Theorizing the image of architecture

Thomas Ruff's photographs of the buildings of Mies van der Rohe

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Abstract

Recent fine art photography has demonstrated a preference for exploring architecture as a subject matter. However, these photographs have seldom been subject to theoretical surveys in direct relation to the architecture they depict. The purpose of this paper is to examine in what ways recent photographs by German artist Thomas Ruff add new meaning to the architecture of Mies van der Rohe. Showing that Ruff's photographs are both representations of architecture and something more than that, I investigate the nature of the deviation of architectural photography from its starting point through the concepts of haptic and optic vision as pronounced by Alois Riegl and related to photography by Walter Benjamin.

Following this I discuss Gilles Deleuze and Félix Guattari's concepts of smooth and striated space in order to show how the perceiving subject and Mies' architectural objects are closely related and constitute one another and how photography in relation to this might act as a parallel to architecture in its way of transforming space and creating affects. Accordingly, Mies' architecture is not only displaced, but also re-actualised by Ruff's photographs, which at the same time inform us on the architecture not least in terms of its material and picturesque effects.

I finally conclude that architectural photography at the same time is a de- and reterritorialization of architecture – that is if the artist is able to let diagrammatic forces into his or her work of art. Ruff's photographs in this way transform the architecture of Mies by creating new territories, new architectures.

Ruff's picture of Haus Esters. Thomas Ruff, *h.e.k. 02*, 2000. Colour print, 185 x 355 cm. After Julian Heynen ed. (2000), *Thomas Ruff – l.m.v.d.r. 2*, Krefeld: Krefelder Kunstmuseen, no pag.

The Krefeld Villas

The catalogue for the *Mies in Berlin* exhibition shown at Museum of Modern Art in New York, Altes Museum in Berlin and Fundación La Caixa in Barcelona between 2001 and 2002 features thirteen photographs from the *l.m.v.d.r.* series by the German artist Thomas Ruff. All of them show buildings by Mies van der Rohe and are accompanied by titles, measurements, and dates, but not by any didactic texts whatsoever.[1] Even though the rest of the catalogue is full of words on images, whether plans, collages, renderings etc., no one thought it necessary to mention Ruff's images. The situation is rather typical. On the one hand architectural photography is often considered as possessing no independent layer of meaning itself, but simply as an indexical translation of form. In this sense one would not need to confront the meaning that the photograph itself however inevitably presents. On the other hand artistic, or interpretive one might call it, architectural photography seems to enter a much more complex relation with architecture. As with Ruff's photographs it appropriates and transforms Mies' architecture, not least in the obvious displacement from three to two dimensions, from space to image. The purpose of this paper is thus to investigate this transformation, how it complements our understanding of Mies' architecture, thereby leading to a discussion of architectural photography as artistic and architectural practise.

The picture *h.e.k. 02* is a 185 x 355 cm large exterior of Haus Esters, one of two houses designed by Mies in the German town of Krefeld built in 1927-30, the other of these being Haus Lange. Seen from the garden the house is surrounded by trees and a wide lawn in the foreground. The colouring of the picture makes it stand out from most architectural photographs as the sky has been retouched in a clear blue, while the rest of the image is black and white. This retouch creates a pronounced effect of flatness, which is emphasized by the building being parallel to the picture plane, and makes the image appear like a model shot or rendering. The colour manipulations change the perception of space since the high contrast between the colour retouching and grey tones of the photography has a kind of disturbing effect on the eye, promoting a *haptic* vision, as Alois Riegl has described it, which refers to a somehow flat spatiality as

opposed to the *optic* vision related to the deep space of perspective. Haptic vision influences the eye in a way similar to physical touching as seen for instance in Egyptian wall paintings.[2] A similar effect is found in many of Mies' own architectural images such as the 1920s pastels, where the colours are added in rough layers on the paper surface, thereby creating a visual expression surprisingly close to Ruff's images of Haus Esters and Haus Lange. Or actually not that surprising since Mies' sense of imagery, as Andres Lepik has pointed to, is determining how we perceive his architecture, being all about catching programmatic ideas in the form of images. Thus the photomontage, this mix of photographs and pictorial effects, a technique parallel to Ruff's manipulation of photographs, was one of Mies' favourite ways of rendering architecture.[3] In Ruff's image the architectural emphasis on flatness and horizontality in the Krefeld villa architecture is stressed by the flatness of the image, which wipes away almost any effect of perspective. The building is represented as pure façade, miming the visual language that the architect would use in connection with the conception and communication of a project, thereby making the building as represented linger somewhere between the conceptual and the real.

While the illusion of perceptive is often avoided or at least disturbed in the montage, it appears with great significance in Ruff's stereography *stereo h.l.k. 05*., although as a special variation of perspective: A diagonal perspective in the corner between two windows. Together the window frames, the paths of the garden and walls create a geometric, almost isometric grid in such a way that space seems to ex- and implode at the same time in a complicated optical interaction. Stereography consists of two photographs shot with a certain distance, enough to create a spatial effect when the stereography is mounted in the stereoscopic apparatus. Rosalind Krauss has termed stereographic space a space of perspective in its highest degree, a visual experience phenomenologically similar to the cinematic experience as the apparatus blocks the bodily space of the viewer, isolating the subject from her surroundings. When perceiving the stereographic images one would therefore, according to Krauss, experience the eye adjust to each represented object one by one in a kind of kinaesthetic process similar to wandering around in a room.[4]

Ruff's stereograph of Haus Lange. Thomas Ruff, *stereo h.l.k. 05*, 2000. Colour print, 16 x 16 cm. After Matthias Winzen ed. (2001), *Thomas Ruff: 1979 to the present*, Cologne: Walther König, p. 245

Walter Benjamin has related Riegl's concepts of haptic and optic vision to photography, though he claims photography to be essentially different from traditional art. The appearance of modern mechanical reproduction techniques has changed art as such. It has lost a part of its aura, since the hypersensitive core, which the authentic reality used to possess, has been interrupted and even surpassed by the fascinating chocking effects of mechanical reproduction. Photography confronts the viewer in new ways. Zooming and new kinds of angling break down the well-known optical experience of the world as represented in traditional art. The violence whereby the reproducible media meets its viewer as a diverted perception through mass media creates a new kind of haptic vision. The chock effect of these images or the massive amount of pictorial impressions simply works in the same way as if actually touching the eye of the beholder. The stereoscope offers one of these modern violent visual experiences. And while Riegl related perspective strictly to optic vision, new kinds of distorted perspective as found in the stereoscope might actually create a haptic vision according to Benjamin.[5]

Matthias Winzen has pointed to the fact that one cannot move around the photographically represented space, but that the stereoscope in its box and due to its illusion of depth emphasizes exactly this limitation of the pictorial representation of space. The stereography is experienced more intensively than photography in general. According to Winzen the stereography demonstrates how perception of space takes place with the involvement of the entire body, something, which Ruff interrupts by making his stereographs with a distance between the cameras that gives an impression of depths as if the distance between your eyes was more than a metre.[6] By using the stereoscope to show the image of the corner between the two windows in Haus Lange Ruff condenses an effect which is already there, i.e. the ambivalent relation between the strong notions of space created by the two orthogonal window frames and the nothingness of the window openings. He brings this effect to the edge of collapse, thereby pointing to this ambivalence as an almost haptic chock effect in the bodily experience of the space of Mies' architecture.

The Barcelona Pavilion

The interplay between a framing structure and something more atmospheric is a characteristic of photography. To cast more light on this relation I would like to introduce Gilles Deleuze and Félix Guattari's examinations of spatial organisation.[7] Based on Riegl's ideas of the haptic and optic Deleuze and Guatattari define the *smooth* and *striated* space, terms, which illustrate the way something is organized, how the forces are made visible and how matter and form work. Smooth space consists only of connections and is therefore without any direction; it is nomadic. Form is not consistent in smooth space, but changes constantly; it is inhomogeneous and amorphous like a kaleidoscope. Smooth space is connected with haptic vision, as this functions like sensation. The eye becomes like the hand. The striated space on the other hand is connected with the distant optic view and has a constant orientation like in central perspective i.e. the material in the striated space is organized by form, by the horizontal and vertical. According to Deleuze and Guattari the smooth and striated space are closely connected and constantly intermingling. The two spatial categories are not necessarily opposites but are rather blend and exist in the cause of these blends.

The interplay between structure and atmosphere is a theme in Ruff's images of Mies' Barcelona Pavilion, the now iconic building created in collaboration with Lilly Reich as the German national representation pavilion for the World Exhibition in Barcelona in 1929. Shortly after the exhibition it was destroyed; a reconstruction was erected in 1986. The pavilion is a horizontal, one storey structure placed on a podium. It consists of a number of coloured screen-like walls, which seem to float freely in space. These glass and stone walls are flanked by two mirror ponds as well as by chrome clad pillars in a grid of two times four pillars. The walls are placed so that they create a flowing connection between inside and outside. Walls and pillars choreograph the movements of the visitor. Ruff's image of the Barcelona Pavilion, *d.p.b. 08*, shows the pavilion viewed from the open space in front of it and is digitally reworked so that colours and outlines appear twisted and blurred. The pixels are adjusted horizontally making the pavilion seem to consist of blurred fields instead of real architecture. The effect is similar to the way the English painter Francis Bacon blurs the figures in his paintings so that the figurative at the same time is preserved and amputated as the colours and traces of movement in the blurring provides the images with a haptic quality. The pavilion takes up the entire horizontal area of the image and appears like only consisting of a roof, a dark space or void and a horizontal base placed on a smooth brown surface of trees and a grey violet sky in the background. The blurring effect makes the image look the way dreams or memories are pictured in films. But the effect of introducing

smooth space also simulated the experience of speed, either as if the viewer was passing through the space in high speed, or if the pavilion itself was passing by. In this way Ruff catches some of the essence of the pavilion as something temporary, a fleeting exhibition pavilion lingering between the architect's world of ideas and models and actual built architecture.[8] What is visible is only a condensation of the forces of architecture. Furthermore, Ruff through his retouched images marks the connection between the official photographs of the pavilion, the so-called Berliner Bild-Bericht photographs, which Mies had retouched of unnecessary details, as if smoothening out the space.

Deleuze strives to make Riegl's concepts relevant in a modern context in order to cast light on the epistemological aspects of the relation between sensation, recognition and structure. In his book on Bacon, Deleuze suggests how to connect the subject with the material form – and thereby letting us connect photography and architecture. According to Deleuze, Bacon creates a system based on three elements: The material as a structure, the Figure and the outline, which separates the two.[9] Deleuze mentions the colour fields behind Bacon's figures as an example, since these appear not as being behind but rather side by side or around the Figure, as Deleuze with a capital F denotes the figure in order to make a distinction between what is just figurative and the figure as something bodily, physically present. These fields appear in a haptic way and should be experienced at close hand like in Egyptian art where figure and ground coexist.[10] Bacon thereby undermines the dominance of figuration, but in a much more gentle way than through pure abstraction. His way of moving away from the figurative by using the sensuous Figure originates in Paul Cézanne's paintings, Deleuze claims, in which the figurative is a sensuous form directly connected with the nerve system and thereby the flesh of the body – contrary to pure abstraction

Thomas Ruff, *d.p.b. 08*, 2000. Colour print, 130 x180 cm. After Matthias Winzen ed. (2001), *Thomas Ruff: 1979 to the present*, Cologne: Walther König, p. 42.

where the deviation from figuration creates a connection with the brain. The sensorial in Bacon's Cézanne-inspired solution is thereby important as it is targeted at the subject and the object at the same time, as both receiver and provider of the sensorial. Art creates affects through the sensorial and these seem to be independent of the subject as well as the object.[11]

Ruff's deviation from a direct, what one might term objective, figurative representation of the Barcelona Pavilion, results in a sensuousness similar to Bacon's in terms of the play between colours, reflexes and between clearly visible figures and the surfaces of the building. This unity of the sensorial and the framing, rhythmic takes place in what Deleuze terms the diagram.[12] When the elements meet they are each drawn towards their opposites. Geometry as an abstract system is made physically present, while the flickering sensuousness attains a certain clarity and duration. According to Deleuze the use of colour in Bacon's paintings is determining in creating this balance, since the colour reconstitute the haptic space.[13] According to Deleuze and Guattari the diagrammatic functions in relation to an abstract machine, which is a kind of interpreter or shaper, though without a body of its own. The abstract machine works solely with functions and material in its dispositions, but without making it a question of form, substance or meaning. The abstract machine is rather something which contributes to instances of creation and potential, which is why its functioning should not be understood as a process of design related to the articulation or distribution of form and meaning.[14] The abstract machine enters the creative process when something is incorporated in the chosen material and is created right where expression and meaning mix. One should understand the diagram as a change in the physical matter, a transformation process, which is all about creating new relations, about the change of existing conditions.[15] By the help of the diagram sensuousness unites object and subject as when art functions as an abstract machine. It is thereby rather an appearance or becoming than a representation.

In Bacon's paintings the diagram is visible as traces of the manual, though as sensorial traces without meaning. The hand breaks the strictly optical organisation of the image in an interruption. Parallels to this are found in the reflexes of Mies' architecture. The smooth organisational form blurs the shape of the architecture when the visitor moves around in diagonal movements through the grid of the walls and pillars. This architectural effect of the pavilion has a pendant in Ruff's haptic colouring and blurring, making it impossible to see anything clear.[16] The photography's interruption of the architecture can be considered as the impact of an abstract machine on the architecture. From this point of view art is about making the invisible visible, about a *deterritorialization*, which in an affective way emphasizes forces and examines creation.[17] When Ruff photographs the architecture of Mies' then it is less with representation in mind, but rather as an affective act. The photograph virtually deterritorializes the architecture from one materiality to another, like when the stone structure of the marble walls is transferred to the silver crystals of the photography.

Villa Tugendhat

Mies' Villa Tugendhat was constructed in Brno in the now Czech Republic in 1928-30. Situated on a hill above the town the villa clings to the terrain in three storeys. The most important room is the large open living room on the *beletage* oriented towards the garden via a single large strip of windows spanning from floor to ceiling. A curved wall clad in Macassar ebony frames the dining area, while a rectangular onyx dorée wall separates the salon and the library. Like in the Barcelona Pavilion chrome clad pillars support the open space. To the west a terrace connects the living room area with the garden by a broad flight of steps parallel to the building.

Thomas Ruff, *h.t.b. 08*, 2000. Kromogent farvetryk, 130 x 195 cm. After Matthias Winzen ed. (2001), *Thomas Ruff: 1979 to the present*, Cologne: Walther König, p. 46.

Ruff's picture *h.t.b. 08* dated 2000 is constructed by placing two other pictures on top of each other, *h.t.b. 05* and *h.t.b. 07*. This overlapping effect makes the room appear as if shattered in a thousand of fragments. The colours are digitally manipulated in blue-green, violet and pink shades and some of the fragments have been inverted, making the picture partly look like a solarized photograph. At first sight *h.t.b. 08* is quite difficult to read. However, one quickly realizes that it shows a space with large windows and groups of furniture seen from different angles. Due to the overlapping effect the space seems to fold around itself. The clear structure of the open though in some sense clearly defined living room space is destroyed and deconstructed in a flicker of colours and light. Ruff creates a montage effect whereby the views to the outside surroundings are spatially related only with difficulty to the rest of the room, but rather look like independent images of trees and houses. A kind of knitting process is introduced whereby the view, nature, interior, furniture, carpets and tables unite and move in and out between each other. Like in a montage or film the relations of space are freed and thereby produce some sort of new space. Though *h.t.b. 08* might not at first sight look anything like the Villa Tugendhat there actually is a structural resemblance between this representation and the represented: The effect of the amalgamation of inside and outside is decisive to the experience of the physical villa, which offers a constant interplay of surfaces, images and space. The splintering into overlapping colour fields in Ruff's picture causes a relation between the sensation and structure, which reminds one of Deleuze and Guattari's descriptions of how the bodily sensation is structured by something similar to architectural plans:

"*The house takes part in an entire becoming. It is life, the 'non-organic life of things.' In every way possible, the house-sensation is defined by the joining of planes in accordance with a thousand orientations. The house itself (or its equivalent) is the finite junction of colored planes.*"[18]

According to Deleuze and Guattari the *sensorial* and the *subjective*, when speaking of an aesthetic experience, are related not through phenomenological intersubjectivity or through a certain bond between subject and object, but as something occurring simultaneously, as becoming. The sensation appears in what O'Sullivan, with reference to Deleuze, describes as a genuinely unexpected affective event, wherein a movement occurs, that is, at the same time a movement and a creation of relations between object and subject even as these are not given beforehand. Deleuze and Guattari thereby consider art as an affect-producing machine, which is not mimetic, but institutes a layer of sensation in a becoming, a deterritorialization.[19] As sensation cannot be representational it is thereby impossible to decide the level of representation in art. If we consider architectural photography a movement-creating affective participant in an event, then it not only repeats, but also performs or transforms architecture.[20] With the assistance of modern digital techniques Ruff thereby creates a relation between actual built architecture and a sensational event in time and perforated space. Exactly this shift of relations takes place through the displacement of the two pictures, which constitute *h.t.b. 08*, and thereby a virtual movement in time is created. As Barry Bergdoll has pointed to the large glass panes of Villa Tugendhat lead to a breakdown of the view in reflexes and images, exactly as Ruff sets forth and intensifies in his pictures:

"*The glass membrane that surrounds the living floor on two sides often collapses the view into reflections on the surface of the building, momentarily pictorializing it.*"[21]

This interplay of image and space is determining for the experience of the Villa Tugendhat. The view seems like a twodimensional picture sticking to the interior like a photomontage.[22] The connection between the interior and exterior is stressed by the fact that two of the garden façade windows can be lowered into the floor, as well as by a narrow winter garden along the eastern side of the house which lets the vegetation inside and outside visually melt together between the two layers of glass. The openness and framing of views is thereby also a transformation of the surroundings contributing to an ongoing deterritorializing and reterritorializing of the architecture, the surroundings and viewer.[23] The merging of the different spaces and the resulting collapse of the perspective effect was even more efficient when the enthusiastic amateur photographer and owner of the villa, Fritz Tugendhat, had a white screen hung in front of the windows towards the garden to project his own film takes of the family life in the house on.[24] Thereby the open living room was transformed into a cinema, and the representational film images of the villa blended with the actual architecture and the view, the latter itself appearing as a projection. An effect of both *mise en scène* and *mise en abyme* was created. The deterritorializing, which takes place in the space of film when the viewer's still body is contrasted by the movements of the film, would thus merge with photography's amalgation of perspective in the representation of the space.

Architectural photography's structuring of sensorial impressions of architecture is not only a representation, in the sense of a repetition, but a re-structuring and new becoming of sensuousness. Even though photography presents an image of instantaneousness it can create affects of a certain timely extent, which can be described as a de- and reterritorializing of architecture, as it works as an abstract machine creating a rhythmic movement parallel to architecture's play of structures and atmospheres, of presence and absence. The meanings of architecture and pictures are countless, but reactualized in an ongoing process of understanding and mutual interpretation. Ruff's photographs displace Mies' architecture, when expressing a view on the becoming of relations and meeting of space and time, subject and object. In that way photography is able to create affects as

it creates haptic and sensorial notions in a diagrammatic way. The world is recreated by and in the aesthetic when the forces of architecture appear in relation to the viewing subject. This becoming of relations is determining in Mies' architecture and finds its place in Ruff's photography in the meeting with and displacement of the actual building.

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[1] Terence Riley and Barry Bergdoll ed. (2001), *Mies in Berlin*, New York: Museum of Modern Art.
[2] Alois Riegl (1901), *Die Spätrömische Kunstindustrie nach den Funden in Österreich-Ungarn im Zusammenhange mit der Gesammtentwicklung der bildenden Künste bei den Mittelmeervölkern*, Vienna: Oesterr. archäolog. Inst..
[3] Andres Lepik (2001), "Mies and Photomontage, 1910-38" in: Riley and Bergdoll ed. (2001), pp. 324-325.
[4] Rosalind Krauss (1998), *Das Photographische. Eine Theorie der Abstände*, Munich: Wilhelm Fink Verlag, pp. 46-47.
[5] Walter Benjamin (1997), *Das Kunstwerk im Zeitalter seiner technischen Reproduzierbartkeit*, Frankfurt am Main: Suhrkamp, pp. 10-20.
[6] Matthias Winzen ed. (2001), *Thomas Ruff: 1979 to the present*, Cologne: Walther König, pp. 136, 148.
[7] Gilles Deleuze and Félix Guattari (1988), *A Thousand Plateaus. Capitalism and Schizophrenia*, London: The Athlone Press, pp. 474-482, 492-500.
[8] Ronald Jones (2001), "A thousand words: Thomas Ruff talks about "l.m.v.d.r."" in: *Artforum*, vol. XXXIX, no. 10, Summer 2001, p. 159.
[9] Gilles Deleuze (2005), *Francis Bacon: The Logic of Sensation*, London and New York: Continuum, pp. 8, 22.
[10] Ibid., p. 4.
[11] Gilles Deleuze and Félix Guattari (1994), *What is Philosophy?*, London and New York: Verso, pp. 163-165.
[12] Deleuze (2005), pp. 25, 30.
[13] Ibid., pp. 79, 97, 109.
[14] Deleuze og Guattari (1988), p. 141.
[15] For more on the connection between Riegl and Deleuze and Guattari see Stephen Zepke (2005), *Art as Abstract Machine. Ontology and Aesthetics in Deleuze and Guattari*, London and New York: Routledge, pp. 1-4.
[16] Deleuze (2005), pp. 70-71.
[17] Ibid., p. 52.
[18] Deleuze and Guattari (1994), p. 180.
[19] Simon O'Sullivan (2006), *Art Encounters Deleuze and Guattari. Thought Beyond Representation*, New York: Palgrave Macmillan, p. 22.
[20] Deleuze and Guattari (1994), p. 193.
[21] Barry Bergdoll (2001), "The Nature of Mies's Space" in: Riley and Bergdoll ed. (2001), p. 95.
[22] Josep Quetglas (2001), *Fear of Glass. Mies van der Rohe's Pavilion in Barcelona*, Basel: Birkhäuser, p. 84. Bergdoll (2001), p. 97.
[23] Fritz Neumeyer (1994), "A World in Itself: Architecture and Technology" in: Detlef Mertins ed., *The Presence of Mies*, New York: Princeton Architectural Press, p. 78.
[24] Daniela Hammer-Tugendhat (2000), "Living in the Tugendhat House" in: Daniela Hammer-Tugendhat and Wolf Tegethoff ed., *Ludwig Mies van der Rohe – The Tugendhat House*, New York and Vienna: Springer, p. 21.

References

Benjamin, Walter (1997), "Das Kunstwerk im Zeitalter seiner technischen Reproduzierbartkeit, Frankfurt am Main: Suhrkamp

Bergdoll, Barry (2001), "The Nature of Mies's Space" in: Riley and Bergdoll ed. (2001)

Deleuze, Gilles (2005), *Francis Bacon: The Logic of Sensation*, London and New York: Continuum

Deleuze, Gilles and Félix Guattari (1988), *A Thousand Plateaus. Capitalism and Schizophrenia*, London: The Athlone Press

Deleuze, Gilles and Félix Guattari (1994), *What is Philisophy?*, London and New York: Verso

Hammer-Tugendhat, Daniela (2000), "Living in the Tugendhat House" in: Daniela Hammer-Tugendhat and Wolf Tegethoff ed., *Ludwig Mies van der Rohe – The Tugendhat House*, New York and Vienna: Springer

Jones, Ronald (2001), "A thousand words: Thomas Ruff talks about "l.m.v.d.r."" in: *Artforum*, vol. XXXIX, no. 10, Summer 2001

Krauss, Rosalind (1998), *Das Photographische. Eine Theorie der Abstände*, Munich: Wilhelm Fink Verlag

Lepik, Andres (2001), "Mies and Photomontage, 1910-38" in: Riley and Bergdoll ed. (2001)

Neumeyer, Fritz (1994), "A World in Itself: Architecture and Technology" in: Detlef Mertins ed., *The Presence of Mies*, New

York: Princeton Architectural Press
O'Sullivan, Simon (2006), *Art Encounters Deleuze and Guattari. Thought Beyond Representation*, New York: Palgrave Macmillan
Quetglas, Josep (2001), *Fear of Glass. Mies van der Rohe's Pavilion in Barcelona*, Basel: Birkhäuser
Riegl, Alois (1901), *Die Spätrömische Kunstindustrie nach den Funden in Österreich-Ungarn im Zusammenhange mit der Gesammtentwicklung der bildenden Künste bei den Mittelmeervölkern*, Vienna: Oesterr. archäolog. Inst.
Riley, Terence and Barry Bergdoll ed. (2001), *Mies in Berlin*, New York: Museum of Modern Art
Winzen, Matthias ed. (2001), *Thomas Ruff: 1979 to the present*, Cologne: Walther König
Zepke, Stephen (2005), *Art as Abstract Machine. Ontology and Aesthetics in Deleuze and Guattari*, London and New York: Routledge