Rolle der "inneren Natur" in der experimentellen Naturwissenschaft der frühen Neuzeit (Frankfurt am Main: Suhrkamp, 1986), pp. 176ff.

forth the application of steel and crayon, print and glass, in the construction of instruments which, in their turn, made the eye more rather than less crucial in the pursuit of a new kind of truth.

Recent literature in the history of optics<sup>37</sup> has opened new vistas on the connections between the transformation of modes of perception and their interpretation between 1600 and 1750. For the philosopher of technology, these studies have been fruitful. For example, one can suggest that issues which arise in current discussions about instrumental realism have, in their way, already been raised in the time of Galileo with the question whether the Medicean stars and the moons of Jupiter are seen with, in or through his telescope.<sup>38</sup> One thing seems certain: The increasing use of instrumental devices for the eye concomitantly distances men's contact with the tangible world of everyday things. However, the lumen, the gaze that senses the visible where it is, does not disappear all at once. As already mentioned, Johannes Kepler still makes a clear distinction between two events:<sup>39</sup>

- On the one hand, the pictura rerum that appears in front of the pupil's lens is focused by the lens, and projected onto the retina whence it is picked up by the sheriff-like visual spirits, to be dragged through the visual nerve into the forum of common sense.
- On the other, the imago rerum, the appearance of the thing, which the gaze projects outward onto the place where the viewed object is tangibly present. There, the object can also be heard and grasped.

## 6. THE INCORPORATION OF THE IMAGE

Kepler distinguished two moments: light as a painter on the canvas of the retina, and the gaze as generator of the visual appearance. However, the future would be contained in his statement: ut pictura ita visio, vision is like painting. During early modern times the image becomes an essential part of the gaze. Henceforth, the gaze is wedded to the image. As a result, distinct approaches taken by painters reveal characteristic types of gaze. A recent controversy in the history of art has focused on two ideal types to interpret the act of western European painting, Italian and Dutch. The initiative for this distinction was taken by Svetlana Alpers.<sup>40</sup>

The Italian style originates in the teachings of Leon Battista Alberti. Painting is narrative; it is a way of telling a story.<sup>41</sup> It translates a story originally written in a book into something that can be contemplated by the eye. It is a legitimate art, because it represents meaningful interactions between persons. It consecrates the status of personages such as heroes, saints and civic leaders by making their moral choices visible. For Alberti, the story appears in or through a window that enables the viewer, who occupies a well defined place in front of the picture, to turn towards it and get involved in the space depicted. The picture thus establishes the eye as its independent antithesis.

In contrast to the Italian, the Dutch style is not narrative but descriptive. It does not draw the eye into a painted space, but only to the surface of the canvas. The painter represents, on the plane of the picture, that which is supposed to take place inside the eye. He does not invite the viewer to take part in a morally charged action, but fosters the quiet contemplation of the colored surface. For Alberti, the image came into existence as a construct of the artist, a pictorial expression of a cut through the visual

<sup>37</sup> A. C. Crombie, Science, Optics and Music in Medieval and Early Modern Thought (London: Ronceverte, 1990); Bruce S. Eastwood, Astronomy and Optics from Pliny to Descartes. Texts, Diagrams and Conceptual Structures (London: Variorum Reprints, 1989).

<sup>38</sup> Don Ihde, Instrumental Realism. The Interface between Philosophy of Science and Philosophy of Technology (Bloomington: Indiana University Press, 1991).

<sup>39</sup> "Cum hactenus Imago fuerit Ens rationale, iam figurae rerum vere in papyro existentes, seu alio pariete, picturae dicantur." (Although up to now the image was [only] an ens rationale [roughly, an "imagined entity"], the figures of things, truly existing on paper or on some other surface, are called pictures.), Ad vitellionem, vol. 2, p. 174.

<sup>40</sup> Svetlana Alpers, The Art of Describing. Dutch Art in the Seventeenth Century (Chicago: University of Chicago Press, 1983), pp. 25ff.

<sup>41</sup> Cecil Grayson, On painting and On Sculpture. The Latin Texts of De pictura and De statua by Leon Battista Alberti (London: Phaidon, 1972).

cone, made at a definite distance from the viewer. For the Dutch, the surface of the object seen and that of the picture coincide.

Constantin Huyghens writes about the intersection of planes observed by him in the camera obscura as something that words just could not express.<sup>42</sup> Kepler, as we have noted, calls the virtual image facing the eye the *pictura* of things.<sup>43</sup> Much later, James Gibson will revive the distinction as one between visual world and visual field.<sup>44</sup>

Alberti's representation of a scene or arrangement of objects does not pretend to be a replica of the retinal image; on the contrary, it is an optical substitute for the object itself. His *pictura* thus creates an object which comes into existence by an act of geometrical construction. It is a facsimile emitting the same bundles of light rays that would be reflected by the object if it were there, beyond the picture's frame. In contrast to Alberti, who has no intention of depicting the event of the gaze, but rather an object brought into existence by the *libido videndi*, the Dutch painter, in the spirit of Kepler, understands visual sensation itself as an act of sensual depiction. The gaze and the image are for him but two aspects of the same event, namely, *opsis*. Still, according to Alpers, the Dutch artist attempts to represent the act of *opsis* as a work of art. The hesitancy one can infer from these two modes of perception, representation and thought provides a new occasion for an advance in iconology.

We have already shown that Byzantine hesitancy in front of the icon, as an essential element in worship, provoked a first major wave of philosophical inquiry into iconology. Now the instrumentation of the eye, and the incorporation of the image as an essential element in observation, generates new initiatives in theoretical iconology. The literature in the various fields of optics is open to the interpretation of both the historian of technology and the historian of philosophy. Dioptrics (which experiments with the refraction of light),<sup>45</sup> color perception,<sup>46</sup> catoptrics (dealing with mirrors),<sup>47</sup> anamorphosis (the disciplined distortion and reconstruction of images);<sup>48</sup> perspectival sciences (using the techniques of *velum* and projection);<sup>49</sup> and particularly experiments with the camera obscura, later with the camera lucida, regularly invite the same hesitancy: Do we see surfaces that reveal the presence of objects to our gaze, or are surfaces all that reality reveals to us?

This fundamental hesitancy about the image in the gaze must be re-thought in light of a seminal article by Erwin Panofsky, "Perspective as Symbolic Form."<sup>50</sup> Panofsky started with the neo-Kantian

<sup>42</sup> Alpers, *The Art of Describing*.

<sup>43</sup> Kepler, *Ad Vitellionem*, vol. 2, p. 153.

<sup>44</sup> James J. Gibson, *The Perception of the Visual World* (Boston: Houghton Mifflin, 1950). See also, Gibson, *The Ecological Approach to Visual Perception* (Boston: Houghton Mifflin, 1979).

<sup>45</sup> See footnote number 36.

<sup>46</sup> For an orientation, see: A. Rupert Hall, *All Was Light: An Introduction to Newton's "Opticks"* (Oxford: Clarendon Press, 1993). For the influence of color and light theory on poetry, see: Marjorie Hope Nicolson, *The Breaking of the Circle. Studies in the Effect of the "New Science" upon Seventeenth-Century Poetry*, rev. ed. (New York: Columbia University Press, 1960). On color, see: John Gage, *Color and Culture: Practice and Meaning from Antiquity to Abstraction* (Boston: Little, Brown and Company, 1993). For a critical study of Newton's optics, see: Dennis L. Sepper, *Newton's Optical Writings. A Guided Study* (New Brunswick: Rutgers University Press, 1994).

<sup>47</sup> G. F. Hartlaub, *Zauber des Spiegels. Geschichte und Bedeutung des Spiegels in der Kunst* (Munich: R. Piper, 1951); Jurgis Baltrusaitis, *Le miroir. Essai sur une legende scientifique* (Paris: Elmayan, 1978); Rolf Haubl, *Unter lauter Spiegelbildern*, 2 vols. (Frankfurt am Main: Nexus, 1991).

<sup>48</sup> Jurgis Baltrusaitis, *Anamorphic Art*, trans. by W. J. Strachan (New York: Harry N. Abrams, 1977); Fred Leeman, *Hidden Images. Games of Perception, Anamorphic Art and Illusions from the Renaissance to the Present* (New York: Harry N. Abrams, 1976).

<sup>49</sup> On the origin of perspective, see: William Ivins, *On the Rationalization of Sight, with an Examination of Three Renaissance Texts on Perspective* (New York: Metropolitan Museum of Art, 1938). See also Martin Kemp, *The Science of Art. Optical Themes in Western Art from Brunelleschi to Seurat* (New Haven: Yale University Press, 1989).

<sup>50</sup> Erwin Panofsky, *Perspective As Symbolic Form* (New York: Zone Books, 1991). Original publication: "Die Perspektive als 'symbolische Form'," in: *Vorträge der Bibliothek Warburg 1924-1925* (Leipzig-Berlin, 1927), pp. 258-331, reprinted in: Hariolf Oberer and Egon Verheyen, eds., *Aufsätze zu Grundfragen der Kunstwissenschaft* (Berlin: B. Hessling, 1964), pp. 99-167.

belief in epoch-dependent a priori forms in sensual perception, and turned it into an instrument in the history of art. For him, Alberti's achievement of the pictorial representation of central perspective was as much a technical discovery as a report on a cultural invention of his time. Panofsky's pithy essay dominated controversies about historical styles of space perception, but it also distracted from the opposite contemporary achievement: the sensuous, dense, plastic treatment of Dutch-style painting.

## 7. THE RESORPTION OF THE GAZE

A general difficulty, encountered in a historical approach to this subject, has plagued us acutely during the attempt to outline this history of the gaze. As Gérard Simon has pointed out, the main subject of our study is a human act shaped by a historical *oikos*.<sup>51</sup> Hugely different actions cannot be recaptured in modern words without constant qualifications. The visual cone can refer to an apex on the pupil, or on a surface point of the object. A film of diaphanous liquid lay unquestioned behind the pupil, acting like a stomach, digesting and incorporating appearances until Christoph Scheiner (1575-1650) suggested that it might be a lens,<sup>52</sup> an opinion for which Kepler later constructed a plausible proof. In distinct epochs, the glance not only generated opposed interpretations, it also triggered experienced events that have no common denominator. The greater our distance from the past - while writing this essay - the more exquisite the difficulty: How avoid casting a bygone ethology into terminology that only applies to the latest fashionable software.

In a short and readable book, Jonathan Crary suggests an approach through which the scopic past of Europe can be recaptured in modern English.<sup>53</sup> Just as the great etymologist of Greek *phos*- words has been shown to be insensitive to *lumen* (see above), so those who attempt a phenomenology of the windshield or screen gaze by using optical terminology coined by Alberti, Cennini, Galileo or Kepler miss the key point. For example, literary genres like photography or movie criticism demand sensitivity to a then distinct from a now. *Casablanca* belongs to a scopic epoch that is now closed; in the movie, you could enter Rick's Café, but today MTV swallows you up.

Crary's "book is about vision and its historical construction. ... about the sweeping reconfiguration of relations between an observing subject and modes of representation that effectively nullify most of the culturally established meanings of terms ..."<sup>54</sup> Very specifically, terms like observer, representation, even vision, have undergone radical semantic shifts.

Crary helps us to examine these changes. He does not rehash French authors like Baudrillard,<sup>55</sup> Debord,<sup>56</sup> Virilio<sup>57</sup> or Lyotard,<sup>58</sup> who first called attention to the gulf beyond which vision becomes postmodern. He takes this gap for granted but does not turn it into a causal vector, which would connect it to the new activity of the eye. He discovers a vantage point in the past, whence the history of the new ocular ethology can be seen in perspective. He avoids the temptation to treat the new gaze as an egg laid by electronics. Rather, two centuries of instrumental-viewing technology appear, under his guidance, as the material implementation of a radical inversion of "natural" vision.

This reconfiguration has happened through an "ubiquitous implantation of fabricated visual 'spaces' radically different from the mimetic capacities of film, photography and television ... Computer-aided design, synthetic holography, flight simulators, computer animation ... are only a few of the

<sup>51</sup> Simon, *Le regard*.

<sup>52</sup> Christoph Scheiner, *Prattica del parallelogrammo da disegnare* (Bologna: G. Monti, 1653).

<sup>53</sup> Jonathan Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century* (Cambridge, MA.: MIT Press, 1990).

<sup>54</sup> Crary, *Techniques of the Observer*.

<sup>55</sup> Jean Baudrillard, *Symbolic Exchange and Death*, trans. by Ian Hamilton Grant (Thousand Oaks, CA.: Sage, 1993).

<sup>56</sup> Guy Debord, *Society of the Spectacle* (Detroit: Black and Red, 1983).

<sup>57</sup> Paul Virilio, *L'art du moteur* (Paris: Éditions Galilée, 1993); Virilio, *The Vision Machine* (Bloomington: Indiana University Press, 1994); Virilio, *L'horizon négatif: essai de dromoscopie* (Paris: Éditions Galilée, 1984).

<sup>58</sup> Jean-Francois Lyotard, *Discours, figure* (Paris: Klincksieck, 1971).

techniques that are relocating vision to a plane severed from a human observer."<sup>59</sup> According to Crary, most of the historical functions of the human eye have been progressively supplanted by practices in which appearances no longer have any topological reference to the position of an observer in a real, optically perceived environment. If these images can be said to refer to anything at all, they correspond to millions of electronic bits or to mathematical data. Crary's remarkable contribution consists in his search for the preconditions of the flip in the gaze that became dominant after, say, 1970. Crary unearths and places these preconditions between 1810 and 1830 - some twenty-five years later than they happened, as we will soon argue - and he documents them as the demise of the viewing paradigms modeled on the camera obscura.

Some, like Besançon, locate the onset of a new scopic epoch by interpreting paintings; others, like Roland Barthes and, following him, Susan Sontag, see in photography the most distinctive dividing line for the beginning of modernity.<sup>60</sup> Still others, usually hankering back to Walter Benjamin, stress that by the middle of the nineteenth century the human eye increasingly had to cope with an unprecedented kind of object. What Crary discusses happened earlier, somewhat like the turn towards abstraction. It dawns in Chardin, but reflects a widespread search only several decades later. Daguerre developed his first plates in 1836, and in Crary's view did not upset but only mechanized and confirmed a paradigm of vision already placed in a camera obscura. One can say that environmental changes exacting entirely new habits of viewing happened as a result of engineering feats in the second part of the nineteenth century. For example,

- The railroad called forth a gaze of a totally new kind. The traveller seated on his bench while sharing a roast chicken with his friend looks out the window, and into a different space. Wheeled speed created a divide between the rattling living room and the astonishing outside. A galloping horse, moving faster than trains in 1837, had never been able to break space apart, in the way a coach seat could do for Flaubert. Victor Hugo observed steeples walking through the landscape, mountains swallowing up each other, and flowers forming colored bands along the rails.<sup>61</sup> - Machine-made products invaded the markets; perfectly identical industrial objects frustrated the eye accustomed to discriminate between similar things.
- First wood engraving, then lithography, flooded street, home and school. It became habitual to see the facsimile before ever facing the real McCoy.

However, all these changes took place after the scopic divide studied by Crary. All such innovations reenforced a trend: towards a standpoint-less viewpoint; a heuristic rather than an exegetical scope; and a forced attention to cues built into the commodities thrust upon the consumer.

Crary claims that the paradigm of what constitutes an observer is turned topsy-turvy. The camera obscura had been paradigmatic of the dominant status of the observer in the seventeenth and eighteenth centuries. It had been the model for "the pervasive suppression of subjectivity in vision in seventeenth- and eighteenth-century thought."<sup>62</sup> In the nineteenth century, a number of new optical instruments - in particular, the stereoscope - became paradigmatic.<sup>63</sup> Crary studies this replacement by

<sup>59</sup> Crary, *Techniques of the Observer*, p. 1.

<sup>60</sup> Roland Barthes, *Camera lucida. Reflections on Photography* (New York: Hill and Wang, 1981); Susan Sontag, *On Photography* (New York: Farrar, Straus and Giroux, 1977).

<sup>61</sup> Wolfgang Schivelbusch, *The Railway Journey. Trains and Travel in the Nineteenth Century* (Oxford: B. Blackwell, 1980).

<sup>62</sup> See also Lorraine Daston, *Classical Probability in the Enlightenment* (Princeton: Princeton University Press, 1988).

<sup>63</sup> See: Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, Brian Massumi, trans. (Minneapolis: University of Minnesota Press, 1978).

... examining the significance of certain optical devices. I discuss them not for the models of representation they imply, but as sites of both knowledge and power that operate directly on the body of the individual.<sup>64</sup>

This corresponds to a change in the role attributed to the mind in the act of perception, shifting from a concept of imitation to one of expression, from mirror to that of the lamp.<sup>65</sup>

The camera obscura made the individual viewer - locked into darkness - into an isolated, autonomous individual whose eyes needed no connection with the rest of the body. The camera was used as a device for draughtsmen, who often accentuated this self-abstraction by hiding themselves and their instrument under a wide black cloak. This ascetical detachment seemed, both symbolically and technically, a condition for exact observation and tracing. The opening of the camera was seen as identical with the mathematically determinable point where the world could be logically derived and represented.<sup>66</sup> Thus the camera expressed the belief that observation was grounded in an "objective" view of the world, vouched for by laws that govern the propagation of light rays.

This is the paradigm that, according to Crary, faded in the 1820s. The popularization of new theories and devices supported the use of the eye as a generator of views. A new constructive force was attributed to the gaze. From Crary, one can understand how the next 150 years were characterized by a deep ambiguity. While the photographic camera saved, spread and trivialized the camera obscura paradigm of vision, philosophy, science and optical devices supported a conception of eye functions that finally became dominant only in our own time. In this latest scopic epoch, that is, in the last twenty years, the eyes have become the key point of informational interface between systems.

One example taken from a plethora of philosophical views, popular entertainments and research in physiology and psychology can illustrate why we recognize a uniquely nineteenth-century hesitancy between two conceptions of vision. The stereoscope became a popular device for viewing daguerreotypes.<sup>67</sup> Two photographs taken through two lenses several inches apart were viewed next to one another in a small dark box. It was widely used by armchair lady tourists; also by rakes selecting their prey for the next visit to the brothel. The instrument provided a view more magical than realistic.

The viewer is drawn into a virtual space that does not submit to the rules of central perspective. The model's body exhibits a fraudulent, exaggerated plastic presence, which is further enhanced by the milieu in which the naked body is perceived: the narrow field of the lens's focus blurs both the vase in the foreground and the curtain in the background. On the other hand, the distance between the two lenses with which the photos were taken simulates an impossible optical embrace and draws the viewer into a weird visual intimacy. On grandmother's table the photo album, with its monocular, perfect projections, stood next to the box of stereo plates of a trip through Sicily. The new machine pulled the gaze into a disembodying, inaccessible space in which a carnal encounter was promised. It habituated the gaze to a viewpoint corresponding to no possible standpoint; it took the viewer off his feet. It trained the eye for the perception and interpretation of appearances that could never be touched.

Crary follows step by step how the new technique and instrumentation intensified the prevalence of such appearances over tangible realities; how virtual spaces, technically created to manipulate the visible world, brought one to a forest that is neither a National Park nor an illusion of Disneyland. This procedure allows him to recognize the strands that led to the great epochal divide of 1970. But, in our opinion, his description of the onset of the entire epoch is deficient.

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<sup>64</sup> Crary, p. 8.

<sup>65</sup> M. H. Abrams, *The Mirror and the Lamp: Romantic Theory and the Critical Tradition* (New York: Oxford University Press, 1969), pp. 57-65.

<sup>66</sup> Jonathan Crary, "Modernizing Vision," in: Hal Foster, ed., *Vision and Visuality* (Seattle: Bay Press, 1988), pp. 36f.

<sup>67</sup> Crary, *Techniques*, pp. 116ff.

## 8. EMMANUEL LEVINAS

Throughout most of the twentieth century, one man resisted the dominant trends of visualization: the disembedding of vision from synaesthesia, the disembodiment of the eye by interpreting it as a built-in camcorder or an abstract sex organ; and, thirdly, the dissociation of the gaze from love. His conservatism permitted Emmanuel Levinas to become our final guide in the effort to recover an ethics of the gaze. Levinas, stemming from a Lithuanian Jewish family of Talmudic rather than Hassidic traditions, was raised on the interpretation of the Cabala, and studied in Strasbourg right after World War I. For many years, he lived and taught in Paris. He brought Husserl to France, and acted as one of the first French interpreters of Heidegger. Repeatedly, he has insisted that his "point of departure is absolutely non-theological."<sup>68</sup> However, in the context of our interpretative history of the gaze as one of hesitancy before the image, the thought of Levinas can be understood as an outgrowth of Talmudic reflection.

As a contemporary philosopher, Levinas establishes the mutual gaze of two persons as the source of personal existence. He stresses the uniquely Jewish hesitancy in front of anything iconic as a condition for ocular intercourse. Such a disciplined hesitancy - disciplined or practiced, since it is outside the historic experience of most western non-Jews - seems to be the initial necessary step for an ethics of the other among a generation consistently robbed of its eyesight by ocular integration into virtual realities.

The only time, so far in our story, when Jewish aversion to pictorial representation came up, was the controversy in Constantinople around 750 A.D. Besançon, in his tale of ocular asceticism, explains the Byzantine iconoclastic battles as the outgrowth of three traditions intermingling in the Christian East: Greek scepticism about figuration; the jealous guardianship of the Koran's words by Muslims; and, quite differently, the Old Testament fear to name or to show Him who has taken possession of the believer's kidneys and heart. While Greek an-iconism (or, anti-iconaltery) stood in the service of abstract truth, and total Muslim dedication to the word stood in recognition of Allah's absolute transcendence, the timorous stance of the Jew reflected a uniquely keen sense of God's nearness and immanence.

The social and economic conditions of the eighth century provided a propitious stage for three traditions of hesitancy before the image to erupt into a bloody dispute about the icon in Christian belief and worship. In this background, the Council of Nicea followed the leadership of John of Damascus:

- From the beginning, it had been part of Christian doctrine that the appearance of God in the flesh was not only part of belief but that it was to be celebrated in a liturgy that gave a central place to the worship of icons.
- The Council insisted that the prayerful believer, in his or her devotion before the icon, find themselves face-to-face with the Incarnate Word of God, that is, their gaze reaches through the typos to the prototypos.

Paradoxically, this victory of iconodule orthodoxy in the Ecumenical Council of Nicea led to a new kind of hesitancy in front of the devotional image that henceforth divided Christendom. In the Eastern Church, the carnal commingling of gaze and typos in the icon remained normative. But in the Latin West, the theological devotion to images in this way never became an essential part of the liturgy. At about the same time, however, a new stress was increasingly laid on the service that images could provide as rhetorical supports. Images became the writ addressing the illiterate. Pagans, who were notoriously hard of hearing - according to contemporary belief - were to be taught by means of pictures. The road was opened for the history that we have retraced: Simultaneously, the power of the gaze to move across the threshold between the believer and the Person of the Savior was denied, while the picture was given a new prominence, an unquestioned function in support of the word. In this sense, hesitancy vanished among most western believers.

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<sup>68</sup> Emmanuel Levinas, "Transcendence et Hauteur," *Bulletin de la Société Française de la Philosophie* 56 (1962) 110. See also: Levinas, *The Levinas Reader*, Sean Hand, ed. (New York: B. Blackwell, 1989).



Jacques Ellul, a Huguenot of partly Jewish stock, speaks in this context of the humiliation of the word.<sup>69</sup> According to him, from early in the Christian era, the ancient Biblical (Jewish) longing to be hosted in paradise, to sit in the lap of Abraham, was changed into a desire to see God, and knowledge, sacred or divine, was equated with vision. Kierkegaard interprets this ocular-centrism as a secular misunderstanding of the Bible. In these reactions to the degradation of the word, the downgrading of the ear, the stress on clear vision rather than obedient trust, the analysis of the gaze proposed by Levinas is of crucial importance. His work suggests a new look at the *libido videndi*.

Levinas set out to save "the face." The face of the other stands at the center of his life's work. The face of which he speaks is not my own, which appears reversed in the mirror. Nor is it the face that a psychologist would describe. For Levinas, face is that which my eye touches, what my eye caresses. Perception of the other's face is never merely optical, nor is it silent; it always speaks to me. Central in what I touch and find in the face of the other is my subjectivity: "I" cannot be except as a gift in and from the face of the other.

Levinas has been interpreted as if he stood within the phenomenology of Husserl. His writings have also been understood as commentaries on Heidegger's philosophy. But he deserves to be interpreted in his own right. The "face of the other" in the writings of Levinas is not something that could be made the subject of a phenomenological description, and by this route given sense and meaning. Levinas admires Heidegger. But in explicit opposition to him, Levinas says that my face comes to life from the face of the other. What the face of the other does in its exquisite delicacy and impenetrability is to address me forever in an ethical way. As he puts it: "I cannot but hear the face of the other, in spite of the profound asymmetry between our faces." Again and again, Levinas repeats, "You see and hear as you touch."

A historical circle of more than two millennia comes to an approximate close. A hesitancy began with the gaze that is colored by the object it touches in pre-Classical Greece, and it ends with the tactile gaze of your face where I discover myself as a gift from you.

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<sup>69</sup> Jacques Ellul, *The Humiliation of the Word* (Grand Rapids, MI.: Eerdmans, 1985).