

“From Pigment to Light”: Moholy-Nagy’s Art and Theories on Light as a New Medium

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“From the first he recognized that the light in itself must be regarded as a medium of form.” Siegfried Giedion, 1935.¹

“Ever since the invention of photography, painting has advanced by logical stages of development ‘from pigment to light.’ We have now reached the stage when it should be possible to discard brush and pigment and to ‘paint’ by means of light itself.” Moholy-Nagy, 1936.²

“The capacities of one man seldom allow the handling of more than one problem area. I suspect this is why my work since those days has been only a paraphrase of the original problem, light.” Moholy-Nagy, 1944.³

Working in numerous media including painting, sculpture, photography, film, design and stage design from 1918 to 1944, Moholy-Nagy investigated light as a new medium in his art and in numerous essays. Light is clearly not a medium in the sense that, for example, oil painting or television are. Yet, as Moholy-Nagy conceived of it from the early 1920s onwards, light functions as a medium within several media, including photography and film. How might we understand light as a medium that is crucial to diverse luminous media such as photography, film, digital and electronic art? In this essay I explore these questions by focusing first on Moholy-Nagy’s theories of light and on his use of light in artworks. In its latter part I analyse the related issue of Moholy’s opposition to the Renaissance perspectival paradigm and examine the ways in which

Jacques Lacan's theories on perspective illuminate Moholy-Nagy's call for the discarding of perspective and the adoption of new light-based media. The essay concludes with remarks on Bill Viola's work *Passions*, as an example of how we might interpret contemporary developments through Moholy-Nagy's conceptualization of the "from pigment to light" trajectory.

"Since the invention of photography," wrote Moholy, "painting has advanced by logical stages of development 'from pigment to light.'" He proclaimed "We have now reached the stage when it should be possible to discard brush and pigment and to 'paint' by means of light itself."⁴ Today it is becoming increasingly evident that light may be recognized as a "meta medium" that enables a wide range of technological media. Furthermore, light is crucial in numerous modes of contemporary art and communication, from photography, film, video, and television, to electronic, digital, and fibre-optic media. It is visible in diverse luminous media, most often on lit screens, which have become ubiquitous during the last decades. Luminous images emanate from film projections, and from the screens of television, computers, video games, cell phones, digital cameras, and digital billboards, in both public and private environments.⁵ They are visible on monitors of varying sizes, from large-scale public ones, to mobile miniature-size screens designed for private use. Light-based media are also increasingly becoming standard in contemporary art exhibitions and museums, many of which include video art and other light projections. This tendency was prominent, for example, at the 2001 Venice Biennale, which was dominated by video art. Luminous media thus play a crucial role both in today's "high" art spaces and in the everyday environment. Given this state of affairs, this essay reconsiders Moholy-Nagy's theorizing on light as a medium from the dual perspectives of subsequent developments and their own historical contexts.

Moholy-Nagy's Art and Theories on Light as a New Medium

Moholy-Nagy investigated issues concerning light in his art and theoretical writings, from his early years in Germany during the 1920s to his last years in Chicago, where he settled in 1937 after being forced to leave Germany in 1934 due to Hitler's rise to power. Light played a central role in his theories — both in his sharp criticism of old modes of representation and in his enthusiastic embrace of new media. His advocacy of light-

based media was accompanied by his call, along with other Constructivist artists, to abandon easel painting and the Renaissance system of perspective, which he considered as outworn modes of representation.⁶ Moholy argued that light was a new medium that enabled new modes of representation, which would have great influence on society. As early as 1925, in his Bauhaus book *Malerei-Photographie-Film* [Painting, Photography, Film], Moholy stated, "We know today that work with controlled light is a different matter from work with pigment. The traditional painting has become a historic relic and is finished with."⁷ His ongoing interest in light as a new medium motivated not only his work in photography and stage design, but also his experimentation with sculpture (using new materials such as plastics), his written proposals for environmental and architectural light displays, and even his thinking on typography.

Working in collaboration with his first wife, the photographer Lucia Moholy from 1922 on, he pursued his interest in light as a medium by working with photograms, a form of camera-less photography.⁸ Though photography had been conceptualized as a medium of light from its inception, Moholy offered a different perspective on the issue. Originally inventors and early apologists conceived of photography as a technology that reproduced images from reality automatically, by mediating the action of natural light and the sun. For example, explaining the new invention of photography, Arago stated in 1839 that photographs are "images drawn by nature's most subtle pencil, the light ray."⁹ Joseph Niépce, the inventor of photography, named his invention "heliography" and defined it as "automatic reproduction, by the action of light."¹⁰

In contrast to these early formulations of photography as "automatic reproduction" with natural light, Moholy-Nagy stressed deliberate human intervention, stating that: "the photographer is a manipulator of light; photography is manipulation of light."¹¹ In placing the emphasis on manipulation, Moholy's exploration of light in photograms clearly did not treat light rays as "nature's pencil." Rather he augmented his creative interventions by using various translucent, transparent and opaque mediating materials. In effect, Moholy's photograms represented light as plastically shaped by the artist. In his 1923 essay "Light — A Medium of Plastic Expression," Moholy described his work with light in photograms thus:

Instead of having a plate which is sensitive to light react mechanically to its environment through the reflection or

absorption of light, I have attempted to control its action by means of lenses and mirrors, by light passed through fluids like water, oil, acids, crystal, metal, glass, tissue, etc. This means that the filtered, reflected or refracted light is directed upon a screen and then photographed. Or again, the light-effect can be thrown directly on the sensitive plate itself, instead of upon the screen. (Photography without apparatus).¹²

Further describing the visual effect of light in his photograms, Moholy writes, "The effect is sublime, radiant, almost dematerialized."¹³ Moholy-Nagy's 1922 photogram, *Self Portrait Profile*, merges the profile with the semi-abstract shape of a glowing moon, illuminating it like an immaterial skin and so thematizing light itself as a medium. (Figure 1, see page 74). It exemplifies how light in Moholy's photograms is not merely presented as mediating the figure, but as itself a featured theme. Thus in addition to the function of light as actual medium, it is also the thematic focus of the photograms. In choosing to work with photograms Moholy strove to use light and photographic materials directly, without cameras, thereby constructing abstract compositions of light and shadow that avoided traditional mimesis. By not using the camera in his photograms Moholy also bypassed traditional perspective, a mode of representation structured into the camera apparatus itself.¹⁴

Moholy-Nagy's focus on light in photograms was, in some ways, different from that of Man Ray, the Surrealist artist who used camera-less photography extensively. Andreas Haus points out that Man Ray (who started working with camera-less images in 1921), usually fixed the shadows of three-dimensional objects on light-sensitive paper, achieving a sense of "magical objects appearing out of nothingness."¹⁵ Moholy on the other hand, "extracts from the black field a space... which is gradually activated through forms of light."¹⁶ In Moholy's photograms "the forms are not individually put down but owe their effect rather to a 'stepping into the light' of spatial structures that were already contained in the darkness."¹⁷ Moholy's work with photograms extended the potential properties of light as a medium by specifically investigating the structuring of space through light, resulting in abstractions of light-structured space. Furthermore, light became the prevailing non-objective theme of the compositions.

Moholy embarked on an ambitious exploration of light as a medium by designing his *Lichtrequisit einer elektrischen Bühne* [Light-Prop for an Electric Stage] (later known as the *Light-Space Modulator*)

probably around 1930 (Figure 2, see page 75). This kinetic sculptural apparatus did more than merely mediate light effects, which the artist manipulated, as he had done earlier in photograms. It actually generated light effects and put them into motion. In the words of the artist, the *Light-Prop for an Electric Stage* demonstrated the possibility of "creation with light."¹⁸ The *Light-Prop for an Electric Stage* was a rotating three-dimensional sculptural apparatus operated by an electric motor, which was originally meant to be contained in a specially designed box. The work was designed to be electrically lit by some one hundred bulbs.¹⁹ Moholy-Nagy engaged the help of his compatriot, the professional engineer István Sebők who worked in Gropius's office, and was assisted in its fabrication by a technician, Otto Ball, in the theatre department of the Allgemeine Elektrizitäts-Gesellschaft (AEG), the German electrical company.²⁰ He may have designed this work explicitly for the German Werkbund's display at the Exposition de la Société des Artistes Décorateurs, which opened in May of that year at the Grand Palais in Paris, or he may have conceived it as part of his work in stage design.²¹ He likely made it for both of these purposes.²² Walter Gropius (who organized the German display through the German Foreign Office as an official representation of the German Reich) offered Moholy-Nagy a small gallery in the exhibition.

Moholy considered the *Light Prop* to be an exceptionally important work in his oeuvre. This was evident from the fact that when he went into exile from Germany in 1934, and had to leave behind much of his work, he took the *Light Prop* with him, no matter how much trouble was involved in doing so, transporting it first to Holland, then to England, and finally to the United States.²³ The *Light Prop* was designed to create a dynamic abstract light/shadow spectacle, which through these projections would, in effect, use the three-dimensional environment as integral to the art work. In other words, the artwork did not consist merely of the apparatus itself, but also of the light spectacle that it generated. In his 1930 essay titled "Light-Prop for an Electrical Stage," Moholy discussed this work as "regulatable artificial light. Electric light effects made it possible to realize different precalculated movements."²⁴ In this brief text he described the effects as "illuminating continuously" a "moving mechanism consisting of translucent, transparent and perforated material."²⁵ The artist explained the structure of the box and light bulbs, which illuminated the "mechanism," generating the light/shadow display:

The model consists of a cubical box, measuring 120 x 120 cm, with a round hole (stage aperture) at the front. Around the hole there are yellow, green blue, red and white electric glow-lamps mounted on the rear side of the plate (ca. 15 watt bulbs for illumination and five 100 Watt spotlights). Inside the box, parallel to the front, there is another plate, with different electric glow-bulbs mounted equally around the hole. The glow bulbs flash at different places according to a prearranged scheme. They illuminate a continuously moving mechanism consisting of translucent, transparent and perforated material.²⁶

In 1923, about a year after he began to work with photograms, Moholy realized that since light effects are usually visible in motion, film would be their most suitable medium.²⁷ He wrote that “the manifestations of light are fluid, and all photographic procedures achieve their highest point in film (the fluid relationship of light projection).”²⁸ Not surprisingly, soon after he made *Light Prop for an Electric Stage*, Moholy-Nagy made a film about it, which was produced explicitly to translate the object into the cinematic medium and “into photographic ‘light’ values.”²⁹ The seven-minute-long black and white film *Lichtspiel Schwartz-Weiss-Gray (Lightplay Black-White-Gray)*, presents the effects of the *Light Prop for an Electric Stage* by using the film medium.

Moholy’s film begins with a fascinating opening sequence. While featuring the title and credits, this opening symbolically represents the cinematic film medium as a creative medium of light. It presents a swirling filmstrip and a rotating translucent sphere on which the words of the title appear in a circular motion. A silhouetted hand indicates the authorial presence of the film-maker/editor.³⁰ This opening “scene” presents the iconic emblems of the film medium while featuring motion and light, the two abstract elements that, according to Moholy, define film. Thus Moholy precedes the filmic presentation of the light performance generated by his apparatus through the presentation of a symbolic entry into the cinematic medium. Furthermore, as animator István Kovács notes, the film sets up a spectatorial standpoint that creates a physical proximity with the light-generating machine:

The light machine is introduced in the film by the focusing of the camera on a perforated sheet through which the rest of the apparatus can be seen, already drawing the viewer into the machine itself... The involvement with the apparatus through

spatial manipulation and light moulding increases gradually until the cinema becomes a total kinetic experience. Beginning by simply viewing the machine in its manifold gyrations — but always being so close to it that a separation can never take place between viewer and object — the artist continues by substituting negative frames, juxtaposing negative and positive in the same frame, and proliferating the movement by multiple exposure.³¹

It appears that Moholy almost immediately realized the potential of the *Light Prop* for making a film and saw both the apparatus/sculpture and film as ways of exploring light. Writing in 1931, he states that “The systematic use of light and shadow in film may result in discovering a new, specific dimension for film: that of light.”³² The following year he wrote that the *Light Prop* was created “for the purpose of experimenting with painting with light.”³³ Moreover, Moholy critiques conventional film as still “conceptually derived from traditional studio painting,” whereas “the essential medium of film is light not pigment.”³⁴ He points out that film projection in the cinema is also limited by outdated conventions of easel painting: “the rectangular canvas or metal screen of our cinemas is really only a mechanized easel painting.”³⁵ By contrast, his own film was a demonstration of what he believed the cinematic film medium was about — a moving display of light and shadow. Moholy’s film proved to communicate his ideas about light most successfully. As Moholy discovered, most people were best able to understand his *Light Prop* by viewing the film rather than by encountering the object itself.³⁶ This was the case, not only for an anonymous audience at an exhibition, but also for Sibyl Pietzsch, who met Moholy in the winter of 1931 and became his second wife. She reports that when she first saw the *Light Prop* shortly after having seen the film, she found the apparatus “almost as beautiful as the film.”³⁷

In Moholy-Nagy’s view the *Light Prop* was but a “modest beginning, an almost unnoticeable step in advance” towards much greater plans.³⁸ He dreamed of producing light displays and light architecture, conceiving of a “light-apparatus” which would “produce visions of light, in the air, in large rooms, on screens of unusual nature, on fog, vapour and clouds.”³⁹ He attempted to interest architects in a “light fresco, a light architecture” which, with the mere “turn of a switch, could be flooded with radiant light, fluctuating light-symphonies.”⁴⁰ One of his ideas was “a bare room with twelve projection devices, so that the white void

should come to life” with “crossing sheaves of colored light.”⁴¹ Moholy also conceived of creating a light display with giant searchlights, of the kind that flash, “grandly and violently, shooting its arrows of light” into the distance, by changing their cut-up rhythm with a composer’s score. In effect, he advocated painting directly “with light, transforming two-dimensional painted surfaces into light architecture.”⁴² Writing about light displays, Moholy deliberately departed from the reigning cinematic tradition, envisioning that “light displays of any desired quality and magnitude will suddenly blaze up, and multicoloured floodlights with transparent sheaths of fire will project a constant flow of immaterial, evanescent images into space.”⁴³

This kind of on-going preoccupation with light as a medium was also central to Moholy’s theories on, and innovative work in stage design. In his essay “Theater, Circus, Variety,” he theorised the potential of light as an important medium of the modernist stage.⁴⁴ He proclaimed that “color must undergo great transformation” (64), and envisioned the role of film on the stage as projected “onto various surfaces” (67). He imagined experiments in space illumination, which will “constitute the new ACTION OF LIGHT, which by means of modern technology will use the most intensified contrasts to guarantee itself a position of importance equal to that of all other theater media.” (67). Naming several examples for the innovative use of light on the stage he wrote of “the potential of light for sudden or blinding illumination in light synchronized with climaxes or with the total extinguishing of lights on the stage” (67). His comments on his stage design for “The Tales of Hoffmann,” provide further insight into his implementation of his ideas on using light effects on the stage: “[it] was an attempt to create spaces out of light and shadow.... Flats and backdrops turn into tools for the interplay of shadow effects. Everything is transparent, and all these transparencies combine into a rich yet still perceivable space articulation.”⁴⁵

Concerns with light entered even his discussion of typography: “The typographical process is based on the efficiency of visual relationships.... An articulated visual experience relies on light and dark or colour contrasts. If light is completely absent, that is, in blackness, we are as unable to distinguish objects as in the case of its total presence, that is, whiteness (dispersion).”⁴⁶ Finally, he argued that studying light was crucial to pedagogy in the era of photography and film because they were light-based media. Moholy thus advocated forming an Academy of Light:

It is an astonishing fact that, although photography has been in existence for a century and the cinematograph for forty years,... there has never been a systematic course of instruction in the use of light. There ought to be an Academy of Light, which would be devoted to teaching and would educate its students to an artistic and economic consciousness of the new creative factor."⁴⁷

Moholy's enthusiastic vision of light as a new medium of art and communication could not tolerate another, older system of representation, namely geometric perspective.

Moholy-Nagy on Perspective

Moholy-Nagy opposed the system of perspective because, in his view, it was an old mode of representation. In a 1945 essay he voiced the utopian assertion that abstract painting and kinetic light displays had the ability to free the human subject from "monocular perspective" and explained the constricting effects of perspective as dictating the "Unbearable fixed relationship of the spectator to the painting. Paintings had to be viewed from one certain point whence the scene would appear undisturbed. We find unbearable the fixed relationship of the spectator to the painting in which his observation is permanently bound."⁴⁸

Moholy-Nagy, who believed that working in luminous media would break the stronghold of the Western system of perspective, articulated the problem caused by perspective as beginning during the Renaissance:

The decay started with the vanishing point perspective, which seemed to be a dazzling performance, since the painter could render scenes as the eyes perceived them. Suddenly every effort was concentrated on the perfection of imitation, with the result that three hundred years of practice by the 'perspectivists' taught everybody to evaluate painting by its illusionist potency. Their method of rendering became the automatic possession of generations...⁴⁹

Instead of the stationary one-point perspective that fixed the spectator, Moholy advocated a "vision in motion," which he associated

with Futurism: “the spectator, stimulated by the specific means of rendering, re-creates mentally and emotionally the original motion.”⁵⁰ He defined vision in motion as “a simultaneous grasp,” which is a “creative performance -- seeing, feeling and thinking in relationship and not as a series of isolated phenomena. It instantaneously integrates and transmutes single elements into a coherent whole.” Thus, vision in motion, “simultaneity in space-time” and “a means to comprehend the new dimension” are a “projective dynamics of our visionary faculties.”⁵¹

Moholy discussed the fact that photography could mechanically render perspective and thus free modernist painting from the Renaissance tradition of illusionist perspectival painting. In much of his own photography, made both with the camera and without, he attempted to produce works that defied the constrictions of traditional perspective by manipulating viewpoints. Moholy-Nagy’s strategy was to introduce unexpected viewpoints that defied the more common earth-bound perspectival vision associated with Renaissance perspective. Moholy’s camera-mediated photographs often created a sense of extreme nearness or great distances through intersections rather than through the use of perspective. He pursued radically different points of view that avoided the normative “horizontal view line,” to use Franz Roh’s term.⁵² Roh notes that Moholy-Nagy’s photographs avoid the usual way of presenting sections of reality and instead present a “daring sight from above and from below by sudden change of level” related to the new technologies of airplanes and lifts, which up to that point had not yet been much used in pictures.⁵³ Roh explains that many of these photographs “open astronomic perspectives” and this type of “radical position” corresponds “to an imaginary center of the earth.”⁵⁴ Furthermore, these viewpoints disorient the viewer accustomed to a picture space based on Renaissance perspective.⁵⁵

While Moholy-Nagy explored photographs and photograms as ways of overcoming the perspectival regime, other artists, including the Cubists, Mondrian, and El Lissitzky experimented with different methods of freeing the representation of space from Renaissance-based perspective.⁵⁶ Erwin Panofsky, whose study on “Perspective as Symbolic Form” was originally published in 1927, did not specifically mention Moholy-Nagy, but rather El Lissitzky’s notions (shared by Moholy-Nagy) that the “limited space” of older perspective closed space off, making it “finite.”⁵⁷ Panofsky argued that El Lissitzky and avant-garde artists who believed they broke with the bonds of Euclidian geometry (which they defined as “rigid three-dimensionality”) did not actually go beyond Euclidian pers-

pective. In Panofsky's opinion the space of the "‘imaginary’ rotating bodies" in El Lissitzky's paintings "is no less 'Euclidian' than any other empirical space."⁵⁸ A similar criticism could be applied to Moholy-Nagy's photographs in which he so often used the "bird's eye" and "worm's eye" viewpoints — namely that in defying normative perspective, these photographs ultimately depended on Renaissance perspective. Nonetheless, Moholy-Nagy, like El Lissitzky, Man Ray, and other avant-garde artists, succeeded in destabilizing the spectator's secure viewpoint designated by traditional Renaissance perspective. Furthermore, Panofsky's own framing of his object of study — perspective as a symbolic form — was no doubt enabled precisely by the fact that while he was working on this issue, avant-garde artists were criticizing the Renaissance perspectival paradigm in their writings and were exploring alternative means of depicting spatial relationships. It was during this period, that Moholy and other avant-garde artists were reframing perspective as an 'old' paradigm and making claims for a new one.

Moholy-Nagy's camera-less photograms offered another solution to the problematic of freeing representation from the regime of perspective. His photograms avoid perspective altogether by exposing objects with light onto a sensitive paper, frequently superimposing objects. The results, as described by the critic Franz Roh, "appear like weird spheres of light, often of marvellous transparency, that seem to penetrate space. Sublime gradations, from gleaming white through a thousand shades of gray down to deepest black."⁵⁹

Man Ray, like Moholy-Nagy, regarded light as a way of avoiding perspective. He referred to his own work as "Rayograms," or "Rayographs," claiming the medium as his own invention by using his last name, and playing on "light ray."⁶⁰ Ray dubbed this period as "the age of light" (publishing a brief essay by that title — "L'age de la lumière" — in the Surrealist journal *Minotaure* in 1933) and stated in a letter of 1922: "I have freed myself from the sticky medium of paint and am working directly with light itself."⁶¹ The fact that other avant-garde artists shared these interests with Moholy-Nagy is not entirely surprising. It is, however, notable that the Paris-based French psychoanalyst and theorist Jacques Lacan discussed the issue of perspective in ways that had much in common with Moholy-Nagy's and other avant-garde artists' concerns. Lacan was close to the Surrealists and familiar with avant-garde art discourses during his formative years in the 1930s.

Lacan's Theories on Perspective, Anamorphosis, Light, and the Subject

Lacan's writings on the role of the perspectival system of geometric optics as opposed to light optics in the formation of the human subject illuminate what was at stake in avant-garde artists' opposition to the system of perspective during the first decades of the twentieth century. Lacan's theories, which address the impact of the perspectival system of representation on the human subject, provide a broader framework for understanding some of the issues involved, amplifying the more familiar avant-garde art discourses on the abolition of perspective in Cubism and Futurism.⁶² In turn, considering Lacan's writing on perspective and on light in the context of avant-garde artists' theories helps explain Lacan's ideas on these issues.⁶³ This kind of analysis, based on a comparison between Lacan's and Moholy-Nagy's ideas on perspective and light, differs from most studies on Moholy-Nagy, which analyse his work within the immediate context of art movements that influenced him or in which he participated — from the Hungarian avant-garde, Russian Constructivism, and Berlin Dada to the Bauhaus. Unlike the analysis of Moholy's participation in these ambients, the comparison with Lacan's theories focuses on an area of parallel concerns. Since there is no evidence that Moholy-Nagy and Lacan knew of each other, the argument is not based on claiming direct "influence" in either direction.⁶⁴

Because some of Moholy-Nagy's art and writings did gain exposure in France during the early 1930s, it is not out of the question that Lacan may have come across Moholy-Nagy's work or ideas in the form of exhibitions, film projection, or publications. As we have seen, in 1930 Moholy-Nagy exhibited his most ambitious work, the *Light Prop for an Electric Stage*, in Paris. The exhibition drew a lot of attention and influenced the presentation of photography in France.⁶⁵ It is possible that Moholy's film *Lightplay Black-White-Gray* was shown there as well. Sibyl Moholy-Nagy states that Moholy-Nagy began to make this film in 1929 and that it was "shown for the first time at the International Building Exhibition in Paris in 1930 where the light-display machine formed the center attraction of the hall."⁶⁶ Moholy's paintings were also exhibited in Paris in 1934, at an exhibition of the Abstraction-Création group.⁶⁷ In addition, in 1932 Moholy published an article on film in *Cahiers d'Art*, in which he boldly criticized the film medium as relying on the outdated conventions of easel painting and proposed radically new

possibilities for film as a light-based medium.⁶⁸ It is thus possible that Lacan could have encountered some of Moholy's work or ideas in France.

Unlike Moholy-Nagy, Jacques Lacan did not discuss photography explicitly as a new light-based system that opposed the spatial order of perspective. Nonetheless, as I shall argue, Lacan did propose a light-based system that was not medium-specific as an alternative to the paradigm of perspective. Lacan discussed geometric perspective explicitly, arguing that it produced and reinforced a mastering subject. Moreover, according to Lacan, geometric perspective inaugurated what he termed "the Cartesian subject." In Lacan's words: "we cannot fail to see" the "relation" of the "research on perspective with the institution of the Cartesian subject, which is itself a sort of geometrical point, a point of perspective."⁶⁹ Geometric perspective provides a point of spatial and visual orientation for subjects.⁷⁰ This visual-spatial system parallels the linguistic, and implicitly verbal enunciation of the *cogito*. Lacan notes that the subject constituting himself through geometric perspectives is the equivalent of Descartes' cogito, "I think therefore I am." Both perspective and the cogito constitute a subject with a point of orientation that bestows certainty.⁷¹

According to Lacan, perspective constitutes the spectator as sovereign. We might add that the subject who is able to symbolically occupy the position of a sovereign spectator is determined by historically specific social positions related to gender, class, and race. This point becomes clear when we observe Albrecht Dürer's woodcut, *Draughtsman Drawing a Nude*, of 1525, which depicts an artist drawing a female nude using the system of perspective. In the woodcut, Dürer contrasts the upright position of the fully attired masculine artist — the author whose gaze and standpoint shape this three-dimensional perspective-based representation — with the horizontal position of the partially draped female model who functions as the object/ground. The authorial gaze and standpoint of the male artist shape this three-dimensional perspective-based representation and constitutes the position of the sovereign spectator. While the regime of perspective endows the subject with certainty and positions him in control — anamorphosis, its opposite — destabilizes the subject.

Lacan discusses anamorphosis, the distortion of one-point perspective (a topic that was of great interest to his friend, the Spanish Surrealist artist Salvador Dali), in Hans Holbein's 1533 painting *Ambassadors*.⁷² Lacan employs a brief discussion of this painting to sharpen his theory about the influential role of geometric perspective in reinforcing the subject. The following interpretation elaborates Lacan's discussion of

Holbein's painting, addressing the issues of perspective and anamorphosis. Holbein's portrait of a diplomat and a bishop includes a strange image depicted from an oblique angle in the centre of the painting.⁷³ Viewed from the front, it is not clear what the object represents. (Its prominent position in the centre front of the painting is further emphasized by its larger scale in comparison to the heads of the two men and the terrestrial and celestial globes on the shelves). This large unidentified object casts a shadow, suggesting that although it appears inexplicable, it is some sort of physical object in space.

The shadow has another important function. Cast beyond the horizontal band that delineates the threshold of the painting, it adds to the precarious status of the object in space. The placement of the shadow as transgressing the horizontal limit of the painting creates an illusion that this strange object is about to rotate outwards towards the spectators of the painting. Its dynamic thrust threatens to invade the spectator's space rather than confirm a spectatorial position of control outside of the painting. This is the case when one views the painting from the centre, the point normally assigned to the spectator in the regime of perspective. However, when the painting is viewed from the extreme right, the unidentified object turns out to be entirely legible — it becomes a skull.

The skull in Western painting often appears in still life paintings as a symbol of mortality. In contrast to this well-established tradition, Holbein renders the skull anamorphically, transforming it into a startling visual effect. Thus, in his painting the anamorphic skull does not merely signify mortality, it embodies it. Representing mortality, the skull belongs to a different spatial and visual order. This is visually represented by the different direction of the shadow of the skull compared with shadows of other objects in the painting.⁷⁴ The anamorphically rendered skull represents the potential of the unsettling of the solid spatial order presented in the painting. Like mortality, which renders life uncertain, the anamorphic skull introduces instability into the world of two firmly grounded and self-assured men steeped in material luxury and signs of knowledge.⁷⁵

If the spatial order represented in the painting, just like the world of the diplomat and the Bishop, does not seem radically destabilized so much as potentially subject to destabilisation — this is because the anamorphic skull is presented within the overall spatial regime of geometric perspective. Nonetheless, the impact of the anamorphic skull in this painting challenges the normal regime of perspective by unsettling the spectatorial position. If the spectator remains in the central position in

front of the painting, s/he does so at the price of being confronted with an illegible strange object that cannot be deciphered. Thus the spectator who remains in the normative location for viewing the painting actually vacates the mastering viewpoint illustrated by Dürer's woodcut. Holbein's painting deploys anamorphosis to dislodge its own spectators from a position of mastery. In order to make sense of a central object in the painting, the spectators are literally forced to abandon the viewpoint normally assigned by perspective and move to the extreme right. The skull thus demonstrates the effect of anamorphosis as the opposite of perspective: anamorphosis destabilizes rather than anchors. It causes disorientation and undermines the confirming effect of perspective. Whereas perspective inaugurates the subject, anamorphosis unravels him. In Lacan's words, it is "the subject annihilated."⁷⁶

Like anamorphosis, light-based media can counteract the stabilizing effects of perspective. Lacan distinguishes between the system of geometric lines of perspective as spatial, and light as visual.⁷⁷ The essence of the visual "is not in the straight line, but in the point of light — the point of irradiation, the play of light, fire, the source from which reflections pour forth."⁷⁸ Lacan contrasts the spatial with the visual and associates the former with painting, and the latter with light. Unlike Moholy-Nagy and others, he does not explicitly discuss photography and film as light-based media. He does, however, elaborate his ideas on the role of light in relation to the subject in his well known sardine-can story, which he states is a "true story" of a memorable experience he had as "a young intellectual."⁸⁰ Accompanying a few fishermen on a boat he sees a small floating object, a sardine can reflecting the sunlight. He concludes that though it does not see him, it is looking at him "at the level of the point of light, the point at which everything that looks at me is situated."⁸¹ In this story, I propose, Lacan contrasts the subject shaped by light, a subject who is not in control, with the mastering subject constructed by geometrical perspective.

Lacan positions light as an alternative to geometric perspective in the chapter entitled "The Line and Light" of his book *The Four Fundamental Concepts of Psychoanalysis*. This, I propose, is the point of his story about the glittering tin can. The anecdote introduces his theory on the fundamental difference between the subject shaped by the regime of light, and the subject constructed by the system of geometric perspective. Lacan clearly sets his story in this context, saying that he will tell his story: "in order to give you some idea of the question posed by this

relation between the subject and light, in order to show you that its place is something other than the place of the geometrical point defined by geometric optics..." Lacan articulates the moral of his story thus:

I am not simply that punctiform being located at the geometrical point from which the perspective is grasped. No doubt, in the depths of my eye, the picture is painted. The picture, certainly is in my eye. But I am in the picture.

That which is light looks at me, and by means of that light in the depths of my eye, something is painted — something that is not simply a constructed relation, the object on which the philosopher lingers — but something that is an impression, the shimmering of a surface that is not, in advance, situated for me in its distance. This is something that introduces what was elided in the geometrical relation — the depth of field, with all its ambiguity and variability, **which is in no way mastered by me. It is rather it that grasps me, solicits me at every moment, and makes of the landscape something other than perspective**, something other than what I have called the picture.⁸²

These statements suggest that the subject shaped by luminous media, such as photography and film, is mesmerized by flickering lights, like the young Lacan looking at the glittering tin can. This subject is solicited by light and attracted to it like a visual magnet: "It is rather it that grasps me, solicits me at every moment."⁸³ She or he is dazzled rather than placed in a position of confident sovereignty from which to survey the depth of a picture, rendered by perspective, from a distance. The key difference between the systems of line on the one hand, and light, on the other, according to Lacan, is that line, namely geometric perspective, affirms the subject's mastery. With light on the other hand, "the depth of field, with all its ambiguity and variability... is in no way mastered by me."⁸⁴ Thus, the regime of light does not merely fracture a unitary self; it utterly disperses its possibility.⁸⁵ In following this line of argument, Lacan does nothing less than sketch out a post-Cartesian subject of uncertainty. No longer anchored on the solid ground of geometric perspective, this subject is attracted to luminous media, and solicited by their radiance. Lacan's ideas on light are, I propose, related to photography, which had been linked to light since its inception.

“I am photo-graphed” — Lacan on the Mediation of the Subject by the Gaze and by Light

It is notable that Lacan makes only one mention of the word “photography” in *The Four Fundamental Concepts of Psychoanalysis*. Though brief, it is a formulation that crucially inserts photography into the perpetually repeated moment in which the human subject is constituted through the gaze and light:

What determines me, at the most profound level, in the visible, is the gaze that is outside. It is through the gaze that I enter light and it is from the gaze that I receive its effects. Hence it comes about that the gaze is the instrument through which light is embodied and through which — if you will allow me to use the word, as I often do, in a fragmented form — I am photo-graphed.⁸⁶

The subject shaped by light systems is constituted in the realm of the visible through the gaze — this is the meaning of “I am photo-graphed.” Furthermore, this is not a mastering subject, of the kind Dürer illustrates as occupying a reigning point through perspective. One might say that this is not the “photo-graphing” subject, but the subject who is “photo-graphed” in a regime of light.

If Lacan's ideas on light are, as I propose, related to discourses about photography during his time, why then does he not mention photography explicitly? The answer, I suggest, is that photography haunts Lacan's text like an unconscious. This may not be entirely surprising since photography's widespread visibility during the 1920s and 30s, the period in which photojournalism flourished, could be said to participate in shaping Lacan's theories at their deepest levels. On a mundane, day-to-day level, photography in books and journals, undoubtedly mediated Lacan's looking at various paintings. Yet, as Walter Benjamin's 1936 essay on “The Work of Art in the Age of Mechanical Reproduction” clarifies, photography was regarded as detracting from the status of the original artwork.⁸⁷ As a form of reproduction, photography did not have the “aura” of high art, to use Benjamin's term. Yet, photography was all-pervasive. For example, Lacan likely saw a photograph of the detail of the anamorphic skull of *The Ambassadors* (shown without the full context of the painting), as an illustration to an article by Salvador Dali published in *Minotaure* in 1935. Lacan was familiar with this journal, since he

himself had published in it.⁸⁸ Nonetheless, while Lacan does discuss paintings, he does not discuss photographs. If photography functioned as an unconscious for Lacan, this partially explains why he barely mentions photography. On the rare occasion when photography does surface explicitly in Lacan's text — as in “I am photo-graphed” — its meaning is far from trivial. Rather, his mention of “photo-graphed” helps explain the central notion about the formation of the subject.

The overall implication I draw from Lacan's writings discussed in this essay is that in the scopic regime of luminous media (from still photography, film, and television to digital media's lit screens) the subject is constituted differently than is the Cartesian subject of geometric perspective. Accordingly, subjectivities are not only shaped by imagery, stereotypes, representations of power relations and so on, but are also deeply affected by the specificities of media and their historically specific discourses.⁸⁹ The subject in a regime of luminous media during the late twentieth- and the early twenty-first century, is one who faces flickering screens and flaring fluorescent colours on monitors. Lacan's description of light as “refracted, diffused, it floods, it fills,” can be read as describing the qualities of luminous media. Accordingly, photography in its diverse incarnations — from the earliest daguerreotype to Moholy-Nagy's photographs, and from early motion pictures to today's electronic transmissions and video art — can now be understood as having contributed to a post-Cartesian subject and an aesthetics of intensified luminosity. Given these developments, Moholy-Nagy's conceptualization of a historical trajectory that he describes as “from pigment to light” gains a new relevance.

Bill Viola's *The Passions* and Moholy's “Pigment to Light”

Bill Viola's video art exhibition, *The Passions*, is a noteworthy example of how Moholy-Nagy's theories can retrospectively be better understood, having acquired further resonance during recent decades. Held at Britain's National Gallery in the fall of 2003, the exhibition of Viola's *The Passions* was the first time this venerable museum exhibited video art.⁹⁰ It was a meaningful step in the “encroaching” of luminous media into the auratic territory of old-master painting. One of the reasons that Viola's works were startling in this context was because they were made to look like luminous “canvases.” Viola's choice of the shape and dimensions of these video works, presented on large, rectangular plasma screens, likened

them to the paintings in the other galleries of the museum. Though made in video, the character of Viola's presentations was brought closer to "still" paintings by virtue of their restrained slow motion, fostering an illusion of the subtle animation of a painting. It is as if the medium of video/film has been refashioned within the theoretical and material framework of paintings on canvases; or, as if canvases covered with pigment were transformed into paintings made with light.

Eschewing earlier conventions for the display of video art as straightforward projections or as a part of site-specific installations, these deliberately ambiguous video works appear like "next generation" paintings, or, to some, may seem to be unexpected "intruders" into the museum's painting galleries. Yet, they ingeniously adapt video to the framework of the canvas and the time-honoured tradition of the display of old-master paintings in museums. Gently "masquerading" as canvases, these plasma-screen projections appear like paintings with light. Their intensified luminosity and subtle movements that change the scene slowly, clearly distinguish them from paintings painted with pigment.

Viola's paintings with light (to use Moholy-Nagy's terminology) play with the medium of oil on canvas as a conceptual frame. They infuse the older paradigm with new technologies. In turn, they adapt the properties of video and of the plasma screen to the tradition of the discrete painting hung in a museum. Moholy-Nagy would most likely have objected, because this could be apprehended as an innovative artist using light as a medium only in order to turn around and conform to what Moholy believed was a limiting tradition of framed oil paintings. This, after all, was Moholy's line of criticism towards film as "conceptually derived from traditional studio painting,"⁹¹ and towards conventions of film projection as "only a mechanized easel painting."⁹² Nevertheless, I suspect that Moholy would likely have applauded Viola's *The Passions* series because these twenty-first century "mechanized easel paintings" toy with the very tradition they take on. Seen within Moholy-Nagy's theoretical framework, these works may actually destabilize the tradition of painting. Viola's *The Passions* constitutes a case in which video art cunningly claims the prestige of an artistic masterpiece for art works made with a mechanized medium of light. Thus, placed within Moholy's "pigment to light" trajectory, Viola's video works ingeniously embody their own unique post-modernist version of the dream of painting with light.

Concluding Remarks

Moholy-Nagy understood the coming developments of light as an important medium in communication and art. Today, the lit screen has outstripped the painted canvas in its ubiquity in everyday life. It has also made important inroads into the museum and gallery space and thus the domain of high art. Yet, Moholy's modernist enthusiasm for abstract forms and the discarding of both perspective and mimetic representations, prevented him from foreseeing the plurality of developments in art that employs light as a medium. If "high" art has been moving in Moholy-Nagy's charted trajectory of "pigment to light," so has mass media. Marshall McLuhan found some of Moholy-Nagy's ideas a fertile ground for his own sweeping theories on media, though he did not publicly acknowledge this debt.⁹³ Since then, media studies have mostly taken different directions. It is becoming clear that the ubiquitous presence of media images in general, and luminous media in particular, within the contemporary environment requires additional approaches to media studies. Contemporary media studies need to take into account notions of the "medium" in new ways. It is hoped that this essay contributes to this emerging direction by interpreting the work and ideas of Moholy-Nagy across the disciplinary lines of contemporary art, media, theory and art history with a view to the longer trajectory that Moholy sensed was unfolding.

NOTES

My deep appreciation and thanks to Hattula Moholy-Nagy for generously allowing access to her archives and providing further information in conversation and correspondence, and to Oliver Botar for his close reading of the essay, his insights, and editing, all of which helped improve the essay throughout its revisions. My thanks also to Oliver Botar for lending his photograph of *Light Space-Modulator* and to Hattula Moholy-Nagy for permission to publish the photographs of Moholy-Nagy's work in the essay (pages 74-75).

¹ Siegfried Giedion (written 1935), reprinted in Richard Kostelanetz, ed., *Moholy-Nagy, an Anthology* (New York: Da Capo, 1991), [1970], 202.

² Moholy-Nagy, "Letter to Frantisek Kalivoda," (written 1934) *Telehor* (nos. 1-2, Brno, 1936): 30-32, reprinted in Krisztina Passuth, *Moholy-Nagy* (New York: Thames and Hudson, 1985), 332.

³ Moholy-Nagy "Abstract of an Artist," Chicago, 1944. Reprinted in Passuth, 362.

⁴ Moholy-Nagy, "Letter to Frantisek Kalivoda," Passuth, 332.

⁵ For an analysis of computer screens in public space see Anna McCarthy, *Ambient Television: Visual Culture and Public Space* (Durham: Duke University Press, 2001).

⁶ Moholy-Nagy did return to painting after some years (and explained his reasons in "Light Architecture" *Industrial Arts*, I/1, London, Spring, 1936, reprinted in Kostelanetz, 155-159), while continuing to experiment with various media.

⁷ Moholy-Nagy, *Malerei Photographie Film*, (*Painting, Photography, Film*) (Bauhaus Book no. 8), Munich, 1925 (first edition) (Expanded second edition, *Malerei Fotografie Film*, Munich, 1927). English ed., *Painting Photography Film*, 1969, reprinted (Cambridge, Mass: MIT Press 1973), 44-45.

⁸ Lucia Moholy (née Schulz) was described as "a brilliant photographer" ("*eine glänzende Fotografin*") by Moholy's later girl-friend — Ellen Frank, a dancer, actress, and the sister of Walter Gropius's wife Ilse — in an interview conducted by filmmaker Jens Schmohl, about her memories of Moholy-Nagy during his Bauhaus years. (Interview transcript from c. 1995 in Hattula Moholy-Nagy archives, p. 36). Born in Prague in 1894, Lucia Schulz initially studied philosophy, philology, and art history in Prague, and moved to Berlin in 1920, where she met Moholy-Nagy and married him in early 1921. She studied photography, built a darkroom, and had the technical darkroom expertise Moholy-Nagy did not acquire. She worked closely with Moholy until 1929, when they separated. Her command of the German language, which Moholy lacked at the time, supports her claim that she collaborated with Moholy on his theoretical writings during the Bauhaus years, and Moholy acknowledged her help with some of his writings. See Hight, 1985, 130. On the role of Lucia Moholy in Moholy-Nagy's photograms, see Andreas Haus, *Moholy-Nagy: Photographs and Photograms* (New York: Pantheon Books, 1980), 12-17, and Eleanor M. Hight, *Picturing Modernism: Moholy-Nagy and Photography in Weimar Germany* (Cambridge Mass.: MIT Press, 1995), 57-93. For Lucia Moholy's account of her creative and technical collaboration with Moholy-Nagy see Lucia Moholy, *Marginalien zu Moholy-Nagy, Moholy-Nagy, Marginal Notes* (Krefeld: 1972), 59-64.

⁹ D. F. Arago, cited in A. Trachtenberg, ed., *Classic Essays on Photography* (New Haven: Leete's, 1980), 18.

¹⁰ Cited in Trachtenberg, *ibid.*, 5.

¹¹ Moholy-Nagy, "Photography is Manipulation of Light," *Bauhaus* No. 1, 1928, reprinted in Haus, 47-50, at p. 47.

¹² Moholy-Nagy, "Light — A Medium of Plastic Expression," *Broom*, IV, No. 4 (1923), reprinted in Passuth, 293.

¹³ Moholy-Nagy, "Photography is Manipulation of Light," reprinted in Haus, 47.

¹⁴ See Joel Snyder's argument about the continuity between the Renaissance system of geometric perspective and photography produced by cameras, which were designed to produce realistic-looking pictures in the geometric perspective tradition of painting. "Picturing Vision," in *The Language of Images*, ed., W. J. T. Mitchell (Chicago: Chicago University Press, 1980), 219-46.

¹⁵ Haus, 16.

¹⁶ *Ibid.*

¹⁷ *Ibid.*

¹⁸ Moholy-Nagy, "Fényjáték-film" ("Light Display Film"), *Korunk*, No. 12, 1931, 866-867, reprinted in Passuth, 316-317.

¹⁹ Sometimes the German title is translated as *Light-Display Machine*, and Moholy also refers to it on occasion as the "Light Prop." The reference to "Light Prop" is in "Abstract of an Artist," 1944, reprinted in Passuth, 381. "Light-Space Modulator (sic) for an Electrical Stage" appears in Moholy-Nagy's brief essay, "*Light-Space Modulator (sic) for an Electric Stage*," ("Lichtrequisit einer elektrischen Bühne") *Die Form*, V, nos. 11-12, (1930), reprinted in Passuth, 310.

²⁰ See Hight, 1995, 91; Passuth, 55; Hannah Weitemeier, *Licht-Visionen: Ein Experiment von Moholy-Nagy* (Berlin: Bauhaus-Archiv, 1972), 5.

²¹ See Letter from Moholy-Nagy to Sonia Delaunay, March 27, 1930, printed in Passuth, 404-405.

²² Sibyl Moholy-Nagy reports that Moholy stated that he and his assistant had worked on the *Light-Prop for Electric Stage* for some ten years. *Experiment in Totality* (Cambridge, Mass.: MIT Press, 1969) 66. According to Nan Rosenthal the sculpture was made between March and May of 1930, and Moholy designed the *Light-Prop* for his stage design work. In unpublished paper in folder, "Lazlo (sic) Moholy-Nagy," Harvard University Museums, Busch-Reisinger Museum, "Notes on a motorized construction of 1930 by Lazlo (sic) Moholy-Nagy," no date. Cited in Andrea Kalisky Miller, "Films" in Hight, 1985, 128.

²³ Sibyl Moholy-Nagy discusses the difficulties of moving the work (which she referred to as the *Light-display machine*) in *Experiment in Totality*, 67.

²⁴ Moholy-Nagy, "Light-Space Modulator (sic) for an Electric Stage" ("Lichtrequisit einer elektrischen Bühne"), *Die Form*, V, Nos. 11-12 (1930), reprinted in Passuth, 310

²⁵ *Ibid.*, 311.

²⁶ *Ibid.*, 310.

²⁷ Moholy-Nagy, "Light – A Medium of Plastic Expression," Passuth, 293.

²⁸ Moholy-Nagy, *Malerei Photographie Film*, 26. (Expanded second edition, *Malerei Fotografie Film, Munich*, 1927). English ed., *Painting Photography Film*, 1969, 33.

²⁹ For the relevant screenplay see Passuth, 316-18. For different opinions on the date of this film, see note 66. For Moholy's earlier thoughts on the possibilities of cinema see Moholy-Nagy, *Malerei Photographie Film*, 26. (Expanded second edition, *Malerei Fotografie Film, Munich*, 1927). English ed., *Painting Photography Film* (Cambridge, Mass.: MIT, 1973), 41-43.

³⁰ I am grateful to the Pacific Film Archive, Berkeley Art Museum, Berkeley, California, for making the film available for my viewing.

³¹ Istvan Kovacs' in *Forum*, cited in Kostelanetz, 13.

³² Moholy-Nagy, "Light Display Film," Passuth, 316.

³³ Moholy-Nagy, "New Film Potentialities," [originally in *Munka*, no. 24, 1932, 685-687], reprinted in Passuth, 317.

³⁴ Moholy-Nagy, "Problems of the Modern Film," reprinted in Kostelanetz, 131.

³⁵ *Ibid.*, 137.

³⁶ "Abstract of an Artist," Passuth, 381.

³⁷ Sibyl Moholy-Nagy, *Experiment in Totality*, 64. Apparently she saw the film and apparatus during the winter of 1931.

³⁸ Moholy-Nagy, "Light Architecture," reprinted in Kostelanetz, 156.

³⁹ *Ibid.*, 155.

⁴⁰ *Ibid.*

⁴¹ *Ibid.*, 156.

⁴² *Ibid.*, 155.

⁴³ Moholy-Nagy, "From Pigment to Light," (1923-26) *Telehor*, Brno: 1936, reprinted in Kostelanetz, 34.

⁴⁴ Moholy-Nagy, "Theater, Circus, Variety," in *The Theater of the Bauhaus*, eds., Oscar Schlemmer, Laszlo Moholy-Nagy, Farkas Molnar, intro. Walter Gropius (Middletown: Wesleyan University Press, 1973), 49-70.

⁴⁵ Cited in Hans Curjel, "Excerpts from Moholy-Nagy and the Theater," reprinted in Kostelanetz, 95.

⁴⁶ "Contemporary Typography – Aims, Practice, Criticism," *Gutenberg Festschrift*, 1925, reprinted in Passuth, 294.

⁴⁷ Moholy-Nagy, "Light Painting," *Circle: International Survey of Constructive Art*, eds., J. L. Martin, Ben Nicholson, N. Gabo, Faber and Faber, 1937, reprinted in Passuth, 343.

⁴⁸ L. Moholy-Nagy, "In Defence of 'Abstract' Art," *Journal of Aesthetics and Art Criticism*, IV, 1945, reprinted in Kostelanetz, 45.

⁴⁹ *Ibid.*, 46.

⁵⁰ *Ibid.*

⁵¹ *Ibid.*

⁵² Franz Roh, *Moholy-Nagy: 60 Fotos*, and Berlin: Klinkhardt & Biermann, 1930, reprinted in Kostellanetz, 49.

⁵³ *Ibid.*

⁵⁴ *Ibid.*

⁵⁵ Hight, 1985, 43.

⁵⁶ Moholy-Nagy wrote about this issue on Cubism and Futurism in his "Abstract of the Artist," Passuth, 360-383.

⁵⁷ See Erwin Panofsky, *Perspective as Symbolic Form*. Trans. Christopher S. Wood (New York: Zone Books, 1991), note 73, 153-154. [Originally published in German as: "Die Perspektive als 'symbolische Form,'" in *Vorträge der Bibliothek Warburg 1924-1925*, Leipzig & Berlin, 1927, 258-330].

⁵⁸ *Ibid.*, 154.

⁵⁹ Franz Roh, 49.

⁶⁰ Man Ray's use of photograms predated Moholy-Nagy's, but others used the technique prior to Man Ray. See Hight, 1985, 48-49 and Herbert Molderings, "Laszlo Moholy-Nagy und die Neuerfindung des Photograms" in *Kunst und Fotografie*, Renate Heyne, ed. (Jonal Verlag, 2003).

⁶¹ "Age de la lumière." *Minotaure* 1, 1933, 1-3. Letter to Howland, Ferdinand Howland Collection, cited in Billy Klüver and Julie Martin, in *Perpetual Motif: The Art of Man Ray*, M. Foresta et. al, eds., (Washington, D.C.: National Museum of American Art Smithsonian Institution, New York: Abbeville, 1988), 116.

⁶² See for example Moholy-Nagy's addressing these issues in Cubism and Futurism in "Abstract of the Artist."

⁶³ Some of the following discussion on Lacan draws on ideas analysed more extensively in my essay "In the Light of Images and the Shadow of Technology: Lacan, Photography and Subjectivity," *Discourse*, Vol. 19, no. 1 (Spring, 1997), 43-66.

⁶⁴ Though it is not known to what extent Lacan may have been familiar with the art and theories of the German Bauhaus, it is known that he associated with Dali and the Surrealists in Paris during the 1930s and was familiar with their ideas, see David Macey, *Lacan in Contexts* (London, 1988).

⁶⁵ As attested by the special March 1930 issue of *Arts et métiers graphiques*, which featured photography, and was the first in a series of annuals devoted to photography in France. See Sandra S. Phillips in *Perpetual Motif*, 205.

⁶⁶ Sibyl Moholy-Nagy's statement appears in notes by her written for the presentation of "Six Films by Laszlo Moholy-Nagy," at The Solomon R. Guggenheim Museum, New York, February 22 – April 19, 1970 (in archives of Hattula Moholy-Nagy). Some scholars differ on the exact date of the film. Passuth dates the film 1930 (p. 58); Hight mentions that the film was shown in the Paris exhibition (in the "Chronology" section of *Moholy-Nagy: Photography and Film in Weimar Germany*, 139); and Haus states that the film was made

“following” the Werkbund exhibition (p. 54). (These texts do not provide sources for this information.) Jeanpaul Goergen concludes that Moholy-Nagy completed the film only in 1932 based on German documents stamped by the censor “March 1932,” which he interprets as proving that 1932 was the date that the film was first shown. (“Vortrag 20. Juli 1995: Laszlo Moholy-Nagy zum 100 Geburtstag,” p. 1, in archives of Hattula Moholy-Nagy). This conclusion does not necessarily follow, however, because while the film may indeed have been first exhibited in Germany in 1932, it may well have been shown earlier in Paris at the 1930 Werkbund exhibition.

⁶⁷ For a photograph of the installation see Passuth, Fig. 242.

⁶⁸ “Problems of the Modern Film,” *Cahiers d'Art*, VII/6-7, Paris 1932, reprinted in Kostelanetz, 131-138. (Written between 1928 and 1930).

⁶⁹ Jacques Lacan, *Four Fundamental Concepts of Psychoanalysis*. Trans. A. Sheridan. Ed., J. A. Miller (New York, Norton, 1990), 86, hereafter referred to as *Four*. [*Le séminaire livre XI: Les quatre concepts fondamentaux de la psychanalyse*. Ed., Jacques-Alain Miller. Paris: Seuil, 1973.]

⁷⁰ For a critical discussion on perspective, that takes into account Lacan's writings, see Hubert Damisch, *The Origin of Perspective*. Trans. John Goodman (Cambridge, Mass: MIT Press, 1994). For a critique of Damisch and an analysis of Lacan, see M. Iversen, “Orthodox and Anamorphic Perspectives,” *Oxford Art Journal*, 18.2, 1995, 81-84.

⁷¹ *Four*, 224.

⁷² On Dali's interest in anamorphosis see Haim Finkelstein, *Salvador Dali's Art and Writing 1927-1942: The Metamorphoses of Narcissus* (New York: Cambridge University Press, 1996) and “Dali's Anthropomorphic Landscapes,” *Bruckmann's Pantheon* (XLVI, 1988): 142-148.

⁷³ The painting is a double portrait of Jean de Dinteville, the French Ambassador to England in 1533 on the left, and Georges de Selve, Bishop of Lavaur, on the right.

⁷⁴ Several scholars have noted the different direction of the skull's shadow. See for example Susan Foister, Ashok Roy, Martin Wyld, *Making and Meaning, Holbein's Ambassadors* (National Gallery Publications, London, 1997), 48. For a different interpretation of *The Ambassadors* in relation to Lacan, see Henry Krips, *Fetish: An Erotics of Culture* (Ithaca: Cornell University Press, 1999), 97-117.

⁷⁵ The objects on the upper shelf are related to celestial knowledge, astronomy, and time measurements while those on the lower shelf include a book for the study of arithmetic, instruments for geometrical calculations, musical instruments and a hymnbook. See S. Foister et. al., 33.

⁷⁶ *Four*, 88.

⁷⁷ Lacan: “the classic dialectic around perception derives from the fact that it deals with geometric vision, that is to say, with vision in so far as it is situated in a space that is not in its essence visual.” *Four*, 94.

⁷⁸ *Ibid.*, 94.

⁷⁹ *Ibid.*, 95.

⁸⁰ *Ibid.*

⁸¹ *Ibid.*

⁸² *Ibid.*, 96 (my emphasis). The English translation is adapted. The original in French reads:

Je ne suis pas simplement cet être punctiforme qui se repère au point géométral d’où est saisie la perspective. Sans doute, au fond de mon oeil, se peint le tableau. Le tableau, certes, est dans mon oeil. Mais moi, je suis dans le tableau.

Ce qui est lumière me regarde, et grâce à cette lumière au fond de mon oeil, quelque chose se peint – qui n’est point simplement le rapport construit, l’objet sur quoi s’attarde le philosophe – mais qui est impression, qui ruissellement d’une surface qui n’est pas, d’avance, située pour moi dans sa distance. C’est là quelque chose qui fait intervenir ce qui est éliminé dans la relation géométrale – la profondeur de champ, avec tout ce qu’elle présente d’ambigu, de variable, **de nullement maîtrisé par moi. C’est bien plutôt elle qui me saisit, qui me sollicite à chaque instant, et fait du paysage autre chose qu’une perspective**, autre chose que ce que j’ai appelé le tableau.

Jacques Lacan, *Le séminaire livre XI: Les quatre concepts fondamentaux de la psychanalyse*. Ed., Jacques-Alain Miller (Paris: Seuil, 1973), 89. (My emphasis).

⁸³ *Four*, 96.

⁸⁴ *Ibid.*

⁸⁵ Mark Poster discusses a “decentered” and “dispersed” subject in relationship to television and computer writing, in the context of his interpretation of Baudrillard and Derrida. See Ch. 2 and 4 in *The Mode of Information* (Chicago: Chicago University Press, 1990). Paul Virilio’s emphasis on the lost dimension, disappearance, and immateriality is of interest in this context. See *The Aesthetics of Disappearance*. Trans. Philip Beitchman (New York: Semiotext(e), 1991).

⁸⁶ Lacan’s one mention of photography is not in his discussion of “The Line and Light,” but in another chapter, entitled “What is a Picture,” *Four*, 106.

⁸⁷ Walter Benjamin, “The Work of Art in the Age of Mechanical Reproduction,” *Illuminations*. Ed. and Intro. Hannah Arendt. Trans. Harry Zohn (New York: Schocken Books, 1968), 117-252.

⁸⁸ In two issues of *Minotaure* in 1933.

⁸⁹ For an example of a study that contextualizes the new technology of electricity in social practices and discourses, see Carolyn Marvin, *When Old Technologies Were New: Thinking About Electric Communication in the Late Nineteenth Century* (New York, Oxford University Press, 1988). Jonathan Crary writes of a new "observer" being constituted in the 1820s and 1830s as the result of physiological research on vision and various apparatuses deriving from this research, before the advent of the photograph in *Techniques of the Observer* (Cambridge, Mass.: MIT Press, 1990).

⁹⁰ Viola's "*The Passions*" was exhibited earlier at the J. Paul Getty Museum.

⁹¹ Moholy-Nagy, "Problems of the Modern Film," Kostelanetz, 131.

⁹² Moholy-Nagy, *ibid.*, 137.

⁹³ Kostelanetz, 214.

Captions for Figures

1. László Moholy-Nagy, *Self Portrait Profile*, photogram, 1922. 37.4 x 27.4 cm. Courtesy of George Eastman House, The International Museum of Photography, Rochester. Reproduced with the permission of Hattula Moholy-Nagy. See page 74.

2. Photographer unknown. László Moholy-Nagy's *Light Prop for an Electric Stage*, silver gelatin copy print, courtesy of Oliver Botar and Hattula Moholy-Nagy, with permission of Hattula Moholy-Nagy. See page 75.



