Mein Kodak

Avant-Garde Photography

in 1920s Germany

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This study examines some of the fundamental principles of a number of influential photographers working in Germany in the 1920s and assesses the ways they understood the world through their camera's lens. German photography initiated a complex engagement with the modern world and marked a significant re-evaluation of the relationship between the camera, perception and reality. The unique quality of the photographic image's verisimilitude of nature was an important phenomenon in this re-evaluation, as it led to assumptions about the capacity of photography to reveal the truth of reality. László Moholy-Nagy's innovative employment of a variety of photographic techniques provide an effective conduit to modern theories about photography that not only expose the presumptions surrounding the photographic image, but also the inherent complications. I propose that the avant-garde photographic experiments of 1920s Germany radically changed the ways in which humanity perceived and interacted with the surrounding world.

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Statement of Original Authorship

The work contained in this thesis has not been previously submitted for a degree or diploma at any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

Toni Mia Simmonds

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Introduction

This study examines some of the fundamental principles of a number of influential photographers working in Germany in the 1920s and assesses the ways they understood the world through their camera's lens. German photography initiated a complex engagement with the modern world and marked a significant re-evaluation of the relationship between the camera, perception and reality. The unique quality of the photographic image's verisimilitude of nature was an important phenomenon in this re-evaluation, as it led to assumptions about the capacity of photography to reveal the truth of reality. László Moholy-Nagy's innovative employment of a variety of photographic techniques provide an effective conduit to modern theories about photography that not only expose the presumptions surrounding the photographic image, but also the inherent complications. I propose that the avant-garde photographic experiments of 1920s Germany radically changed the ways in which humanity perceived and interacted with the surrounding world.

The aesthetic ideals of Neue Sachlichkeit (New Objectivity) provide a crucial backdrop to the discussion of German photography during the 1920s. Neue Sachlichkeit photographers perpetuated the notion that the photograph transmitted truthfulness. This premise was founded on the belief that the mechanical optics of the camera provided unrivalled access to an 'objective' reality at a time when it was argued that truth could only be measured if it were scientifically verifiable. The camera was seen to bypass and supersede subjective human intervention in the process of representing reality. Neue Sachlichkeit photographers thus assumed that the photograph could provide a reliable and comprehensive visual document that established an existential connection (although displaced in time and space) to the original object. These photographic documents were generated in order to establish a new, objective relationship with the world and to confirm that the world was as it appeared in the photographic image.

The work of Neue Sachlichkeit photographers was therefore characterised by its fidelity to the original object (they believed that the photograph's verisimilitude afforded the 'appropriate respect for the integrity of the object' before the lens). Their aim to objectively and exhaustively document modern Germany was legitimised by the belief that photography captured the truth of reality. The information about the photographic image's subject, however, was limited to appearances and these limitations undermined their beliefs about the relationship between the photograph and reality. The chapter, *The Objective Eye of the Camera*, examines the work and ideals of Neue Sachlichkeit photographers in order to explore the significance of the tension between photographic appearances and reality. I thus seek to elucidate how the

relationship between the photographic image and the world of objects and appearances was interpreted, and what the repercussions were for how the photograph was understood and used.

The following chapters examine the photographic experiments of László Moholy-Nagy, a Hungarian avant-gardist working with photography in Germany throughout the 1920s. His photograms and camera-photographs constitute a significant break from the Neue Sachlichkeit idiom by lessening the value of the object before the lens, and instead focusing on the interaction of forms in space and the dynamic effects of light and shadow. He also experimented with photographic techniques that were pre-empted by the Berlin dadaists' and Russian constructivists' photomontage works. Indeed, these artists initiated the acceptance of photography as an avant-garde tool. Moholy-Nagy's investigations of distinct photographic techniques constitute a steppingstone between new ideas about photography and its relationship with the modern world.

The chapter, *The Language of Light*, considers the scientific developments and aesthetic theories that informed Moholy-Nagy's photogram experiments, and posits that underlying his approach to these experiments was an insatiable interest in the potential for light, as an abstract yet material phenomenon, to evoke dynamic optical responses to modern reality. Moholy-Nagy's work with photograms was a practice that helped to elucidate his unique theoretical approach to the medium. By limiting the elements of photography to light and a light sensitive surface, and by lessening the importance of the representation of objects, he aimed to instigate a more spontaneous and direct sensory reaction to his work. Moholy-Nagy believed that the new, modern world required an adjustment in perception in order to be able to fully comprehend and appreciate it. Habitual and ineffective modes of perceiving the changing world could be replaced with heightened sensory experiences once this new, photographic way of seeing had been established and learnt. Moholy-Nagy therefore formulated the notion of a 'New Vision' to teach humanity new ways of seeing.

A common assumption amongst avant-gardists in 1920s Germany was that photographic images extended the range of human optical capacity, and at times even surpassed human vision. These avant-gardists believed that photographic techniques that dealt with enlargement and slow motion exposed new visions of reality, and that, despite its apparent bind with reality, photography often produced extra dimensions of psychological meaning in response to this reality. I argue that these photographic visions of reality had a twofold effect: they not only revealed unseen perspectives of recognisable objects, but also celebrated the novel transformation of appearances ushered in by modernity. Camera vision therefore introduced new perspectives that differed from human vision, and these new ways of seeing often estranged modern

objects and defamiliarised quotidian environments. Unusual viewpoints accentuated the effect of disorientation and often led photographed objects to assume a new appeal by simultaneously stirring in the viewer an uncanny response of both recognition and alienation.

Moholy-Nagy's attempts to defamiliarise reality in order to evoke optical experiences that could heighten a human sensory understanding of the world, were also applied to his photographs taken with the camera. When looking at these photographs, it is clear that he was preoccupied with the interaction of forms in space and the dynamic effects of light. Moholy-Nagy repeatedly used shadows to accentuate geometric grids and shapes, and light to activate the way the eye traversed the image in the perception process. Additionally, he framed his images from unusual viewpoints in order to distort recognisable scenes and to transform ordinary objects. Moholy-Nagy chose to use these defamiliarising framing techniques in order to extend the duration of perception and involve the viewer in an active optical experience. I therefore propose that the centre of interest in each of his photographs was not the object itself, but the revelation of new ways of observing and appreciating the fluidity of the object's appearance.

The chapter, *New Vision, Photographic Seeing and Dynamic Optics*, examines these images in order to glean how 'New Vision' ultimately altered how we see reality and to clarify how this change was activated. Moholy-Nagy's underlying pedagogical ambition, however, was to promote photography as the tool for a new visual form of communication. He argued that photography embodied a universally recognisable and readable language that did not rely on cultural literacy. For this theory to work one needed to accept that the photograph reproduced reality in a visually objective format and that photographic meaning was consistent. Semiotic theories that were dominant in the early 1970s challenged this stance however, and suggested that objects that were represented in photographic images could allude to a variety of meanings that fluctuated, for they were dependent on cultural contexts and photographic devices. The inclusion of some of these ideas provide a theoretical context to critically test Moholy-Nagy's claims about utopian photography and to establish the limitations and complications of its articulation.

The chapter, *Enigmatic Objects and Shattered Realities*, examines the ways that photomontage radically transformed photographic meaning. Photomontage challenged the photograph's axiomatic relationship with reality by isolating fragmented subject matter as independent signs and 'tearing off' pre-existing contextual information that would serve to anchor photographic meaning. Photomontage also revealed that an understanding of reality was dependent on cultural signs, of which photography was one. Photography was a particularly important cultural sign because it was especially prone to be mistaken for reality. Positioning these signs in new contexts produced new visions of reality. Avant-gardists, therefore, could consciously

employ chosen photographic objects as veritable symbols of reality as well as to fulfil altered signification roles in constructed realities. I suggest that this dual application meant that photo-fragments could be manipulated by modern artists to produce visual narratives that could address social-political themes in ways that extended beyond the conventions of quotidian reality. Ironically, these artists also exploited the photo-fragments supposed indexical connection with its object. The unique function of the photograph in photomontage works had repercussions for the understanding of photography as an accurate copy of visual reality.

Photomontage narratives suggested that reality could be manipulated to expose social and political contradictions as well as to persuade alliances. This subjective utilisation of the photographic fragment problematised the understanding of photography as a reliable and objective source of information, for rather than constituting a definitive reflection of reality, photomontage made the viewer aware that the photograph was a cultural sign. For Moholy-Nagy, photomontage shifted the photograph's function from a means of heightening an awareness of a changed visual reality to a tool for communicating socio-political agendas. Departing from the avant-garde aims that he established with his photogram and camera-photograph experiments, Moholy-Nagy used the photomontage technique to construct subjective responses to the modern environment, and thus recognised and exploited the ambiguous nature of photography's relationship with reality. His work provides a link between the diversity of modern photographic practices and avant-garde theories that were fundamentally connected to the changes ushered in by modernity. I thus seek to reveal the presumptions that shaped the appearance of these photographic works, as well as the axiomatic tensions and complications inherent in the photographic image.

Chapter 1

The Objective Eye of the Camera

> Nothing seems better suited than photography to give an absolutely faithful historical picture of our time... It can render things with magnificent beauty but also with terrifying truthfulness... let me honestly tell the truth about our age and people. August Sander

In June 1925, art historian and director Gustav Hartlaub ushered in 'Sachlichkeit' (Objectivity) as a visual art movement when he organised a painting exhibition at the Mannheim Kunsthalle entitled *Die Neue Sachlichkeit*. The concept of objectivity became intrinsically linked to the visual capacities of the camera, as it was seen to bypass the subjectivity of human intervention in the process of representing reality. At a time when positivists argued that truth could only be measured if it were scientifically verifiable, the mechanical optics of the camera provided unrivalled access to what was believed to be an objective reality. Some etymological nuances of the word Sachlichkeit, however, allude to tensions that problematised this concept of objectivity and its relationship to science, truth and the camera. Although Sachlichkeit signals an objective fact (Sache), the interpretation of a tangible object (Gegendstand) signals the inextricable involvement of this object and its representation with the dispassionate and unbiased traits of objectivity as it was applied to an art-historical aesthetic.

Many photographers that were influenced by the Sachlichkeit paradigm prioritised the realist task of rendering an object's appearance precisely and assumed that the absolute fidelity afforded by the camera transmitted truthfulness. These Neue Sachlichkeit photographers aimed to exploit the camera's unique ability to provide an unbiased documentation of the visual reality of 1920s Germany. The camera's image was still a representation, however photographs were thought to be a more accurate rendition of the world, while some even claimed that it *was* this world. Indeed, modern dogma asserted that the mechanical objectivity of the camera established an existential (although conspicuously displaced in time and space) connection between the photograph and the original object.

As camera technologies evolved, these optical machines were assumed to supersede the subjectivity of human vision by minimising the intervention of the photographer in the reproduction process. Moreover, the objective eye of the camera was seen to seize its subject directly. The supposed unrivalled superiority of the camera's engagement with objects was vital to its appeal. The Neue Sachlichkeit photographers' enthusiasm for the camera's technological power, however, at times undermined their studied neutrality

and objectivity. Despite their attempts to document modern reality without personal bias, they often photographed objects in previously unrecognised ways with the use of photographic techniques such as alternative viewpoints and extreme close-ups. The novelty and surprise of these estranged visions led them to assume a fetishistic appeal. This text aims to explore the significant connections between the photographic image, appearances, truth and reality by critically assessing the aspirations and work of three prominent Neue Sachlichkeit photographers, Albert Renger-Patzsch, Karl Blossfeldt and August Sander.

***

At the time, Neue Sachlichkeit was reputed to posses a cool neutrality and 'matter-of-factness' that was fundamentally at odds with the ideology and style of Expressionism. The disaffinities between Neue Sachlichkeit and Expressionism were driven by social and cultural transformations in Germany after World War 1. Germany's economic stability was significantly damaged by the devastating consequences of the war reparations that were required to be paid to the Allies as stipulated in the Versailles Peace Treaty. This treaty included a 'war guilt' clause that deemed Germany solely responsible for the First World War. The economic ramifications of enforced reparations contributed to unsustainable inflation and the massive devaluation of the German Reichsmark. This in turn led to unemployment and poverty that undermined the social fabric of post-war Germany. Overwhelmed by a sense of despair, cynicism and alienation, many Germans lost faith in an ethos of hope that characterised the ideals of spiritualism and utopianism. In pre-war Germany, Expressionism's youthful frustration with Wilhelmine values found expression in idealistic and utopian projects. In post-war Germany, however, Expressionism's preoccupation with internal realities seemed to offer an inadequate response to the extreme, external changes taking place in this society. Some advocated that artists not only needed to look outwards, but also had to do so with an objective attitude towards the world.

The tumultuous changes taking place in post-war Germany not only effected social values and ideals, but also the material world itself. Everyday environments were transformed by the infiltration of American investment, industrialisation and materialism. American modernity emphasised technical innovation and mechanical power and further expedited the eradication of traditional modes of production. Under the influence of this regimen, German cities metamorphosed into metropolis-scapes where factories, blocks of flats and steel structures superseded traditional architecture. Neue Sachlichkeit artists' response to the materiality of the modern city was in stark contrast with that of the emotional response of the Expressionists. This was because they drew upon the city's plethora of visual subject matter, approaching

and presenting mechanical objects with the same detachment that was applied to objects of nature or to portraits. Indeed, the stated primary goal of the Neue Sachlichkeit artist was to generate a new objective relationship with this changed, modern world.

Amongst the most influential American technical innovations to impact upon German society and culture was the portable camera. Simultaneous technical developments saw the invention of paper negatives, followed by the universal holder for 24-exposure rolls of sensitised paper and the production of a plain, box-shaped camera named 'The Kodak', by American George Eastman. Subsequent refinements led to small, easy to use, portable cameras including photo-binoculars, the Folding Pocket Kodak, and later, the German Leica. These technical developments effected a profound change both on the nature and quality of the image produced and on the accessibility of photography to the general public. The camera's relative affordability and uncomplicated 'point-a-box-straight-and-press-a-button' instructions also facilitated photography's incorporation as a mass leisure activity.

The camera's capacity to produce images that appeared to be direct copies of reality provided an ideal tool for the elaboration of Neue Sachlichkeit aims. The presumption was that photography reproduced true objects within its framed image and that the camera mechanised the reproduction process and provided unrivalled jurisdiction over the representation of these objects. The camera was therefore seen to replace the human (subjective) role in the process of reproducing a visual reality and its technical precision and mechanical objectivity were highly valued by Neue Sachlichkeit photographers. Scott McQuire notes that the immediate and dominant effect of photography was "to confirm the authority of the objective eye by providing a mechanical vision capable of transcending the suspicions directed towards the 'merely human'" (p. 36). The camera, the Neue Sachlichkeit photographers concluded, exposed truth.

Neue Sachlichkeit photographers were thus inextricably dependent upon the camera to fulfil their aspirations to provide objective, visual records of a modern reality. They assumed that the photographic image provided a reliable and comprehensive visual document due to its supposed ability to transmit the reality of the object. Indeed, some Neue Sachlichkeit photographers believed that the ideal format for the unbiased presentation and preservation of information was provided by the document (as both a visual regime and a perceptual attitude), and that the conditions of the document were most perfectly manifested in the photograph. Photographic archives were therefore generated in order to establish a new, objective relationship with the world and to confirm that the world was as it appeared in the photographic image.

The ways in which artists and photographers articulated Neue Sachlichkeit aims and ideals varied

considerably between individuals. What united these photographers, however, was a "scrupulous faithfulness to the subject, correct lighting, irreproachable truth in the rendering of detail, and total mastery of optical and chemical procedures" (Haus and Frizot, p. 464). Although they adhered to the precise and objective approach to the presentation of German reality, these photographers also manipulated Neue Sachlichkeit ideals to fulfil their individual aesthetic, scientific or sociological goals, and thus, their photographic work produced quite different results.

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Albert Renger-Patzsch was one of the most prominent figures of German Neue Sachlichkeit photography. He was renowned primarily for his 1928 publication *Die Welt ist Schön (The World is Beautiful)*. This album of photographs depicted machines and industrial sites that were juxtaposed against plant studies. Shearer West has claimed that in this book "factory pistons and wet leaves were given equivalent status, and both were treated as part of a new canon of beauty" (p. 168). Renger-Patzsch isolated patterns in design from both nature and industry to demonstrate that both sources could share a single, purely formal aestheticism. He depicted factory chimneys with the same detached neutrality (described by Haus and Frizot as a "dehumanised calmness") as a flowering cactus, and claimed that photography's unique value lay in its capacity to depict the detail of physical objects with absolute fidelity.

Exploiting the camera's mechanised reproduction processes and 'dehumanised' accuracy, Renger-Patzsch aimed to provide a new, objective relationship with the world of objects. In his 1927 text *Aims* (in Phillips (ed.), p. 105), he claimed that the secret of a good photograph resided in its realism and that only photography was capable of doing justice to "modern technology's rigid linear structure, to the lofty grid work of cranes and bridges and to the dynamism of machines operating at one thousand horsepower". Renger-Patzsch's rhetoric hinted at a technological enthusiasm and utopian idealism that was in conflict with his supposed neutrality. This tendency to idealise and rely on emotional views contradicted photography's posture of neutrality and this was recognised by Eleanor Hight, who observed that "instead of offering factual information, Renger-Patzsch alluded more generally to the glories of industrialisation and the ensuing growth of capitalism by using his rendering of beauty of form in the detail as a metaphor for the values of the thing photographed" (p. 103). The title of his album, *The World is Beautiful*, surely also encouraged a subjective assessment of modernity (that was fundamentally pleasurable) that influenced any subsequent reading of the images presented.

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Albert Renger-Patzsch, *Blast Furnaces*, 1927.

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Albert Renger-Patzsch, *Giant Crane*, 1930.

Renger-Patzsch's claim to objectivity is further undermined with the publicity written for *The World is Beautiful*. This propensity towards subjectivism is reflected in the opening sentence; "The pleasure in looking has reawakened in our impoverished Germany". It continued:

> It is a delight that the poor can take advantage of it to the same extent as the rich. Only the appreciation for doing so must be revived. The best guide for this is DIE WELT IST SCHÖN... This book with one hundred pictures... is something totally new and is THE GIFT BOOK FOR EVERYBODY. Renger's art of photography mirrors our contemporary view of life. It is as if we were learning to see everything anew and more intensely. The value of this publication, which allows the eye to gain access to unexplored grounds, lies in its extremely refined general comprehensibility. An exciting, enriching, inspiring book for everyone who has eyes (in Ruter, p. 192).

The statements in this text inadvertently raise three important assumptions that relate to how photography was predominantly understood in 1920s Germany. These were 1. that the mechanical objectivity of the camera established an existential connection between the photograph and the original object, 2. that the manoeuvrability and technical devices of the camera exposed new ways of seeing reality (that extended the capacity of human optical vision), and 3. that this new way of seeing (this modern vision) was ultimately pleasurable. These three assumptions can be viewed as ideological foundations that informed the experiments not only of Neue Sachlichkeit photographers, but also other avant-garde photographers working in 1920s Germany.

First, photography in the 1920s was largely interpreted as providing a verisimilitude of life in an image made by the chemical action of light on sensitive paper or film. This was achieved not only through a mechanical and chemical reproduction of modern reality in the photographic image, but also by the fact that these images conformed to the visual convention of realism. In the above advertising text, Renger-Patzsch was praised for 'mirroring our contemporary view of life'. Art historian, Wolfgang Born, describes this photo-mimesis in the following terms:

> The discovery of reality is the mission of photography. It is not incidental that the very process of taking a photograph involves the use of technology. The nature of this medium is intrinsically adapted to the structure of the contemporary worldview; its objective way of registering facts corresponds to the thinking of a generation of engineers. Today the camera can unfold its finest virtue - truthfulness- without hindrance (in Phillips, p. 156).

The analogy of the mirror and photography as objective devices that revealed truth was shared by Soviet avant-gardists like Alexander Rodchenko, who described the photograph as "the new, rapid, concrete

reflector of the world" (in Phillips, p. 257). The notion that photography provided a mirror reflection of a truthful reality was a guiding principle for 1920s German avant-gardists' approach to, and work with, the photographic medium. But, inadvertently, this attachment to an intense objectivity extracted another aspect of reality that could not fail to excite.

With the use of photographic techniques such as alternative viewpoints and extreme close-ups, Neue Sachlichkeit photographers often exhibited objects in previously unrecognised ways. This predisposition led to the second assumption that was articulated in the declaration, "It is as if we were learning to see everything anew and more intensely... which allows the eye to gain access to unexplored grounds". In this sense, the aim of these Neue Sachlichkeit photographers was to provide a *new*, objective relationship to, and perception of, the visual world. This, however, required learning new ways of seeing. As the camera's lens could be led to probe the world from different viewpoints to reveal unexplored perspectives, it was felt that society had to be educated in new ways of seeing the modern world in order to better understand it. This pedagogical trend became known as the 'New Vision'. With New Vision, the photographic image was thought to prompt a sensory consciousness of the modern world that provided new perspectives towards familiar objects.

Photography's perceived utopian functionality was particularly important for avant-gardists in Germany and the Soviet Union who were attempting to democratise art by making it more accessible to the proletariat. Because it was assumed that photography did not rely on specialised skills of literacy to understand the information contained in an image (the visual world was reflected in a still image for 'anyone who has eyes'), the photographic image was employed by avant-gardists to play a powerful role as a new, modern, universal communication tool. This viewpoint was articulated in the publicity material where Renger-Patzsch's photographs were described as a 'delight that the poor can take advantage of to the same extent as the rich'. László Moholy-Nagy, a Hungarian avant-gardist working with photography in Germany throughout the 1920s, also argued that the camera had the ability to reveal "the unambiguousness of the real, the truth in the everyday situation... for all classes" (1925, p.38). The social role assigned to the camera assumed that modernity perceived through photography was democratic, as it was available for everyone.

Furthermore, 'learning to see everything anew and more intensely' was pleasurable. This notion was publicised in the before-mentioned advertising text with the claim that "the pleasure in looking has been reawakened" through "Renger's art of photography". Camera vision introduced new perspectives that differed from human vision, and these new ways of seeing often transformed modern objects. This

defamiliarisation of quotidian environments could lead the objects to assume a fetishistic appeal while simultaneously stirring an uncanny response of both recognition and alienation. In addition, the mass produced photo-format itself was something new and as such exuded an aura of mystique with its ability to produce an inexplicable verisimilitude. The novelty of these strange objects presented in the photographic image led them to assume an appealing quality that introduced a emotional facet to the precise technique and objective indiscrimination of subject matter practised by the Neue Sachlichkeit photographers. German cultural critic, Walter Benjamin, astutely condemned Renger-Patzsch's *The World is Beautiful* with the claim that it "succeeded in turning abject poverty itself, by handling it in a modish, technically perfect way, into an object of enjoyment" (in Burgin, p. 24). Neue Sachlichkeit photographers may have attempted to comprehensively document modern reality without personal bias, but they inadvertently exposed and exhibited objects as novel and unique events.

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Like Renger-Patzsch, Karl Blossfeldt began taking photographs to record and archive the graphic details and design patterns found in plants. His macroscopic photographs of plants have since come to be regarded as consummate renditions of Neue Sachlichkeit photography. Blossfeldt originally worked in decorative cast iron and later taught at Berlin's Royal Museum of Arts and Crafts. It was through his desire to reinvigorate the study of design that he began to compile an extensive photographic portfolio of botanical specimens. Details of leaves, seeds and buds echoed the curvilinear patterns of Art Nouveau metalwork while providing an inexhaustible source of inspiration for the artist. In the Neue Sachlichkeit tradition, Blossfeldt's forms of nature were photographed with exacting precision. In 1928 his images were published in the book *Urformen der Kunst (Art Forms in Nature)*; subtitled, 'Enlarged Photographs of Plant Forms by Professor Karl Blossfeldt'. It contained 112 photographs and only had a brief two-page introduction by Karl Nierendorf. The publication was intended to provide a visual text book for the appreciation of linear flowing forms and design ideas in nature for the general public.

Blossfeldt aimed to provide an archive of photographic images that exemplified ornamental design patterns found in plants. By isolating and enlarging specific elements from nature, he not only recognised design patterns, but documented them for the appreciation and education of others. In so doing, he provided examples of new ways of perceiving the known (natural) world. In the introduction to Blossfeldt's *Art Forms in Nature*, Nierendorf wrote, "modern technology brings us into closer touch with nature than was ever possible before, and with the aid of scientific appliances we obtain glimpses into worlds which hitherto had been hidden from our senses". The camera, therefore, was the modern tool that would probe the known

world and expose unfamiliar perspectives. Hans Christian Adam argued, “Blossfeldt can be credited with having opened new perspectives for our perception through his life’s work” (p. 19). By providing alternative perspectives of the known world, Blossfeldt inadvertently revealed that the familiar could also be something that was unrecognisable and strange.

Blossfeldt’s plant forms were presented against plain, white backgrounds and emerge as beautifully textured objects. In tones of grey, isolated plant stems acquire a cool, almost metallic, quality, and sometimes create the illusion of a cast iron ornamental feature. At other times, the young rolled-up fronds of a fern (enlarged four times) provide a paragon design motif with its undulating organic form. In *A Small History of Photography* (1931), Benjamin described Blossfeldt’s ‘astonishing plant photographs’ as revealing, “the forms of ancient columns in horse willow, a bishop’s crosier in the ostrich fern, totem poles in tenfold enlargements of chestnut and maple shoots, and gothic tracery in the fuller’s thistle” (p. 244). The extreme close-up views of Blossfeldt’s photographs transform his plants to such an extent that they become unrecognisable.

Blossfeldt’s photographs of plant forms thus exude a surreal quality. Although purporting to be objective, the strangeness of the forms presented in his photographs generate a powerful emotional impact. His objects, magnified to various degrees and presented in isolation from any contextual information, look almost alien with their veined surfaces, twisted tendrils and furred skins. Indeed, they become surreal images of improbable objects, and like Renger-Patzsch’s objects, their dislocated familiarity also arouse pleasure and excitement. Benjamin argued that “photography reveals in this material the physiognomic aspects of visual worlds which dwell in the smallest things, meaningful yet covert enough to find a hiding place in waking dreams” (1931, p. 243). For Benjamin, Blossfeldt’s photographs in particular induced an ‘optical unconscious’. He claimed, “it is another nature that speaks to the camera than to the eye: other in the sense that a space informed by human consciousness gives way to a space informed by the unconscious” (1931, p. 243). Blossfeldt’s photographs were thus accredited with the capacity to heighten awareness of the visual world and of opening up new areas of human consciousness that would benefit culture and society.

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Karl Blossfeldt, *Maidenhair fern, young unfurling fronds.*

Karl Blossfeldt, *Birthwort, young shoot.*

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Karl Blossfeldt, *Blumenbachia, closed seed capsule.*

Karl Blossfeldt, *Indian balsam, snapweed, stem with branching.*

Although Blossfeldt provided examples of new and heightened ways of perceiving the natural world, the comprehensiveness of the information contained within the photographic image was limited to that of appearances. Indeed, he recorded little about the plants' essential characteristics - "they do not smell, they have no colours... They are reduced to geometric forms, structures and grey tones... to standardised types" (Adam, p. 19). Furthermore, Neue Sachlichkeit photographers' method of isolating detail and excluding contextual information often defamiliarised objects to such an extent that they became fetishistic rather than informative in an objective or documentary manner. As Adam points out, taxonomic types were established by purely superficial visual characteristics that may have had nothing to do with scientific or environmental considerations. This unanticipated effect complicated the Neue Sachlichkeit photographer's fundamental aim to provide exhaustive documentation about a new, modern reality. What such unanticipated effects show is that photography is best regarded as the documentation of appearances rather than essential truths that were scientifically verifiable.

The questions, how much did these visual documents actually tell us about the subjects they depicted?, and how did the inclusion or exclusion of contextual information alter the perception and understanding of photographs?, equally arise when looking at the work of another Neue Sachlichkeit photographer, August Sander. Sander was a portrait photographer who conceived a large scale project to document the different types of people living in modern Germany. Although he originally employed an atmospheric, pictorial style of portrait photography, he soon abandoned this technique for a more precise approach to photographing his subjects. Sander planned to group his types of people according to class, profession and gender so as to establish a comprehensive taxonomy of the German population through the objective power of photography. The first (and only) volume of this project, *Antlitz der Zeit (Face of our Time)*, was published in 1929. *Face of our Time* presented sixty portraits, and although many were of individuals, Sander also included couples and groups in his typology. Most of Sander's subjects were displayed in full-length or three-quarter portraits and appeared in either artificial studio settings or in unaltered natural environments. The photographs in *Face of our Time* were deliberately sequenced as the impoverished, farmers and the urban proletariat were positioned either side of portraits of artists and professionals. This suggests that Sander was not so much interested in individuals as he was in the documentation of a general(ised) social history through the representations of subject types.

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August Sander, *Arbeitsloser*, 1928.

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August Sander, *Lackierer*, 1932.

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August Sander, *Erfinder*, 1928.

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August Sander, *Jungbauern*, 1914.

Sander aspired to use scientific methods of empirical analysis to classify the types of people living in Weimar society. His aim was to establish an encyclopaedic-style historical record of his time and place. Sander believed that,

> this historical image will become even clearer if we juxtapose pictures typical of the many different groups that make up human society, which together would carry the expression of the time and the sentiments of their group. The time and the group sentiment will be especially evident in certain individuals whom we can designate by the term type (in Kramer, p. 40).

Sander maintained that types of people could be identified through physiognomy; that facial features and the form of one's body could elucidate character, class and occupation. Appearances were thus entrusted with a prognostic prestige in his photographic world. Benjamin described Sander's *Face of our Time* as a 'tremendous physiognomic gallery' mounted from a scientific viewpoint. He stated,

> sudden shifts of power such as are now overdue in our society can make the ability to read facial types a matter of vital importance. Whether one is of the left or right, one will have to get used to being looked at in terms of one's provenance. And one will have to look at others the same way. Sander's work is more than a picture book. It is a training manual" (1931 ,p. 252).

The Neue Sachlichkeit quest for the objective presentation of German reality was, however, arguably undermined by an inherent paradox that arises between photography's absolute fidelity to appearances and the unpredictability of photographic information. This was perhaps why Sander often included contextual material that assisted in clarifying the types of people he intended to represent in the portrait photograph. The selection and inclusion of objects of trade (such as a pitch fork, a mail bag, a mixing bowl or even paper work), coincided with specific dress to negate any purely objective, physiognomic assessment of the subject's type. Susan Sontag argued that,

> unselfconsciously, Sander adjusted his style to the social rank of the person he was photographing. Professionals and the rich tend to be photographed indoors, without props. They speak for themselves. Labourers and derelicts are usually photographed in a setting (often outdoors) which locates them, which speaks for them... (pp. 60-61).

Sander therefore used formal conventions to differentiate and identify signs of occupation and class. Indeed, in many cases, without the idiosyncrasies of locations and the inclusion of contextual information (as well as accompanying titles such as, 'The Shepherd' or 'Interior Decorator') it would be difficult to distinguish the subject's provenance, occupation and position in society.

This inadequacy, combined with the inevitability of the influence of the photographer's selective use of what kind of representation of an objective reality he chose, leads one to challenge Sander's supposed detached and non-judgemental depiction of archetypal German people. West has argued that, "Sander's progressive intentions were counteracted by the eugenic implications underlying his categorisation. By presenting his 'people of the twentieth century' as types, he inadvertently reinforced a prevailing right-wing view that vestiges of class, race and profession could be read into the face and body" (p. 167). She goes on to question, "whether or not Sander's 'sachlich' view of Weimar Typology is anything but a distortion, perhaps coloured by his own socialist interests" (p. 167). The somewhat contradictory nature of West's interpretations demonstrate not only that the intervention of the photographer's subjective techniques of framing and manipulation of subject matter inevitably influenced how the image's content was read, but also how differently a reality can be read.

Despite West's arguments, Sander has been generally described as politically unbiased. Sontag for instance, has suggested that "a cretin is photographed in exactly the same dispassionate way as a brick layer, a legless World War 1 veteran like a healthy young soldier in uniform, scowling Communist students like smiling Nazis" (p. 61). Sander's uncensored inclusion of the disabled and disfigured, the promiscuous and the poor, and the coloured and the Jew, as legitimate representatives of archetypal German people also seem to undermine West's stance. Indeed, it was precisely Sander's lack of bias that inevitably became problematic when Hitler rose to power. The thoroughness of Sander's archive revealed a truth that conflicted with Hitler's supreme Aryan society and Sander's printing plates were destroyed by the Gestapo.

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Sander's work is symptomatic of Neue Sachlichkeit photography for it inadvertently exposed a number of photographic paradoxes. Neue Sachlichkeit photographers believed that the intervention of the camera mechanised the reproduction process and provided unrivalled jurisdiction over the representation of objects. The photograph, they argued, merely transmitted the reality of the object. They therefore sought to provide a new objective relationship with the modern world by rendering its objects and people visible through the camera. At times however, the precise rendition of an object's appearance - the metallic gleam of industrial machines, the furred texture of coiled ferns or, even, the weathered skin of a farmer's face - was prioritised by Neue Sachlichkeit photographers even more than their idiosyncratic search for truth. Furthermore, in their desire to exhibit the power of the camera they also chose to depict subjects from unusual perspectives (the manoeuvrability of the compact camera enabled these photographers to expose

alternative vantage points from which to see the surrounding world). By selecting particular perspectives, Neue Sachlichkeit photographers demonstrated that reality was in effect controlled by the photographer, as opposed to the camera. These new framing techniques combined with the devices of slow motion and enlargement, afforded camera vision to capture new perspectives of reality that transcended the biological capacity of human vision. These hitherto unsuspected photographic visions of reality had a twofold effect: they not only revealed unseen perspectives of recognisable objects, but also that modernity could be made to look strange through the camera's lens. Photographic seeing therefore induced an aura of the modern world that inevitably challenged habitual seeing and alienated the appearance of familiar objects. The view that Neue Sachlichkeit photographers presented an objective and accurate image of reality can now, in retrospect, be accepted as a fallacy.

Chapter 2

The Language of Light

> The photogram... is a writing with light, self-expressive through the contrasting relationship of deepest black and lightest white with a transitional modulation of the finest greys... the photogram is capable of evoking an immediate optical experience, based on our psycho-biological visual orientation. László Moholy-Nagy

The radically changed reality of 1920s Germany was the catalyst for changes in avant-gardist attitudes towards art. Traditional ways of thinking, values and perceptions were undermined by the tumultuous social and cultural transformations that occurred in Germany after World War 1. Many preconceptions about class structure, the monarchy, political ideologies, economic stability and the role of aesthetics were challenged as the realities of modern Germany produced rapid changes in modes of production, land use, and ways of life. Scientific discoveries, technical developments and the increasing dominance of industrial capitalism prioritised the mechanisation of life. This changed, modern world discombobulated perceptual habits and many avant-garde artists became preoccupied with utopian projects that aimed to reflect and heighten human awareness and sensory experience. Germany lured artists and intellectuals from throughout Europe in the 1920s, despite its damaged economy and political instability. Berlin, in particular, became a centre for avant-gardists to meet, exchange ideas and debate the changing role of art in modern society.

László Moholy-Nagy was one of these international avant-gardists. Born in southern Hungary, he moved to Budapest to study law. His studies were interrupted by the war where he served as an officer in the Austro-Hungarian army between 1916 and 1917. After Moholy-Nagy returned to Budapest, he began to work seriously as an artist. In the winter of 1919 he moved to Vienna (the 'White Terror' of the counterrevolution in August 1919 made conditions in Budapest intolerable). In Vienna he became affiliated with a clique of Hungarian émigré artists and activists who were known as the Ma group. They articulated their shared ideals in an international periodical *Ma; Aktivista Müvészti és Tarsadalmi Folyóirat (Today; Activist Art and Social issues Magazine)*. It was through his association with the Ma group that Moholy-Nagy developed a socially engaged edge to his conceptualisation of art. This overriding concern for humanitarian and social issues eventually led to his formulation of a 'New Vision'.

When Moholy-Nagy moved to Berlin in January 1920, he met several avant-gardists who intrigued him with their different ideas about art. Dadaists Raoul Hausmann and Hannah Höch, De Stijl artist and architect Theo van Doesburg and Constructivist El Lissitzky were in contact with Moholy-Nagy and his wife Lucia throughout the early 1920s. In October 1921 he contributed to the *Aufruf zur Elementaren Kunst (Manifesto of Elemental Art)*, which emerged from the shared ideals of the dadaist, De Stijl and constructivist groups. In the fall of 1922 he also participated in the Dada-Constructivist Congress in Weimar. Moholy-Nagy's involvement in these activities informed his theories about art that would be applied in his experimentation with photography as a modern medium.

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Moholy-Nagy was fascinated by the functional and impersonal characteristics of photography. He examined and disassembled its physical properties in order to distinguish its unique potential and to establish a fundamental definition that, "photography is manipulation of light" (in Haus,p. 47). The interaction of light with a light-sensitive layer (such as paper) provided a formula for Moholy-Nagy's experimentation with camera-less photography, or photograms. Indeed, he argued that "the essential tool of photographic procedure is not the camera but the light-sensitive layer" (in Haus,p. 47). Even before Moholy-Nagy had used a camera to record images in a conventional way, he was experimenting with photograms. This led to a unique engagement with photosensitive images that can be understood in light of his definition. Moreover, Moholy-Nagy's approach to the photogram owed much to the technical experience and scientific understanding possessed by his wife, Lucia. He produced his first photogram in Germany in 1922 (probably working in collaboration with Lucia) and continued to experiment with the photogram technique throughout the 1920s.

A photogram is produced by exposing a light-sensitive surface, such as paper, to light. Intermediary objects of various transparency or density protect the surface from exposure to the light to various degrees. Moholy-Nagy explained that,

> If one chooses a transparent or translucent object in place of an opaque one: crystal, glass, fluids, veils, nets, sieves etc., one gets, instead of the hard outlines, gradations of bright values. And if one combines these values or objects according to definite principles, the results will be clearer and richer, according to one's concentration and experience... A small quantity of white is capable of keeping in balance by its activity large areas of the deepest black and it is less a question of form than one of the quantity, direction and the positional relationships of the particular manifestations of light (in Haus, p. 48).

Variables occur according to the amount of time that the materials are exposed to light. Additional changes are determined by the direction and nature of the light source (sunlight or artificial, single or multidirectional), the positioning of the objects in relation to the light-sensitive surface, the nature of the objects (flat, three-dimensional, textural, transparent, solid) and the arrangement of the objects. Moholy-Nagy experimented with these variables to produce abstract photographic images that were independent of the camera.

The history of the photogram technique actually preceded the development of the camera. Pre-photographic experiments carried out by Thomas Wedgwood in the early 1800s involved copying silhouettes or drawings on glass by placing them onto pale-coloured leather soaked in silver nitrate and exposing them to bright light (Frizot (ed.), p. 19). The basic premise of these experiments was centred on the light-sensitivity of certain substances (the photosensitivity of silver salts was recognised as early as the thirteenth century). Further experiments on the sensitivity of silver salts were carried out by William Henry Fox Talbot around 1835. Talbot placed flat objects such as leaves, flowers or lace on paper soaked in silver nitrate and exposed it to sunlight. These 'photogenic drawings' or silhouettes depicted shapes with tonal values, that depended on the transparency / opaqueness of the object used, against dark backgrounds, where the paper was fully exposed to the light.

The term photogram had also been used to describe certain types of photography that were employed in the natural sciences. Scientists used this technique for a variety of purposes, including the collection of data in observations and the recording of organic specimens and forms in nature. The invention of electromagnetic radiation by Röntgen in 1895 saw the introduction of x-ray photography. X-ray photography extended the use of light as a photographic tool as minute invisible wave lengths, such as infra-red radiation, were exploited to 'see through' objects. The notion of light being composed of discrete increments of energy was extended by Max Planck, who established a theory to isolate the fundamental constants of nature, such as the velocity of light, the constant of gravitation and the quantum of action.

In an artistic era that prioritised the inherent and unique qualities of individual media and embraced scientific and technological developments, avant-garde photographers were exposed to a plethora of ideas and influences. Scientific discoveries in the early 1900s, such as Albert Einstein's Theory of Relativity, fed a growing public interest in the movement of objects and light through space. Einstein's revolutionary paradigm meant that notions of time and space had become relative and only light remained a constant. Andreas Haus has claimed that "Einstein's theory of relativity helped to make possible the notion of light being treated as a 'substance', to redefine mystical ideas of 'fluid' light in a rational form, and to enable light

to be considered an actual ‘material means’ for manipulation” (p. 25). Like others, Moholy-Nagy was influenced by Einstein’s General Theory of Relativity. Eleanor Hight argues that he “came to believe that the ultimate artistic medium was light, creating forms in space, and that these forms would achieve their full realisation when set into motion” (p. 74).

Moholy-Nagy sought to invent an art that was generated by and articulated a synthesis of modern science and technology. He used technology and scientific methods of investigation in a constantly evolving artistic practice and methodology. He aimed to expose new sensory relationships in order to expand human awareness and prioritised perceptual goals throughout his artistic career. He interpreted the act of perceiving, of becoming aware of the modern world through the senses, as belonging to the realm of science. Art, however, would provide the conduit through which humanity would come to terms with new perceptions. In addition, Moholy-Nagy asserted that productivity combined with creative expression were major forces in fulfilling a person’s potential. He sought to dissolve the automated nature of the technological process of production by exposing it to the artist’s ability “to dissect its various elements and thus place them at the disposal of the senses” (Haus, p. 13). Scientific discoveries, developments in physics and the increasing possibility to incorporate technological processes into art were subjects that intrigued Moholy-Nagy and inspired him to develop an innovative theory and practice of photography.

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Moholy-Nagy’s theory about art contained a number of fundamental ideas that he explored in writings throughout his artistic career. These ideas fuelled his notion of a photographic New Vision. By exploiting scientific methods of investigation, Moholy-Nagy systematically dissected the elements of visual phenomena and sensory perception in order to determine a metaphysical (in the sense of acknowledging the existence of abstract entities and universals) basis for form. By reducing visual phenomena to the essential components of form, colour, light, space and time, he aimed to reconfigure these phenomena and stimulate new optical experiences that would heighten visual perception (he saw these abstract constituents as being universal and applicable to any visual art media).

Moholy-Nagy strove to create new optical relationships by using photography to heighten a human biological optical capacity. The extension of this optical capacity required a renewal of visual perception and Moholy-Nagy’s New Vision was formulated to educate society in these new ways of seeing. He claimed that visual perception had previously been orientated towards looking at ‘primary nature’, but the rapid social and environmental changes brought about by the influx of commercialism and industrialisation called

for a retraining of optical perception as a part of the process of adapting to vastly different living conditions. In his 1925 publication, *Malerei, Photographie, Film (Painting, Photography, Film)*, Moholy-Nagy identified eight varieties of photographic seeing or camera vision that were an extension of human vision. One of these varieties of photographic seeing introduces the notion of 'abstract seeing': "(1) *Abstract seeing* by means of direct records of forms produced by light; the photogram captures the most delicate gradations of light values..." (in Caton, p. 73). His experimentation with the photogram can be seen as a process through which he could test his early ideological hypotheses in practical translations.

The influence of both dadaist and constructivist tenets also shaped Moholy-Nagy's explorations with photograms and guided his development of a theory of art. Although the ideologies and aims of these groups differed, they shared some basic concerns. Both the Berlin dadaists and the Russian constructivists rejected past traditions in art and in culture. As Joseph Harris Caton suggests, they believed that the old world could provide no solutions for the problems of the future (p. 19). The anarchic dadaists were committed to dissecting, satirising and collapsing bourgeois art and past cultural ideals that depended on order and rationalism. The constructivists, on the other hand, saw the collapse of social institutions and past traditions as an opportunity to rebuild modern society with a new progressive art.

Their rejection of traditional art led to a reassessment of some fundamental beliefs and questions such as; 1) how should the role of art and of the artist adapt to a radically changed, modern world?, 2) what media can be used to make art and how can it be manipulated?, and 3) how does representation and meaning function within this avant-garde art? Moholy-Nagy participated in numerous ideological debates about these questions with fellow avant-gardists and new manifestos were established in attempts to resolve these issues. In the *First German Dada Manifesto* (1920), Richard Huelsenbeck wrote;

> The word Dada symbolises the most primitive relation to the reality of the environment; with Dadaism a new reality comes into its own. Life appears as a simultaneous muddle of noises, colours and spiritual rhythms which is taken unmodified into Dadaist art, with all the sensational screams and fevers of its reckless everyday psyche and with all its brutal reality (in Harrison and Wood, p. 254).

Dadaists employed objects from everyday life and arranged them in haphazard montage works that would evoke a new reality. The muddle of modern life presented in the nonsensical layers of dada assemblages subverted orderly bourgeois preconceptions about art and culture. In addition, the empowerment of the individual embedded in romantic conceptions of the artist was undermined by the use of found, mass produced objects and images and text gleaned from mass media publications. The dadaists organised their disparate forms in order to explore an object or reality from a new (and often antagonistic) perspective.

If the dadaists saw their mission as smashing the foundations of ossified cultural ideologies and the relics of tradition, then the task of constructivism was to help rebuild or re-'construct' modern society. In 1920, Nikolai Punin argued,

> a social revolution by itself does not change artistic forms, but it does provide a basis for their gradual transformation... Renaissance traditions in the plastic arts appear modern only while the feudal and bourgeois roots of capitalist states remain undestroyed. The renaissance burned out, but only now is the charred ruin of Europe being purged (in Harrison and Woods, p. 312).

The synthesis of scientific discoveries, machines, engineering and technological developments would contribute to the elements / materials for the production of a new visual culture of the future. Indeed, the mechanical reproduction of a mass imagery that was accessible to the proletariat was critical for the constructivists, who saw the absorption of art into industrial production as essential to the establishment of a socially utilitarian art.

Although the aesthetic ideologies of the dadaist and constructivist paradigms differed, they contributed to an avant-garde concept of art that influenced Moholy-Nagy's theories about art. The dadaists' appetite for exploring objects and reality from new perspectives, and the constructivists' conviction that art should be absorbed into industrial production in order for it to be socially utilitarian, can be recognised in Moholy-Nagy's photographic experiments.

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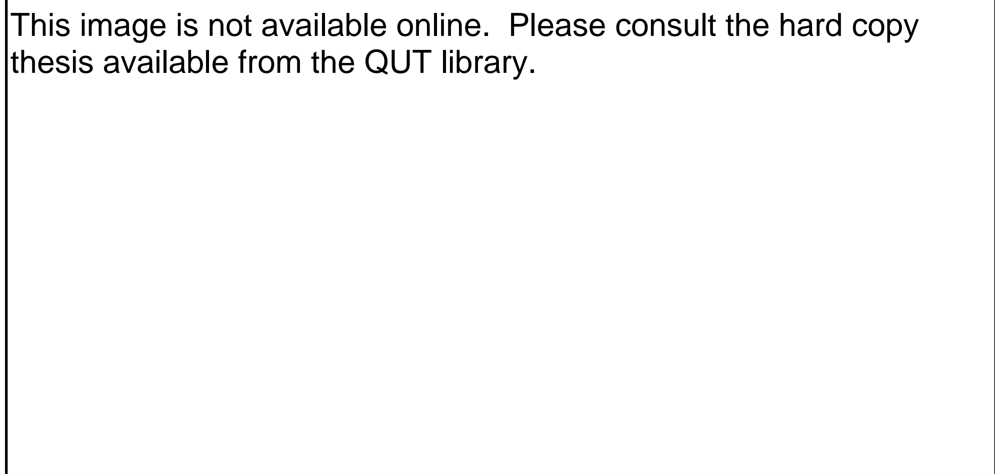
Another significant preoccupation for Moholy-Nagy was to adopt scientific methods of investigation to assist in his analysis of the medium of art. In October of 1921, he joined in the signing of the *Aufruf Zur Elementaren Kunst (Manifesto on Elemental Art)* together with Ivan Puni, Raoul Hausmann and Hans Arp. The text incorporated bold statements such as "We stand for elemental art. Art is elemental because it does not philosophise, because it builds up its products from elements of its own... The elements of art cannot be determined by the artists alone" (in Haus, p. 46). The tools or 'elements' of art were analysed by these avant-garde artists in order to identify fundamental geometric forms and primary materials.

This process was commensurate with the constructivist concept of faktura. Russian constructivist, Alexander Rodchenko, described faktura as; "the organic state of the worked material or the resulting new state of its organism... Faktura is material consciously worked and expediently used... Faktura is the

material" (in Harrison and Woods, p. 317). Faktura was a complex notion for it not only described the material itself, but also the manipulation of that material for constructive purposes. Rodchenko attempted to explain the constructivist methodological approach to avant-garde materials: "The material as substance or matter... Its investigation and industrial application, properties and significance. Furthermore, time, space, volume, plane, colour, line and light are also material for the Constructivists, without which they cannot construct material structures" (in Harrison and Wood, p. 318).

The identification of light as a material or medium that could be investigated and physically worked would be paramount in Moholy-Nagy's photograms. For Moholy-Nagy, the utilisation and manipulation of light as a medium of (and for) composition fulfilled the constructivist notion of faktura. He argued "the light-sensitive layer - plate or paper - is... a blank page on which one may make notes with light just as the painter working on his canvases uses, in a sovereign manner, his tools, brush and pigment" (in Haus, p.17). Faktura's 'speech of material' was not reliant on texture per se, but on the physical working of industrial materials for artistic ends. The recording of light on photosensitive materials thus revealed the manipulation of the medium. The complexity in the faktura process was alluded to, however, when Moholy-Nagy also acknowledged the dematerialised effect of his photograms. He described the effect of the "fixation of light-effects in gradations of black-white-grey directly on the photographic layer... [as] sublime, radiant, almost dematerialised" (in Haus, 47). In Moholy-Nagy's photograms, ethereal circles, diagonal lines and ghostly shadows of fragmented objects move beyond direct representation of matter and into the realm of the purely abstract, and the flat surface of his photograms only faintly echo the dematerialised objects that were used as a part of the initial physical working of the materials.



László Moholy-Nagy, *Photogram*, 1923.

For some critics, the dematerialised effect of Moholy-Nagy's photograms weakened his claims that he interacted with the constructivist notion of faktura. Benjamin Buchloh argued that the notion of faktura implied an interaction between an object and a spectator. He proposed that "to emphasise spatial and perceptual contiguity by mirror reflection... means, once again, to reduce the process of representation to purely indexical signs: matter seemingly generates its own representation without mediation" (in Bolton, p. 55). This description of faktura exposes a tension between the photographic medium's inherent capacity to fix meaning and appearance independent of human intervention, versus an active working of a medium for the purposes of construction. Buchloch's propositions inadvertently undermined Moholy-Nagy's assertion that light was a material that could be physically worked by the artist, and alluded to the complications inherent in Moholy-Nagy's photograms as they challenged previous visual processes of art-making by negating the importance of the original object in the physical execution of art production. What Buchloh fails to acknowledge with his proposition, however, is the undeniable influence of the artist over the ways that the fundamental elements of art are used and represented. With the photogram, productive techniques such as determining the arrangement and types of objects used to interrupt light's exposure to photographic paper and decisions with regards to the direction and duration of that light exposure, arguably underpinned the reproduction process. These techniques incorporated deliberate creative decisions that (in)formed the process of making a photographic image where light is manipulated in order to produce a desired effect. It can, therefore be argued that Moholy-Nagy's hypothesis that light is a substance and material means for manipulation extended rather than problematised the constructivist notion of faktura.

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In *Produktion - Reproduktion* (1922), Moholy-Nagy argued that production, or productive creativity, expanded human awareness so that human potential was being used to the 'limits of its biological capacity'. He, therefore, equated productivity with creativity and stated that, "creations are valuable only when they produce new, previously unknown relationships" (in Haus, p. 46). This suggested that photography's previous use as a medium for reproducing objects in nature without mediation was insufficient and ineffective. Instead, for Moholy-Nagy, the medium of photography needed to be explored in terms of its inherent characteristics in order "to establish far-reaching new relationships between the known and the as yet unknown optical... phenomena" (in Haus, p. 46). New Vision was formulated to highlight these new optical relationships and to renew humanity's perception of the modern environment.

The notion of perceptual renewal was derived from a radical formalism forged in the Soviet Union. Russian

literary critic, Victor Shklovsky, developed key concepts of a formalist doctrine that flourished in the decade after the October Revolution of 1917. Shklovsky was concerned with discovering what formal attributes distinguished literary works from other written works in order to glean what inherent characteristics defined 'literature'. He proposed the notion of 'defamiliarisation' as a useful device in his attempt to engage his formalist pursuits. Like Moholy-Nagy, the formalists argued that perception could be renewed by providing alternative ways of perceiving the known or making the familiar strange. Tony Bennett argues that, "far from reflecting reality... literary texts tend to 'make it strange', to dislocate our habitual perceptions of the real world so as to make it the object of a renewed attentiveness" (p. 20). Photography's capacity to provide unusual perspectives made it particularly receptive to this formula. Moholy-Nagy exploited this notion of defamiliarisation throughout his experiments with photography and adapted its basic principles to his development of the concept of New Vision.

With New Vision, the photographic image could be used to prompt a new sensory consciousness of the modern world by exemplifying different ways of perceiving the familiar. In his 1925 publication, *Malerei, Photographie, Film*, Moholy-Nagy argued that "the camera has offered us amazing possibilities, which we are only just beginning to exploit. The visual image has been expanded and even the modern lens is no longer tied to the narrow limits of our eye". He concluded with the claim that "we may say that we see the world with entirely different eyes" (pp .7 - 29). Walter Benjamin also believed that,

> in photography, process reproduction can bring out those aspects of the original that are unattainable to the naked eye yet accessible to the lens, which is adjustable and chooses its angle at will. And photographic reproduction, with the aid of certain processes, such as enlargement or slow motion, can capture images which escape natural vision (1936, p. 65).

Moholy-Nagy strove to create unique optical relationships not only by using the camera to extend and confront human biological optical capacity, but also by activating vision with the essential tool of photography - light. The dynamic play of light in Moholy-Nagy's photograms enlivened black space and stimulated direct optical experiences.

Moholy-Nagy's photograms therefore transcended the idea that the camera helps us to see what our human eyes cannot by dispensing with the role of the camera altogether. By limiting the elements of photography to simply *light* and a *light-sensitive surface*, and demoting the task of representing physical objects, Moholy-Nagy aimed to instigate a more spontaneous and direct sensory experience. Indeed, his dedication to exploring the potential for working with light overshadowed the importance of intermediary objects used in the production of the photogram's abstract light effects. Moholy-Nagy's belief that, "the photogram is capable of evoking an immediate optical experience, based on our psycho-biological visual

orientation" (in Caton, p. 60) taps into Benjamin's notion of an 'optical unconscious'. Benjamin believed that a space informed by the conscious gave way to a space informed by the unconscious when seeing reality through the mediation of photography.

In his essay, *Photography, Phantasy, Function*, Victor Burgin discusses the ways in which we perceive visual images (photographs in particular) and describes the processes that take place on physiological and cognitive levels. He refers to a text by Karl Pribram;

> What we see... is not a pure and simple coding of the light patterns that are focused on the retina. Somewhere between the retina and the visual cortex the inflowing signals are modified to provide information that is already linked to a learned response... Evidently what reaches the visual cortex is evoked by the external world but is hardly a direct or simple replica of it (p. 193).

By abstracting and estranging light patterns, Moholy-Nagy wanted to subvert these learned responses and instead induce what he referred to as an 'immediate optical experience'. Burgin has also argued that, "we may find ourselves making connections between things, on the basis of images, which take us unawares; we may not be conscious of any wilful process by which one image led to another, the connection seems to be made gratuitously and instantaneously" (p. 195). What Burgin is alluding to here is that the (il)logic of the processes of the unconscious that activate with the connotative slippages that occur when looking at photographic images. By tapping into those unconscious activities with photographic light effects, Moholy-Nagy wanted to 'take the viewer unawares' and to invoke a spontaneous, dynamic optical reaction.

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László Moholy-Nagy, *Photogram*, 1924.

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László Moholy-Nagy, *Photogram No. 1 - The Mirror*, 1922 - 23.

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Moholy-Nagy conceived of New Vision to educate humanity in new ways of seeing and appreciating the modern environment. He adopted the formalist tenet that perception could be renewed by providing alternative ways of viewing the known. Moholy-Nagy also strove to activate vision with light effects and to create new, unknown optical relationships. By subverting learned responses with abstract and strange light patterns, he hoped to instigate a more spontaneous and direct sensory reaction to his photograms.

Moholy-Nagy's photograms contained light-shapes that floated, clustered and spiralled across vast, black backgrounds. Fluid gradations of grey tones cast by the light's interaction with dematerialised objects in varied proximity to a sensitised surface transform known ways of seeing the modern world. In some of Moholy-Nagy's photograms, objects appear to be falling through space as the downward pull of gravity distort light forms that fade into blackness like comets plummeting through a night sky. In other positive photograms, dark geometric forms float in white light like twirling shapes on suspended mobiles. Despite the impulse to look for visual analogues when observing his photograms (Burgin argues "analogies are of course *only* analogies" and instead stresses "the fluidity of the phenomenon by contrast with the unavoidable rigidity of some..." p. 192), Moholy-Nagy's primary concern was to "produce a penetrating light-effect which is without concrete significance, but is a direct optical experience for everyone" (Moholy-Nagy in Haus, p. 47).

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László Moholy-Nagy, *Photogram*, 1922 - 23.

Moholy-Nagy's two primary ideological concerns in relation to his photogram experiments were his systematic investigation into the elements of visual phenomena and sensory perception and his desire to expose new, unknown optical relationships by using the photography to heighten human optical capacity. He attempted to downgrade the value of the material object in society in order to demonstrate the fluidity of the modern object's appearance and believed that his abstracting photographic techniques could provide the conduit that would enable the population to heighten their awareness of modern reality. Moholy-Nagy's methodology thus conflicted with that of the Neue Sachlichkeit photographers, who dismissed his work as undisciplined and amateurish. They argued that abstraction was inherently more suited to the aesthetics of painting, whereas realism now belonged to the medium of photography. As long as photographic images conformed to the visual convention of realism, appearances could be entrusted with a new, revelatory power. Moholy-Nagy's photograms, however, upset these assumptions by revealing optical phenomena that transcended normal perception.

Chapter 3

New Vision, Photographic Seeing and Dynamic Optics

> [Photography posses an essential duality:] On the one hand the joy of reality, of the most exact possible 'recognition' of a piece of reality; on the other hand, the subtle pleasure in what is strange, hidden, unusual in this same surrounding world. Franz Roh

The modernising transformations that occurred in the late 1800s and early 1900s in Germany effected people on many levels. As the physical realities of Germany metamorphosed, habitual sensory perception was no longer adequate. The new world required new ways of seeing and Moholy-Nagy worked to uncover and advocate these new ways of seeing. He sought out the underlying elements of perception in order to evoke a new sensory consciousness of the modern world. The introduction of the compact camera was a technology that provided a means to visually explore both a changed world as well as changed perceptions required for these new everyday environments. Moholy-Nagy formulated the concept of New Vision in recognition of the unprecedented capacity of the camera to both reveal reality from new perspectives (that represented an extension of the biological potential of the human eye), and to produce mechanical images that superseded old concepts of representation. New Vision also had a pedagogical bias as it aimed to teach humanity new ways of seeing the modern world. Furthermore, Moholy-Nagy believed that his new photography could provide a means of visual communication that could be understood universally. He devoted himself to the implementation of these ideas with his camera-focused experimental photography.

The radically changed reality of 1920s Germany alienated many people. Not only had cultural institutions, traditions and values been obliterated by the onslaught of World War 1, but material reality had been transformed as well. The influx of technology and industrially mechanised environments estranged familiar views - towering steel structures and factory buildings overshadowed traditional architecture, and the capitalist market introduced a plethora of material acquisitions and technical inventions that populated these new environments. Marcus Bullock has described these changes;

> The strange and estranging effects of technology under the command of commercial impulses, such as that electric illumination which now invades nocturnal space with an intensity akin to violence, close down the last hope that we can arrive at a framework of adequately distinguished meanings in our life assembled with the snug joints of contemplation and reasoned reflection (in Murray (ed.), p. 43).

The new world, as part of the transformation of modern Germany's living conditions, disrupted habitual

modes of understanding and perception. Walter Benjamin argued that “the mode of human sense perception changes with humanity’s entire mode of existence” and that “the adjustment of reality to the masses and of the masses to reality is a process of unlimited scope, as much for thinking as for perception” (1936, pp. 66 - 67). The ‘aura’ of the modern world thus effected a dissociation from familiar environments.

Moholy-Nagy believed that art could provide the conduit through which the population would come to terms with new perception and reality. He argued that what was needed was a rediscovery of the elements of existence, a nurturing of the health of the visible and a heightening of sensory awareness of the changed, modern environment. He stated,

> Our crucial problem is that capitalism brought us to a stage of economics and radical development where life has become intolerable from the point of view of a healthy and fulfilling occupation. The class struggle is a means... for the improvement of the organic conditions of life. But there exist also other means... which have the aim of giving man an idea of what is necessary for him for a later reconstruction of life after the present total or at least partial shattering of these energies. *Art* is this unconscious preparation, the subconscious education of man (in Haus, p.50).

Both Moholy-Nagy and Benjamin examined the potential of the mechanically reproduced images of photography for the improvement of humanity. Certainly, a dominant motif in Moholy-Nagy’s theorisation of art was that optical manipulation provided the means through which to prepare a form of consciousness suitable for a future society. Photography was also critical for it provided a mass imagery for a mass culture. Indeed, it was the primary force in the management and distribution of images in the modern world.

Moholy-Nagy was driven by the belief that the changed living conditions of industrialised, post-war Germany required an adjustment in perception and that society could be educated into new ways of seeing. Photography was to be used to exemplify and teach modern humans a new active way of seeing. Andreas Haus and Michel Frizot argued that “in living conditions that had become abstract as a result of industry and technology, human awareness could keep abreast of events thanks to a ‘new way of seeing’, one that was active and dynamic, and supported by photography” (p. 462). Devices such as unusual high and low angle viewpoints, oblique views, close-ups and the fragmentation of objects, provided Moholy-Nagy with the means to explore optical phenomena that represented everyday scenes in unusual and unfamiliar ways and that involved the viewer in an exciting and dynamic optical experience.

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The modern condition gave rise to humanitarian and social aspirations for art. Avant-gardists responded to disruptive and inequitous effects of social changes by employing new materials / media and undertaking a reassessment of the fundamental elements of art. Caton suggests that, "the goal was the creation of a metaphysical basis for form - a search for a new *Gestaltung*... for the artists of the twenties, this search demanded, particularly, that the phenomena of the visual world be studied, and then reduced to their component elements" (p. 26). Scientific methods of investigation were used in extensive analyses of the ways that visual realities could be represented through art. The tools or elements of art were dissected into fundamental geometric forms and primary materials. Moholy-Nagy systematically investigated the elements of visual phenomena, including aspects of sensory perception, and reduced essential components to form, colour, light, space and time. The identification of such abstract constituents guided his development of a theory of art and his subsequent experimentation with photography as a tool for heightening optical perception.

Moholy-Nagy's analytical reduction of form was informed by a two prominent avant-gardists. The intellectual leader of De Stijl, Theo van Doesburg, proposed that an artist must turn to "scientific and technical developments, so that he can establish laws creating a system, that is to say, to master his elementary means of expression in a conscious manner" (in Caton, p. 28). Doesburg's pure form of abstraction prioritised diagonal 'counter-compositions' that juxtaposed natural architectural space. Moholy-Nagy saw the purpose of these juxtapositions as "the activation of space by means of a dynamic - constructive system of forces" (in Haus, p. 29). Russian constructivist, El Lissitzky, also saw science and technology as providing efficacious paradigms for the reconstruction of a new society. He aimed to establish a systematic record of the fundamental elements of design that could be applied to all visual art media. These elements would represent the vital components of the visual world and the underlying stimuli of sensory perception.

Throughout his artistic career, Moholy-Nagy searched for the abstract structure of underlying form. Like Lissitzky, Moholy-Nagy believed that once the formal elements (of painting) had been established, they could be applied to any visual art, for they were universal. With photography, however, the application and prioritisation of these abstract constituents proved to be problematic. Photography was a unique art medium because it introduced a form of representation grounded in a realist aesthetic. For Moholy-Nagy, however, what was important was not the representation of objects or matter, but the interaction with light and shade through conjoined surfaces, formal structures, and textures. He attempted to dematerialise reality in order to evoke dynamic optical experiences that could heighten the human sensory understanding of the modern world.

Moholy-Nagy insisted that photography was the ideal guide for this changed, modern world. He saw his abstract formal elements as constituting the foundations of visual perception and argued that they could be applied to the medium of photography to activate an unsuspected heightening of visual perception and to establish a new means of visual communication that would enlist the interests of the general public as they confronted the psychological challenges of the new modern world. This approach became known as New Vision and was premised on the belief that the conditions of modern life subverted habitual and ineffective ways of seeing. Moholy-Nagy believed that due to the inadequacies of habitual vision, humanity would be unable to fully comprehend and appreciate modern life unless they were guided in new and extended methods of optical perception that could be demonstrated through photography.

Developments in Soviet avant-garde photography paralleled Moholy-Nagy's New Vision photography in Germany. Indeed, although Moholy-Nagy and Alexander Rodchenko never met, they exchanged thoughts on each others' works through written correspondence and they shared certain ideological and technical approaches. Moholy-Nagy also had contact with other Russian constructivists in the early 1920s in Berlin, which at the time provided an international meeting-point for intellectuals and artists. Victor Shklovsky's concept of defamiliarisation with the notion of viewing the known in new ways, was uncannily similar to an ideological vein of Moholy-Nagy's concept of New Vision. Additionally, Russian documentary film maker, Dziga Vertov's "kino-eye", echoed Moholy-Nagy's belief that "the photographic camera can either complete or supplement our optical instrument, the eye" (1925, p.28). Moholy-Nagy certainly was aware of and may have been influenced by these ideas, if not always through direct meetings, then through interactions with other Soviet artists in Berlin at the time (the Communist 'Red Terror' of the civil war between 1918 and 1920 was directed above all against the Russian Intelligentsia and many artists fled Russia to escape the increasingly unbearable living conditions).

Human complacency and unquestioning recognition of the changes taking place in the surrounding world were habits attacked by various artists and critics as a part of the revolutionary struggle instigated by Communism. Shklovsky argued that the ideal function of art could be realised through a process of defamiliarisation - of viewing the known world in new ways. Art started to be used as a provocative agent. It was believed that art had the potential to prompt the viewer to challenge preconceived knowledge, which would in turn encourage growth and change. Shklovsky claimed that "a phenomenon, perceived many times, and no longer perceivable, or rather, the method of such dimmed perception, is... 'recognition' as opposed to 'seeing'. The aim of imagery, the aim of creating new art is to return the object from 'recognition' to 'seeing'" (in Bennett, pp. 53 - 54).

By identifying and collating the essential forms of literature, Shklovsky aimed to estrange habitual modes of representation and perception by revealing the formal operations that provide our access to reality and construct what is usually accepted as reality. For Moholy-Nagy, the essential constituent of photography was light - "the 'textures' and 'structures' of the real world were sought out for their ability to translate the photographic interaction of light and shade" (Haus and Frizot, p. 463). With photography, Moholy-Nagy strove to activate a dynamic optical experience that surpassed habitual ways of seeing. By revealing reality from new perspectives, both Shklovsky and Moholy-Nagy aimed to tap into what Roh described as 'the subtle pleasure in what is strange, hidden and unusual' in fragments of reality that can be nonetheless recognised as belonging to the modern world.

In keeping with the principles of formal experimentation with the avant-garde, Vertov advocated attention to the purely inherent qualities of each specific medium and the integration of art into modern life. He argued that the camera could be used as an effective defamiliarising device and that its 'eye' provided a means to create a new visual language by dissolving the habitual constraints of human vision. He stated,

> I'm an eye. A mechanical eye. I, the machine, show you a world the way only I can see it. I free myself for today and forever from human immobility. I'm in constant movement. I approach and pull away from objects. I creep under them. I move alongside a running horse's mouth. I fall and rise with the falling and rising bodies... Freed from the boundaries of time and space, I coordinate any and all points of the universe, wherever I want them to be. My way leads towards the creation of a fresh perception of the world. Thus I explain in a new way the world unknown to you (in Berger, p. 17).

As with Moholy-Nagy, unusual vantage points and angles were used to disorientate the viewer and exemplify alternative ways to perceive the modern world. Vertov conceived of a 'kino-eye' that referred to the objective eye of the camera. He argued that the kino-eye had the capacity to see more than the human eye and that it could separate general(ised) vision into components through isolating and framing, and that this technique would assist in interpreting and making sense of visual phenomena. In this sense, the kino-eye was yet another manifestation of the optical unconscious.

Moholy-Nagy's attitude towards the camera was largely consistent with Vertov's approach. For Moholy-Nagy, however, a concern for the abstract structure of underlying form, as a universal guide to the foundations of sensory perception and artistic creation, guided his experimentation with photographic techniques of alternative framing and cropping. Unusual perspectives, both from above and below, abstracted scenes by accentuating the relationship between forms in space and the interplay of light and

shade. Moholy-Nagy claimed that man perceives space "...through his sense of sight in such things as wide perspectives, surfaces meeting and cutting one another, corners, moving objects with intervals between them..." (in Caton, p. 35). Moholy-Nagy's camera eye tended to frame images that revealed geometric and dynamic abstract effects that also estranged familiar scenes. He aimed to exemplify new ways of seeing and to heighten a sensory awareness and understanding of the modern environment.

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When looking at Moholy-Nagy's camera photographs, his preoccupation with the interaction of forms in space and the subsequent translation of them into dynamic light / shade effects is clear . He repeatedly used shadows to accentuate geometric grids and shapes, and light to activate the way the eye traversed the image in the process of perception. Additionally, he framed his images from unusual view points in order to distort recognisable scenes and to transform ordinary objects into novel visual representations. One cannot help acknowledging, however, an uncanny tension between the formal composition of his photographs and the representational content. Moholy-Nagy was not particularly interested in communicating narrative messages or illuminating subject matter with his photographs. Yet the unavoidable representation of objects in camera photographs, regardless of their transformation, entices the viewer to interpret these objects as signifying meaning that often confuse the desired optical dynamism of his images.

In *Street Drain* (1925), Moholy-Nagy adopted an unusual perspective that isolated commonplace subject matter in a decontextualised downward angle view. The extreme close-up divides the rectangular picture frame into sections: an unfocused pavement fills an asymmetrical lower half of the composition, whilst a strip of fabric diverges water flow with a strong diagonal line across the upper left. The play of light on the water suggests movement and texture and enlivens the image with a similar effect of a fire's wind-blown sparks through a night's sky. With *Street Drain*, Moholy-Nagy enticed the viewer's eye to follow the light patterns, and thus to actively participate in an optical experience.

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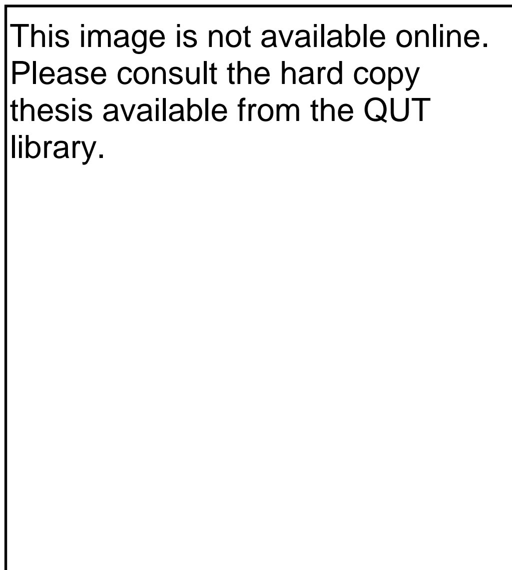
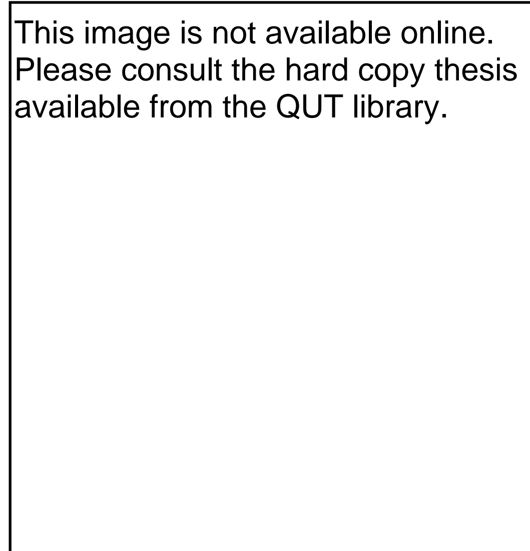
László Moholy-Nagy, *Street Drain*, 1925.

He also capitalised on an interplay between light and shadows in order to involve the viewer in uncanny optical illusions in his disturbing photograph *Dolls* (1926). Two dolls lie on their backs and are naked (one has its legs missing and has a dislocated arm). The positive and negative areas of the photo are unified by the grid shadow of a fence. Again, Moholy-Nagy's use of unusual perspective and the disposition of forms into an abstract composition draw the viewer into the dynamic spatial structure of the camera work. By isolating this unusual shadow pattern, Moholy-Nagy aimed to highlight the optical fluidity of modern reality.

Dolls, however, also introduced anthropomorphic themes into Moholy-Nagy's abstract compositions and, thus, accentuated the inherent tension between form and content (the two dismembered dolls seem vulnerable and dwarfed by their grid-shadow enclosure). This duplicitous effect is also evident in his *Portrait of Lucia Moholy* (1926). Here, Moholy-Nagy's manipulation of light and shadow fragmented the image into abstract shapes, yet also alludes to an eerie sense of oppression. Lucia's face is photographed close up. An angled shadow obscures her eye and mouth, and her dark curled hair falls across her other eye. The dramatic light effects dominate this photograph where rectangles of light frame a nose, cheek and a shoulder while short diagonal stripes ascend the right hand edge. Despite the softened focus that aids the visual deception of emerging geometric shapes and the subordination of references to human attributes, one is confronted with a non-traditional portrait photograph that inadvertently treats a human condition (indeed, one wonders if Moholy's photograph of Lucia inadvertently refers to an unhappy emotional or psychological content).



László Moholy-Nagy, *Dolls*, 1926 - 27.



László Moholy-Nagy, *Portrait of Lucia Moholy*, 1924 - 28.

Moholy-Nagy's architectural and aerial view camera photographs, however, more determinedly adhered to an analysis of the structural and spatial attributes of modern architecture and the abstract potential for studying form. In *Bauhaus Balconies* (1926 - 1928) he frames the functional Bauhaus building within an upward-looking and oblique view. This exaggerates the geometric and linear qualities of the square under-surface of the successive balconies, while the dark glass windows and their frames and the plain walls differentiate each level. The unusual angle disconcerts the viewer and only the inclusion of a poised figure leaning over a (seemingly) tilting balcony railing uncannily provokes the vertiginous reaction "don't jump!". Moholy-Nagy succeeded in completely alienating the viewer in his 1925 photograph *Paris (Eiffel Tower)*. The composition's arrangement (the unusual, close-up view from directly underneath the structure) submerges the viewer in an abstract scene of metallic linear patterns where perspective and depth are only vaguely recognisable. With *Paris (Eiffel Tower)*, Moholy-Nagy exemplified an alternative way of seeing something familiar by probing with the camera lens and revealing unfamiliar, rich network of steel.

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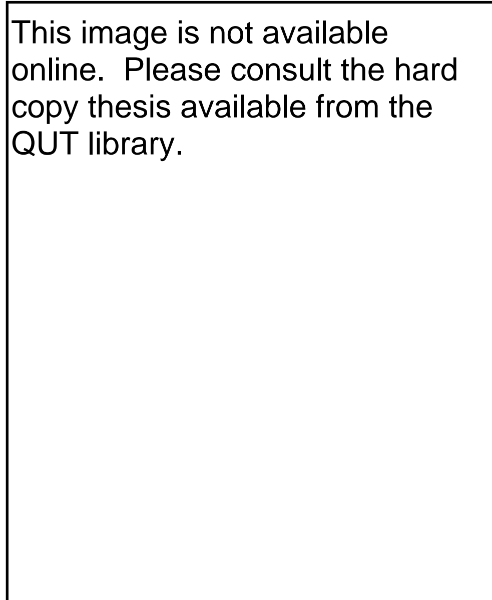
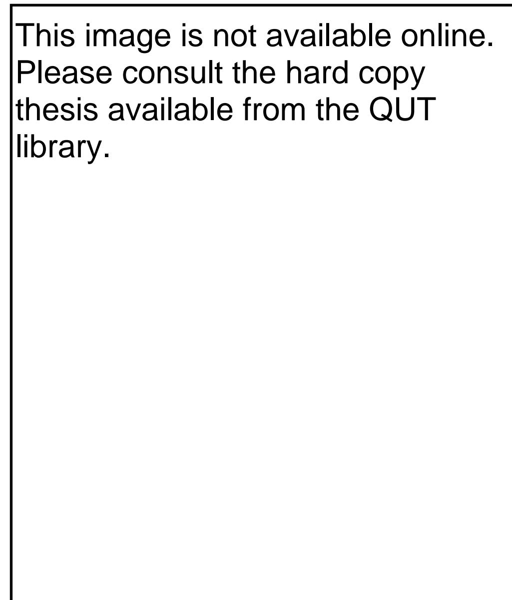
László Moholy-Nagy, *Bauhaus Balconies*, 1926 - 28.



László Moholy-Nagy, *Paris (Eiffel Tower)*, 1925.



László Moholy-Nagy, *View from Pont Transbordeur, Marseilles*, 1929.

Moholy-Nagy's representation of a view looking down to a transporter bridge in Marseilles in *Pont Transbordeur* (1929), further challenged the viewer to recognise what was being photographed. A band of light-coloured concrete extends up the centre of the picture plane. Dark water frames the bridge on either side, and on the left a row of small boats teeter in an uneasy balancing act. From the top right a line of rope leads to the centre of the composition and is coiled in a scribble of circles. An elongated shadow reveals an otherwise inconspicuous speck of a walking figure and exaggerates the grandiose size and power of the industrial structure. The defamiliarising effect of the aerial view coerces the viewer to acknowledge and interact with optical illusions (the walking curbs almost delineate the shape of a robotic head). The rich spatial relationships of the composition effectively strengthen Moholy-Nagy's promotion of the value of challenging established and limited habits of viewing the modern world.

The emerging emphasis on the innate value of visual perception and of sensory interpretations of a modern, industrial society was given heightened credibility by Moholy-Nagy's camera photographs. His experiments with space and movement evoked a dynamic response from the viewer and generated an active optical experience. His innovative use of unusual camera views, oblique angles, isolation of detail and the deliberate manipulation of light and shadow, defamiliarised quotidian scenes as well as architectural and machine constructions. They also encouraged the viewer to adopt a fresh realisation of radically-changed living conditions. Moholy-Nagy's decisions with regards to titling his photographs can be more clearly understood in this light. The centre of interest in each of his photographs was not the object after which the image was titled (for example, 'Street Drain', 'Dolls', 'Bauhaus Balconies' etc.), rather the revelation of new ways of observing and appreciating the fluidity of the object's appearance.

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Moholy-Nagy's underlying pedagogical ambition, however, was to promote photography as the dominant tool in a new visual form of communication. He established a basic visual structure with his abstract photographic works and identified form, colour, light, space and time as the foundational elements upon which visual perception functions. He methodically analysed and manipulated these elements and applied them to the medium of photography in order to construct an innovative means of communicating visual information. Caton argues that, "It was a form of communication that would use the structure provided by the abstract elements of *Gestaltung* [the whole or formation] as the basic visual context on which the presentation of visual information would depend... the abstract structure of underlying form provides a scaffolding on which the visual image depends" (pp. 67 - 68).

Moholy-Nagy's claim that photographs could provide a natural visual language raised some important questions in relation to the reliability of photographic meaning. The basic idea underpinning his approach to visual communication was that the photograph could be understood as embodying a universally recognisable and readable language that was independent of cultural literacy. This ideology demanded a clarity of a visual image that was powerful enough to allow immediate recognition and understanding. For simultaneous perception and understanding to occur, however, one must accept that the photograph reproduces reality unequivocally and is therefore visually objective, as well as trust that the ways the photograph is interpreted are consistent. Roland Barthes has argued that, "in order to move from the reality to its photograph it is in no way necessary to divide up this reality into units and to constitute these units as signs, substantially different from the object they communicate; there is no necessity to set up a relay, that is to say a code, between the object and its image" (*c.*1977, p. 17).

The viability of the photograph as a visual communication tool presumed a predictable information exchange between the photo-image and the viewer, or 'reader'. The belief that meaning is fixed within the photographic image, however, was difficult to substantiate. Indeed, meaning can be interpreted in a number of ways and ultimately fluctuates with historical and cultural associative specificities. Moholy-Nagy's photographs demonstrated that objects that are represented in photographic images can allude to a variety of associations that shift with the use of contextual information and photographic devices such as cropping, manipulation of subject matter, and captions. Ironically, his own photographic procedures undermined his ideological assumptions about photography. In his essay, *On the Invention of Photographic Meaning*, Allen Sekula argued that,

> the photograph is an 'incomplete' utterance, a message that depends on some external matrix of conditions and presuppositions for its readability. That is, the meaning of any photographic message is necessarily context-determined. We might formulate this position as follows: a photograph communicates by means of its association with some hidden, or implicit text; it is this text, or system of hidden linguistic propositions, that carries the photograph into the domain of readability (p. 85).

The fragmented nature of the photographic image, therefore, cuts off contextual information that ultimately anchors photographic meaning and reliable information.

Photographic meaning, therefore, lacks stable and cohesive information that leads to clear comprehension. It acts on multiple levels between what Barthes identifies as denoted versus connoted iconic messages. He argues that "all images are polysemous; they imply, underlying their signifiers, a 'floating chain' of signifieds, the reader able to choose some and ignore others" (*c.*1977, pp. 38 - 39). Barthes thus acknowledges a universality of analogous meaning inherent in the photographic image. This interacts with a secondary culturally determined connotative meaning. In this context, Moholy-Nagy's search for simultaneous perception and understanding was undermined by learned association patterns that were (and remain) historically and culturally specific. They could never be universal and their meaning was not culturally transcendent.

Moholy-Nagy adapted his approach to his theory of visual communication and used text to direct the viewer on how to interpret his typophotos (a style of printing where graphic design techniques, text and photography were combined). With his proposition "typophoto is the visually most exact rendering of communication" (1925, p. 39), Moholy-Nagy acknowledged the enhanced communicative power provided by the combination of text and photographic images, particularly in typographical formats. His proposition, however, remained grounded in the values of photography as "the visual presentation of what can be

optically apprehended" and the dogmatic belief that photographic images offer "a precise form of representation so objective as to permit... no individual interpretation" (Moholy-Nagy, 1925, pp. 39 - 40). By combining typography and photography, Moholy-Nagy argued that "the typophoto governs the new tempo of the new visual literature" and, thus, "the printer's work is part of the foundation on which the new world will be built" (1925, pp. 38 - 40). For Moholy-Nagy, the embeddedness of the photographic image in a text-complimented environment allowed photographic meaning to be controlled.

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Moholy-Nagy believed that photography could be used as a pedagogical tool to guide humanity in adapting to and appreciating the modern environment. Photography was seen as an integral part of the new machine age - it provided mass imagery for a mass culture and a modern mode of seeing (Wells,p. 83). The photographic seeing or New Vision associated with this device could reveal objects and fragments of reality from different perspectives. The subsequent recognition of these strange looking objects was something that he believed was both pleasurable and educational. Furthermore, experiments with formal relationships and light / shade effects in the photographic image could be used to involve the viewer in an active optical experience. Habitual and static modes of perceiving the changing world could be replaced with heightened sensory experiences once this new, dynamic, photographic way of seeing had been established and learnt.

When Moholy-Nagy took photographs with a camera he was preoccupied with the illumination of forms in space and the subsequent translation into dynamic light effects. He experimented with shadows to accentuate geometric grids and shapes, and light to activate the way the eye traversed the image in the perception process. The unavoidable representation of objects in the photographic image inevitably alluded to associations of ideas that often undermined Moholy-Nagy's abstract optical effects. These associations also imposed limits on Moholy-Nagy's utopian project to establish a universal, visual language with photography. The basic tenet underlying Moholy-Nagy's conceptualisation of a mode of visual communication relied upon the notion that the photograph embodied a universally recognisable and readable language that was independent of cultural literacy. For Moholy-Nagy to have achieved his aims, however, one must accept that the photograph reproduces reality faithfully and is therefore visually objective, as well as trust that the ways the content / message in the photograph is interpreted are consistent. Objects that are represented in photographic images, however, can allude to a variety of meanings that fluctuate for they are dependant on specific contextual information and photographic devices.

Chapter 4

Enigmatic Objects and Shattered Realities

> It is the marvellous faculty [of photomontage] of attaining two widely separate realities without departing from the realm of our experience, of bringing them together and drawing a spark from their contact; of gathering within reach of our senses abstract figures endowed with the same intensity, the same relief as other figures; and of disorientating us in our own memory by depriving us of a frame of reference. André Breton

Photomontage challenged the photograph's axiomatic relationship with reality. It did this by fragmenting and isolating images as independent signs and tearing off contextual information that would serve to anchor photographic meaning. Positioning these signs in new contexts produced new visual realities. Photomontage introduced a new power to defamiliarise and shock with its enigmatic objects and shattered realities forged by unexpected juxtapositions. Many avant-gardists working in the 1920s employed specific photographic objects to both draw upon their unique connection with reality and to fulfil altered signification roles in their constructed realities. This dual application meant that photo-fragments could be manipulated by modern artists to produce visual narratives that could address social-political themes in ways that extended beyond the conventions of quotidian reality (these constructed realities were often surreal). Ironically, these artists also exploited the photo-fragments supposed indexical connection with its object. The photographed object's appearance of being real empowered the negotiation of meaning by limiting the distinction between photographic signs and the objects that they communicate. Photomontage narratives suggested that reality could be manipulated by artists to expose social and political contradictions and persuade alliances. This subjective utilisation of the photographic fragment problematised the understanding of photography as a reliable and objective source of information.

Photomontage was employed in dada and constructivist circles in the years immediately following the First World War. The Berlin dadaists formulated the term photomontage to describe a new technique that incorporated photographs into collaged ensembles. The term had its origin in the adoption of the words 'montieren' (to assemble, set up) and Monteur (engineer), and was appropriated by the Berlin dadaists as a part of their desire to identify themselves with the working class. The photomontage described a composite image made up of photographic fragments that were cut from their original source (often from the mass media) and reassembled to produce a new image. Photomontage could also embrace the use of text, drawn lines and planes, and painted colour as well as the technique of printing superimposed negatives.

Both the Berlin dadaists and the Russian constructivists utilised the photomontage technique to provide a means to move beyond abstraction, without regressing to the tradition of painterly imagery. For Moholy-Nagy, photomontage introduced a method for manipulating and extending the range of photographic imagery beyond that of the pure abstraction of his photograms and formalist photographs. With photomontage, he could continue his investigation into constructivist ideals of form and composition, whilst interrogating the relationship between reality and the photographic image. The slicing disconnectedness of photomontage challenged assumptions about the immediacy of the photographic image and the nature of its verisimilitude. In fact, fragmented photographic images provided the elements for the creation of new and unfamiliar visual realities. Photomontage, therefore, also afforded Moholy-Nagy a means to amalgamate photographic fragments to create new optical worlds and to exploit the iconic meaning of the photographic image to acknowledge and comment on certain social changes in 1920s Germany.

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The main use of photomontage in Germany was undertaken by the Berlin Dada Club. The club, formed in 1918, marked the alliance of a number of German avant-gardists, including Raoul Hausmann, Hannah Höch, George Grosz and John Heartfield. These artists were disillusioned with the damaged society of post World War 1 Germany, as well as the established rules and conventions of art. The dadaists were dissatisfied with the rules of representation and perspective, the role of the creative artist, and the elitist nature of art's education, content and dissemination to the public. This frustration with traditional art motivated their fervent experimentation with alternative media and new ways of communicating ideas. The Berlin dadaists have often been typecast as unruly artists because of their attempts to subvert romantic conceptions of the artist, and their desire to expose the corruption and impotency of contemporary social institutions. Yet, despite their anarchic reputation, these artists shared quite deliberate and purposeful aims.

For the Berlin dadaists, the violence and chaos of post-war Germany demanded a politically engaged consciousness that could directly and politically interact with the real world. This was why they rejected Expressionism, which they saw as a self-absorbed and internalised elitist style of art. The Expressionists' utopian beliefs aestheticised, and for the dadaists, therefore, trivialised, the realities of the external world. The Berlin dadaists' 'First German Dada Manifesto' (1920), written by Richard Huelsenbeck, attacked the ineffectiveness of Expressionism and promoted dadaist aims:

> The highest art will be the one which in its conscious content presents the thousandfold problems of the day, the art which has been visibly shattered by the explosions of last week, which is forever trying to collect its limbs after yesterday's crash. The best and most extraordinary artists will be those who every hour snatch the tatters of their bodies out of the frenzied cataract of life, who, with bleeding hands and hearts, hold fast to the intelligence of their time (in Ades, p.26).

The agitational propagation of ideas relating to external realities and pertinent social issues demanded the employment of a visual medium that generated a powerful bond with reality. Photographic objects were chosen for their immediate relationship with the real world and were manipulated by the dadaists to exploit their unparalleled potential for containing explicit associations of meaning. These photographic objects were detached from their original contexts and repositioned to announce trenchant commentaries on the world as they saw it.

The photomontage works of Höch and Heartfield, in particular, sought to expose the 'thousandfold problems of the day' through topics that addressed class structures, the effects of capitalism and institutionalised political violence and oppression. Both artists sourced their materials from printed mass media and employed the photograph as a ready-made cut from newspapers, magazines, advertisements, books and other printed matter. They pieced together their fragmented photographic images in layered photomontage works in order to expose socio-political contradictions as well as to demonstrate visual echoes of the shattered modern realities of 1920s Germany.

The descriptive terminology used in the dada manifesto, such as 'shattered', 'tatters' and 'frenzied', influenced the aesthetics of many dadaist photomontage works. Höch, for example, made no attempts to disguise the torn edges and dislocated character of her ready-made photographic images and self-consciously arranged them in chaotic combinations. This technique was skilfully deployed in her *Cut with the Kitchen Knife Dada through the Last Beer-Belly Cultural Epoch of Germany* (1919-20). This detailed and complex work depicts authority figures from the former Empire, the military and the new government of the Republic who are grouped in the top right corner with the text 'Die Anti Dada'. Radicals, communists and fellow dada artists are scattered across the lower right corner. The frenzied arrangement of elements and sections of thickly layered images are dispersed into open space where isolated androgynous figures float like strange circus freaks amongst machine parts, animals and disembodied heads. Indistinct clues within the work, such as the inclusion of a small map identifying European countries in which women could vote, allude to Höch's underlying concern with the political empowerment of women in post-war Germany.

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Hannah Höch, *Cut with the Kitchen Knife Dada through the Last Weimar Beer-Belly Cultural Epoch of Germany*,1919 - 20.

In contrast to Höch's photomontage technique, the leftist Heartfield discretely blended disparate photographic elements to create surreal images that communicated his socio-political views. The injustices of capitalism, the ironies of massive unemployment in an era of increasing consumerism and the links between capitalism and militarism were just a few themes that he addressed with his photomontage works. Heartfield left the dadaist group to work for the German Communist press and produced photomontages as covers and illustrations for newspapers, magazines and books. Although he was forced to leave Germany in 1933, he continued to satirise German politics through photomontages in Prague and later London.

Heartfield's photomontages were intelligently constructed and exuded both a comic uncanniness and a thought provoking intensity. In *Hurrah, the Butter is Finished* (1935), he depicted a family sitting around their living room table devouring iron objects. He decorated the room with swastika icons (that were seamlessly incorporated into decorative wallpaper) and a portrait of Hitler, to allude to the intrusion of Nazi propaganda into quotidian family environments and ways of life. The text at the bottom of the work quotes Goering's announcement that, "Iron always makes a country strong, butter and lard only make people fat". By tearing the photo-fragments of iron objects from their usual contexts and placing them in the new and somewhat surreal setting of the dinner table, being eaten by a family, Heartfield subverted the objects' conventional meanings. For example, a sharp edged tool becomes a menacing threat as it is teethed upon by a baby in the foreground of the composition. Heartfield translated Goering's words into visual icons and manipulated these icons to lampoon the quoted statement. He achieved this by establishing a sardonic visualisation of the capacity for these objects to induce strength by consumption.

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John Heartfield, *Hurrah, the Butter is Finished!*, 1935.

Heartfield's photomontage works were convincing and effective largely due to the belief that the reality represented in the photographic image was natural or a source of truth. By manipulating these images in photomontages, however, he inadvertently exposed the ambiguous nature of the photograph's relationship with reality and the capriciousness of photographic meaning. Dawn Ades argues that,

> While the dadaists, perhaps unconsciously, attempted to avoid the expression of an ideology - implicitly present in any image that is intended to represent reality - by breaking up images, Heartfield was able by juxtaposing them to reveal the ideology for exactly what it was, rendering visible the class structure of social relationships or laying bare the menace of fascism (p. 45).

By fragmenting or breaking up images and by exploiting the ideology or system of meanings of the photo-image, Heartfield challenged the photograph's supposed ability to capture objective reality and instead emphasised that its power to influence was predicated on the ability to 'stage' the world. The Berlin dadaists wanted to comment on and engage with the changed, visibly shattered socio-political conditions of 1920s Germany and for some this meant embracing a visibly shattered aesthetic. The disconnected visual layering technique of the photomontage combined with the immediacy of the photographic object provided the ideal medium to achieve this aim. The dadaists questioned the objectivity of appearances, experimented optically and produced new visionary realities. The process of cutting or dislocating photographic objects from their usual contexts expanded the potential for tapping into, as well as creating, alternative correlations of meaning. Because these meanings were established by what were seen as indexical signs (that is, signs that had a direct connection with the original object), they acquired a poignancy and persuasive power unrivalled by non-photographic forms of visual representation.

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In Russia, the political upheaval of the October Revolution had a major impact on the avant-garde artists of the time. It certainly inspired these artists to engage in passionate debates about the role of the artist and of art in a new Communist society. Art was designated the momentous task of shaping public consciousness through the use of propaganda images. For a society that was largely illiterate (and had no single language) the task of educating and informing people required a system of representation and signification that was universally recognisable and easily comprehended. This education involved an art of persuasion and 'agitational-propaganda' (agit-prop) to convey the aims and to celebrate the achievements of the Soviet state.

In order to discover a means to address a new Communist society, a generally accessible aesthetic had to be developed. Because photography did not rely on specialised skills of literacy to understand the information it contained, the photographic image could be employed to play a powerful role as a modern communication tool. It was generally accepted that these images provided a reliable and precise iconicity of representation, and when combined in photomontage works could readily extend art into the fields of political propaganda and commercial publicity. As the tools and techniques of artistic production shifted, so did the forms of dissemination and reception. Developments in communications media, advertising and typography provided new outlets for avant-gardists, who transferred their photomontages onto postcards, book jackets, posters, advertisements, magazine and book illustrations. Indeed, many avant-garde formal innovations became mass media standards.

Photomontage became the preferred medium for the *Lef* group (*Journal of the Left Front of the Arts, 1923 - 5*) founded by Alexander Rodchenko. For Rodchenko, photomontage had the power to contribute to the building of a new socialist state and, therefore, justified artistic labour. By using the tools and materials of modern production he assumed the role of the engineer or technician (the constructivists saw the absorption of art into industrial production as critical to successfully establish a socially utilitarian art). The process of production (the mechanical reproduction of images, cutting and assembling) and the material conditions (that is, the conditions of the photograph) would determine the construction of photomontage works. The synthesis of art, scientific discoveries, machines, engineering and technological developments would contribute to the elements / materials for the production of a new visual culture of the future.

Russian avant-gardists exploited photography's unique relationship with reality by selecting and organising specific photographic objects to communicate specific meanings. Indeed, some constructivists advocated that the photograph transmitted the literal reality of the object, and therefore, could be treated as providing unbiased, documentary information. The use of these testimonial objects combined in constructed realities seemed to establish the persuasive power that was required to shape a new Communist consciousness. In the forth issue of *Lef* a statement entitled *Photomontage* addressed the value of employing photographic objects as purveyors of truth:

> By photomontage we mean the use of the photograph as an illustrative means. A combination of photos replaces a composition of graphic images. The sense of this substitution is that the photo is not a sketch of a visual fact, but an exact fixation of it. The exactness and documentariness give the photo a power of influence over the observer which a graphic image can never attain (in Ades, p. 72).

Certainly, this statement echoes the modernist tenet that the reality represented in the photographic image

was a source of truth (or, an ‘exact fixation’ of a visual fact). The constructivist arrangement of photographic objects in photomontage works repositioned existing photographs of reality to build up new realities that reflected their utopian ideals. The recognition of (at least) fragments of this new reality as reliable sources of truth (despite their displacement) was thought to empower the communication of propaganda.

The ‘photograph-as-a-document’ used by constructivists in their photomontage creations was invested with a complex metonymic power. John Fiske explains;

> Metonyms are powerful conveyors of reality because they work indexically. They are part of that for which they stand. Where they differ from the ‘natural’ indexes like smoke for fire is that a highly arbitrary selection is involved. The arbitrariness of this selection is often disguised or at least ignored, and the metonym is made to appear a natural index and thus given the status of ‘the real’, the ‘not to be questioned’ (p.98).

With photomontage, new realities are founded on the fragmented disposition of photographs whose distinct realities become integral parts in a new whole. The meanings usually associated with these photographs often shift in their new photomontaged environments.

The ways that Russian avant-gardists exploited the photographic power in photomontage works varied. Gustuv Klutsis was one of the first Russian artists to work with the photomontage technique. Klutsis was a political activist who believed that art should be connected to political goals. He thus used photomontages to disseminate Bolshevik agendas. In his poster photomontage, *Let Us Fulfil the Plan of the Great Projects* (1930), he used a photograph of his own palm as a sign of the individual’s voting power. The hand motif is repeated on a diagonal and is superimposed over a dense crowd of workers (with Klutsis, the artist’s hand symbolises action rather than creation). Klutsis also experimented with the photographic object’s signification schema to communicate notions of social unity and collective voice. In *We Will Build Our Own New World* (1931), a merged female and male face overlooks an industrial landscape and crowds of workers. Their overlapping faces and shared expression were intended to provide a metonymic representation of a unified consciousness. By arranging fragmented photographic images of crowds and individuals in close proximity, Klutsis established new archetypal environments whilst taking advantage of photography’s unique relationship with reality to legitimise and empower his socio-political ideals. In other words, by using photographic images as the framework for the construction of his new worlds, he meant to tap into the ‘this is real and not to be questioned’ quality of the photographic ‘natural index’ to strengthen the perceived potentiality of his imagined realities.

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Gustav Klutsis, *Let Us Fulfil the Plan of the Great Projects*, 1930.

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In contrast to Klutsis, El Lissitzky prioritised constructivist ideology and the viability of the object over the politically active manipulation of reality. Through his materialist aesthetic, he persisted with the notion of faktura and continued to explore the form of a work of art that was constituted by the material and the organisation of that material in the process of construction. In a 1924 self-portrait photomontage, Lissitzky identified himself as *The Constructor*. The work combined superimposed negatives and direct exposure techniques. His left eye is obscured by shadow whilst his right eye stares pensively from the open palm of his hand. His forehead (and therefore his thoughts) seem directly connected to the tool of the creator represented by the hand (with Lissitzky, the artist's hand embodies a working class - engineer persona). The hand manipulates a compass and constructs a circle behind his head. The circle, rectangles and alphabetic letters frame his face, whilst a fine grid merges across it.

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El Lissitzky, *The Constructor,* 1924.

The distinctive, abstract graphic design evident in works like *The Constructor* came to provide the basis for non-objective, constructivist art that influenced Moholy-Nagy throughout his artistic career. His interest in photomontage, however, led to a tangent in his avant-garde experiments - it reintroduced representational traits that seemed at odds with his underlying philosophy and constructivist aesthetic. The avant-garde interaction with mass culture and politics between the world wars, both in Germany and in Russia, was unprecedented and seemed to demand a search for a new aesthetic that engaged with the mass media and modern reality. Although Moholy-Nagy was not a political activist, he was certainly driven by a concern for social matters and humanitarian issues (and was anxious about the direction of the changes taking place in modern society). These issues provided a plethora of themes, that addressed dysfunctional relationships, conflict between the sexes and silent complicity, that were largely neglected or deemed irrelevant in his experiments with other art media. The deliberate inclusion of photographic fragments in his photomontage creations provided Moholy-Nagy with a means to exploit the variety of meanings and associations contained within a photograph.

Moholy-Nagy began experimenting with the photomontage method in 1923. His interaction and friendship with a number of Berlin dadaists, including Hausmann and Höch, influenced the development of his formal techniques and choice of subject matter. In his 1924 photomontage, *The Farewell*, Moholy-Nagy established a fantastic scene by combining disparate photographic fragments with painterly techniques. The image presents a melodramatic parody of romance as the two figures' exaggerated gestures are mocked by two dogs that seem to echo their demeanour. Photographic fragments include an industrial background, a bridge (on which the figures are positioned), and a train passing underneath. These components were selected and organised by Moholy-Nagy in order to depict an explicit setting and to construct a visual narrative.

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László Moholy-Nagy, *The Farewell*, 1924.

As Moholy-Nagy became more adept at using the photomontage technique, his reliance on contextual, ready-made 'setting' elements was reduced. He returned to preferred constructivist styles of composition and use of colour as a base for his chosen photographic fragments. With *The Broken Marriage* (1925), Moholy-Nagy created an elaborate architectural space that consisted of planes of colour and overlapping rectangular panels. This work exemplifies his transition from the construction of detailed settings with

photographs to his later, more minimal, linear photomontages. The planes were rendered with pen and ink and enclosed a hybrid figure that possessed both male and female attributes. Contrasting expressions and gestures of husband and wife merge into an androgynous, multifaceted being reminiscent of Höch's montage creations. The figure's head is capped with what looks like firecrackers and this creates a disturbing tension that undercuts the woman's uncanny smile. A delicate female hand reaches into the space and introduces a gesture that alludes to seduction. Here, the (sur)reality that Moholy-Nagy created within the photomontage frame (with the merging of two faces) was designed to expose what he saw as a condition of a psychological reality of marriage.

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László Moholy-Nagy, *The Broken Marriage*, 1925.

Conflict between the sexes was a theme explored in many of Moholy-Nagy's photomontages as radical social changes in 1920s Germany fed Moholy-Nagy's concern for gender relations. For example, issues pertaining to cross dressing, sexual stereotyping and masculine domination and superiority were raised in his 1927 photomontage *Rape of the Sabine.* A dancing figure morphs between male and female - elegant female legs dance with male companion legs until they merge at the waist into a single being (wearing male attire and topped with a feminine head). The torso seems trapped in an eternal handclasp with a dislocated

arm and a floating hat. A group of athletic men futilely tug at a rope attached to the being's waist. The dynamic tension between the group and the androgynous dancing figure was augmented with the inclusion of Moholy-Nagy's drawn linear structures. Indeed, his aim to integrate separate elements into a unified whole without relying on naturalistic settings was achieved with the arrangement of photographic fragments that were placed on a light background and connected with fine lines.

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László Moholy-Nagy, *Rape of the Sabine,* 1927.

These photographic fragments as objects that had been cut from their original contexts generate new meanings in this environment. The process of tearing photographic fragments from their original contexts loosens pre-existing associations and patterns of meaning. For example, the group of tug-of-war men in Moholy-Nagy's *Rape of the Sabine* acquire a slightly sinister, predatory association (instead of, for example, a sign of sporting strength). Similarly, the arm and hat of dancing female's otherwise invisible partner, seem to suggest an emerging 'other' consciousness that represents the changing role and perception of women in 1920s German society.

Although Moholy-Nagy was not overtly political, some of his photomontages undeniably dealt with political and social criticism. In *My Name is Rabbit, I Know Nothing* (1927), Moholy-Nagy uses lines to connect minimal photographic elements (he chose only five photo-fragments) on a light background. In the foreground, a white-faced Commedia dell'Arte character wearing a black top hat stares complacently towards the viewer. The character's dislocated hands are crossed in a gesture that seems to grasp invisible shrugging shoulders. Behind, three figures struggle on 'high-wires' (Moholy-Nagy's lines). The first figure is a baby that hangs crying, another figure seems tangled and anxiously looks for assistance, whilst a third dances precariously while grasping her head in nervous desperation. In this context, Moholy-Nagy's deliberate selection and arrangement of separate photographic fragments establishes a visual reality that refers to the issue of silent complicity (those who witness the problems around them but do not speak out against them) (Naef, p. 58). The simplicity of this photomontage, accentuated by the exclusion of extra contextual objects / settings, seems to focus the potential interpretations of Moholy-Nagy's intended message.

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László Moholy-Nagy, *My Name is Rabbit, I Know Nothing*, 1927.

The style of composition in Moholy-Nagy's later photomontages differed from other avant-gardists who were experimenting with the technique at the same time. He incorporated fewer photo-fragments and positioned them in carefully constructed, vast, white spaces. Moholy-Nagy also intended to engage with the modern world from a less antagonistic stance than for example the anarchic dadaists or the propaganda driven constructivists. Frizot describes some distinctions,

> Moholy-Nagy simplified the accumulation of cut-out pieces and the multiplication of perspectives, textures, and scales on a single surface, concerning himself with a more sober and pure exploitation of these elements... thus, Moholy-Nagy's intentions in photomontage reflect the economy of his pictorial means: an intensely poetic simplicity, allusive rather than demonstrative, and without aggression (pp. 434 - 435).

The precise and sober utilisation of linear structures and rectangular planes set against a light backdrop echoed the constructivist aesthetic of Lissitzky's 'prouns' where lines or his axes of projection were used both to anchor objects and to indicate their positions and movements in space (Hight, p. 158). Moholy-Nagy's found photographs inevitably varied in size. He used linear structures to determine the positioning of these images in the space and to create a unified and coherent work. Moholy-Nagy's photomontage creations introduced a new power to defamiliarise with enigmatic objects that seem to kinetically interact with his drawn structures and spaces.

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The unique function of the photograph in photomontage works had repercussions for the understanding of photography as an indisputable copy of visual reality. With photomontage, the photographic image could be fragmented and juxtaposed with other photographic fragments that created new associations and meanings. The assumption that photographic images were a reliable source of truth was therefore thrown into question. The photograph's capacity shifted from a means of revealing a truthful reality as well as heightening experience by selecting particular viewpoints from which to view reality, to being a tool for communicating subjective information and political agendas. The photographic sign's perceived connection to the original object was shown to be a cultural convention that could be manipulated to serve any number of agendas and reality could thereby be changed to become more convincing (and exciting). Dogmatic preconceptions surrounding the photograph's indexical connection to reality however, continued to empower photomontage environments. New visual realities were created to expose and comment on social conditions in ways that could extend the conventions of quotidian reality. Two headed beings, androgynous figures, á la carte steel objects and floating limbs were begotten by avant-gardists in their photomontage works, and indeed in many cases were made to look real. These fanciful creations were

used as metonymic representations of reality that were manipulated to represent intangible socio-political or psychological realities. These subjective responses to the modern environment exploited the arbitrariness of photography's relationship to reality in order to construct new visual realities and to communicate that the photograph was merely a visual sign (albeit a powerful one that could mimic reality itself) that could be re-configured and re-aligned to produce new meanings.

Conclusion

> The desire of contemporary masses to bring things 'closer' spatially and humanly, which is just as ardent as their bent toward overcoming the uniqueness of every reality by accepting its reproduction. Every day the urge grows stronger to get hold of an object at very close range by way of its likeness, its reproduction. Walter Benjamin

German photography activated a complex engagement with the modern world. What avant-gardists thought would be a simple image of the world as a document instead revealed a more problematic interaction. Camera representations exposed some important dualisms between appearances and reality, the material object and truth, and camera vision and human vision. Indeed, the invention of the small-format, portable camera that preceded the avant-garde photographic experiments of 1920s Germany radically changed the ways in which humanity perceived and interacted with the surrounding world. The mass produced photographic image introduced a style of reproduction that captured the visual appearance of objects with an uncanny precision. This quality proved especially pertinent at a time when the modern world had become inundated by materialism as humanity developed a new compulsion towards appropriating objects (the capitalist market introduced a plethora of material acquisitions and technical inventions that populated new, industrially mechanised environments). The novelty of the photographic image's capacity for verisimilitude, however, also revealed uncanny visions of reality that suggested that the photograph could be much more than a document and could also acquire a fetishistic appeal. As Walter Benjamin observed in his 1936 text, *The Work of Art in the Age of Mechanical Reproduction*, photography's appearance of being real began to be coveted as a supplement for the uniqueness of reality.

With their unwavering concern for the integrity of the object before the lens, Neue Sachlichkeit photographers inadvertently promoted the idea that humanity was dominated by a materialist environment. Their technically precise photographic style isolated material objects from quotidian environments in order to emphasise the camera's capacity to accurately depict the detail of an object's appearance. Unexpectedly, these Neue Sachlichkeit artists also exposed something more ambiguous, for their photographs seemed to evoke other meanings that transcended a documentary function. This trait can also be recognised in Moholy-Nagy's photographs where he attempted to downgrade the value of the material object in society in order to demonstrate the fluidity of the modern object's appearance. By photographing objects from unusual vantage points, he hoped to defamiliarise (and at times even dematerialise) the world. Moholy-Nagy's New Vision was designed to guide humanity towards a dynamic

visual awareness so that it could effectively adapt to the changing world. This dynamism represented a radical departure from the immobility of the Neue Sachlichkeit still-lifes as well as subverting photography's axiomatic predisposition for realism. Moholy-Nagy believed, however, that his abstracting photographic techniques could provide the conduit that would enable the population to heighten their awareness of modern reality.

Moholy-Nagy's methodology thus conflicted with that of the Neue Sachlichkeit photographers, who dismissed his work as undisciplined and amateurish (abstraction, they argued, was inherently more suited to the aesthetics of painting, whereas realism now belonged to the medium of photography). These Neue Sachlichkeit photographers advocated that the superiority of the camera's representation of the surface detail of objects should be used to disclose a hidden truthfulness. As long as photographic images conformed to the visual convention of realism, appearances were entrusted with a new, revelatory power. Benjamin alluded to this power when he stated that "photography reveals in this material the physiognomic aspects of visual worlds which dwell in the smallest things" (1931, p.243). Neue Sachlichkeit photographers, however, assumed that the photographic image's verisimilitude established an existential connection to the original object and some even claimed that the photographed object was reality (despite the fact that it remained a visual representation of reality).

It was generally accepted, however, that photography could expose aspects of reality that were not accessible to the human eye. Benjamin explained this by the term optical unconscious. He believed that "photography, with its devices of slow motion and enlargement, reveals a secret. It is through photography that we first discover the existence of this optical unconscious, just as we discover the instinctual unconscious through psychoanalysis" (1931, p.243). Benjamin based his argument on the notion that photography reveals 'entirely new structural formations' of the subject beyond what was already visible. This theory can also be identified in relation to the Russian formalist defamiliarisation strategy that was adopted by Moholy-Nagy. Moholy-Nagy, however, hoped to reveal optical traits that were simply unrecognised by humanity. This was an important difference - it was not so much that photography exposed aspects of reality that were not accessible to the human eye, rather that photography exemplified new, more effective ways of seeing reality that dissolved the habitual constraints of human vision. This difference was emphasised with Moholy-Nagy's photograms. These photograms transcended the idea that the camera helps us to see what our human eyes cannot by dispensing with the role of the camera altogether. By limiting the elements of photography to only light and light-sensitive surfaces such as paper, Moholy-Nagy aimed to instigate a more spontaneous and direct sensory experience that could then be transferred to the process of optically engaging with the modern world. Moholy-Nagy therefore strove to

create new optical relationships by using photography's new vision in order to heighten (rather than surpass) a human biological optical capacity.

Victor Shklovsky's concept of defamiliarisation (of viewing the known in new ways), was uncannily similar to the ideological vein that ran through Moholy-Nagy's concept of New Vision. Like Moholy-Nagy, Shklovsky argued that;

> Art exists to help us to recover the sensation of life, to make the stone *stony*. The end of art is to give a sensation of the object as seen, not as recognised. The technique of art is to make things 'unfamiliar', to make forms obscure, so as to increase the difficulty and the duration of perception. The act of perception in art is an end in itself and must be prolonged. In art, it is our experience of the process of construction that counts, not the finished product (in Watney, p. 161).

Moholy-Nagy's experiments with formal relationships, light / shade effects and the distortion of objects' appearances in the photographic image were similarly orientated towards extending the duration of perception and involving the viewer in an active optical experience. Habitual and static modes of perceiving the changing world could be discombobulated and replaced with heightened sensory experiences once this new, dynamic, photographic way of seeing had been demonstrated and learnt.

The notion of defamiliarisation ultimately relied upon a number of assumptions about the power of art to influence society. In particular, it assumed that photography possessed the capacity to make ambiguous and unrecognised aspects of reality accessible to the human eye by means of disorientation and surprise. Simon Watney observed, however, that the theory of defamiliarisation, "completely failed to grasp... that our preconceptions, our ideology, are primarily determined by widely varying social and historical experience. One cannot defamiliarise that which is not in the first place familiar" (p. 174). The novelty of estranged objects in photographic images therefore often led them to assume an appealing quality more closely affiliated to fetishism than to revelation. Photomontage, however, introduced a new schema to defamiliarise and shock with its enigmatic objects and shattered realities. The propagandistic origins of photomontage emphasised photography's capacity to influence society through a rearrangement and staging of the world. Avant-gardists who used photomontage achieved defamiliarisation not by the distortion of physical objects but rather by the creation of new visual realities. These new realities were assembled to expose and comment on social conditions in ways that could transcend the conventions of quotidian reality, and the photographic sign's perceived indexical connection to the original object was shown to be a cultural convention that could be manipulated to serve any number of agendas.

The avant-garde experiments with photography in 1920s Germany effected a profound change on how we interpret the relationship between appearances, truth and reality. The photograph can now be understood as a cultural sign, albeit a powerful one that can mimic reality itself. Furthermore, the assumption that photographs objectively reflect a comprehensive world of appearances can now be seen to be a fallacy. Photographic images, however, can exemplify new ways of seeing reality that enable the disruption of habitual human vision and heighten an awareness of processes of perception.

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