ABSTRACT

Embodied Concepts of Drawing and Writing

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This research project aims to investigate the potential of ambiguity as an underlying principle in the construction of an immersive and implicating architecture. If ambiguity emerges in the interference of precisely articulated concepts as is discussed by Ana Maria Rabe in her discussion on Eigengesetzlichkeit (being-coherent to its own sets of rules) in the essay on the space in Las Meninas and Umberto Eco’s idea of openness from his essay The Open Work, it holds within it the apparent ability to construct situations of engagement in an architectural space through an unveiling of an inherent logic. More precisely ambiguity may be located in the moment of oscillation between definition and openness at the interference of one system with another.

To explore this relation in spatial terms the research is departing from a comparative approach to pictorial space and its notation through the rules of descriptive geometry under the focus of the construction of an enhanced spatiality through increased spatial depth or flatness. The target is to develop knowledge on these terms beyond their linear measurability towards an understanding of their experiential quality in the practice of drawing.

This research will make use of methodologies from the field of surveying that employ the bodily and visual horizon in the process of constructing cartographic information, which share as their basis the same optical rules as perspective geometry and are strongly affiliated with a Cartesian concept of space. The knowledge that promises to be enriching for architectural discussion is of embodiment and the consequential inhabitation of the drawing process, which potentially resides in the application of the measuring instruments, surveying techniques and drawing tools.

This project resides strongly in the field of architecture research, which is largely concerned with embodied experience but at the same time misses emphasis on the critical tools to encourage spatial embodiment in the design process. Through my practice I am attempting to develop new tactics for architectural design and review the relationship of drawing and spatial embodiment through ambiguity.

Keywords: ambiguity; Eigengesetzlichkeit; open work; writing; drawing; embodiment
The drawing research departs from Helmut Newton’s photograph *Selfportrait with Wife and Models*, which shows a space of a certain complexity and strangeness. Therefore the image offers itself to this inquiry. With it’s strong references to *Las Meninas*, what Ana Maria Rabe writes about Velázquez’ painting may also be true for the Newton photograph: *With its numerous layers of meaning, (…) its relations and contradiction, the staging and the blind spots, the ambivalences and constant inversions*, the image is putting the viewer into an open but in itself simultaneously coherent dynamic space. The conflicts that arise between the openness of the work and its coherent sets of rules result in a principally infinite possibility of interpretations.1

The subject of the photograph is the network of gazes entangled in the mirror reflection and in the spatial arrangement.2 In this study I speculate on the ambiguity of spatial depth in the aspects can be discussed through perspective analysis, for some aspects this will prove to reveal valuable aspects. The perspective investigation is also the first step towards building a scenario for further research on the potential of photogrammetry and spatial journey to inquire into ambiguity. The process of constructing the reverse perspective has been a simultaneous reading and rewriting the image with the aim to get behind some of the spatial arrangement, which Newton has composed to achieve an uncertainty of spatial depth.

An ambiguity, proposes William Empson in his *Seven Types of Ambiguity* (1930), is *in an extended sense, […] any verbal nuance, however slight, which gives room for alternative reactions to the same piece of language*.3 Even though Empson’s work on ambiguity refers to poetical writing, some of his findings hold potential for a transferal into a spatial discourse.

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1 Ana Maria Rabe, *Das Netz der Welt – Ein philosophischer Essay zum Raum in Las Meninas*, (München: Wilhelm Fink Verlag, 2008)
2 However the gaze of the photographer, voyeur, and spectator at the scene with the nude bodies will not be the focus of the present investigation. I have discussed these relations in my thesis *Subjectivity and Objects in Helmut Newton’s Selfportrait with Wife and Models*. 
In complicated situations this conflict threatens the unity: you are thinking of several things, or one thing as it is shown by several things, or one thing in several ways. A sort of unity may be given by the knowledge of a scheme on which all things occur, so that the scheme becomes the one thing which is being considered. More generally one may say that if ambiguity is to be unitary there must be 'forces' holding its elements together.

(…) Many forces are covertly included within ideas, and so of the two elements, each of which defines the other, it is much easier to find words for the ideas than for the forces.

He states that the forces cannot be discussed in terms of ambiguity because they are complementary to it.

But by discussing ambiguity a great deal may be made clear about them. In particular, if there is contradiction, it must imply tension, (…) in some way other then by the contradiction, the tension must be conveyed, and must be sustained. An ambiguity is not a device on its own. It must (…) arise from and be justified by the peculiar requirements of the situation.

The space in the photograph apparently sets up a system of nuanced meanings, but as Umberto Eco suggests, the possibilities which the work's openness makes available always work within a given 'field of relations'.

The aim of this drawing project is therefore not the measuring out of the scene of the photograph but to explore the relationships - more specifically the spatial relationships of scale and depth within it. This careful observation of the forces that play out the spatiality and experience of depth in the picture is the focus of this work.

A preliminary conclusion may lie in the interaction of a number of subtle irritations that are revealed in the reverse perspective reading of the image. The complexity and variety of small tilts and confusions are just enough to engage a variety of spatial experiences without questioning the unity of the single spatial situation.

Figure 2 (p.3-9). Drawing by the author
Drawing out Helmut Newton's 'Self-Portrait with Wife and Models, 'Vogue' Studios, Paris, 1980'

5  Ibid p.235
It is assumed that the floor meets the wall in the back of the picture orthogonally. As a consequence, the position of the photographer was constructed by drawing the right-angled triangle with the two vanishing points at its extremities.

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Another vanishing point is given by the reflection of the mirror. Even though the sides of the mirror are parallel to the edge of the image, they are vertical in relation to the view. The bottom and top edge behave differently. Seemingly, the left side is further away. The mirror is turned away from the straight view and tilted towards the model, placing her instead of the photographer into the center of the reflection.

In order to measure out some of the spaces dimension, the floor is a useful element to pay attention to. The pattern on the plane surface gives strong visual clues about their spatial position and orientation.

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In effect, the mirror is not particularly large. To make a guess, how large it may be a comparison with the size of Newton's wife June sitting partially in the same depth as the mirror right next to it may help. Her leg and her face, as she sits bended forward, are almost in the same plane with the mirror. Just imagining her standing up, the mirror will probably be shorter or just the same height as her.

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Another vanishing point is given in the reflection of the mirror. Even though we are made believe by the parallel sides of the mirror, that we are looking vertically straight at it, the floorboards give away a vanishing point below the horizon. As a consequence, the reflected space tilts downwards in the perspective analysis.

Similar to a grid, used in landscape surveying, where it allows measuring out details of a mapped landscape, the floorboards define a plane with a vanishing point and enable the positioning elements in the space efficiently.

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The focal point $F$ defines the height of the horizon. This is where all horizontal planes find their vanishing point. It coincides in height with the camera lens where the image is projected onto the film.

For any vanishing point above the camera’s horizon, it means that the plane is at an angle other than parallel to the horizon. If the distance of the observer is known, the angle can be constructed by connecting the viewpoint with the vanishing point projection on the picture plane.
The viewpoint is the focal point of the camera (most likely a Rolleiflex 2.8 F with a 80 mm x 2.8 planar lens by Carl Zeiss). The camera has a double lens. The upper one serves for the view finding and the lower one for exposing the film. The image that Newton sees in the viewfinder is technically not the same as the one we are looking at, however, it is very likely that he has taken this into account by lifting the camera slightly to take the image from the precise viewpoint. A similar lens for a Hasselblad camera has a viewing angle of 51.9°. 53°/54° measured. Newton may have been at a slightly wider distance.

The photographic image is understood as a section cut through a cone of vision, consisting of invisible lines that connect the viewpoint with its spatial reference.

The large mirror in the centre of the image shows a scene with a photographer (which is Helmuth Newton himself as stated by the title Selfportrait) photographing himself at work, while taking a picture of two female models. The mirror must be large. It fits the tall women on high heels easily. The scene feels close to the viewer. Looking from the position of the photographer, we are very near to the nude and the space between her position and the edge of the mirror appears short, judged by the amount of ground reflected in the mirror. (Newton works a lot with contrasts in this image. In this case the white, strongly lit up backdrop supports the impression of a small spatial depth and at the same time brings the scene into the foreground.)

I suggest that this may have been beneficial not only to fit the scene into the mirror, but also to emphasise some physical aspects of the female body. Initially her body appears stretched, but with perspective foreshortening, those parts of her body, which are closer to the viewpoint, become larger, while others seem smaller. Since her upper part is further away, it appears slimmer. This is subtle and gradual and most noticeable by comparing the head with the feet (even though they are stretched and small looking in the high heels).

The floorboards in the mirror are mostly covered – by elements such as the white garment, but mainly by the white backdrop paper, a common element in photography. The backdrop is usually a wide roll of paper, hung from the ceiling and unrolled to cover background and floor. Spatially interesting in regard to this backdrop is the continuity of the vertical boundary and the horizontal. If Newton wouldn’t cast a shadow onto it, the white space would appear infinitely deep. Instead, the space ends right behind him, where the surface receives his shadow. Being seemingly very close to the model, this makes him appear smaller than he possibly is.

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The garment is covering the floor and may function slightly like scattered trees on a lawn in a picturesque landscape garden. Usually used to blur the boundaries and staggered to give a sense of a deep space, this garment has the opposite effect by occupying the floor and covering the spatial depth that it would otherwise hold. In addition it emphasis the boundary that is created by the backdrop rather then disguising it.

The existence of two vanishing points for the floor produces a situation of multiple horizons. Focusing on the space in the mirror we are made believe, that our horizon is as low as the respective floorboard convergence point. It is important to note that this affects our sense of the scale of the room. Newton effectively obscures the fact that we are not looking straight into the space. The edges of the mirror being parallel tell us that the mirror is upright to the view, but equally the doorframes are (almost) parallel. This makes us expect that the room might be looked into horizontally, otherwise they would have a different angle and converge to their own vanishing point somewhere far below the horizon.
This in a strange way puts a conflict for our expectation of the floor being horizontal to the view. At the same time the image composition makes it hard to find clearly defined visual clues. Most obvious however is the fact that mirror and floor are not at a right angle. Not only is the mirror turned sideways, it is also tilted backwards relative to the horizontal.

The use of the camera lucida allows a working process between model and drawing. It is employed for the verification of the spatial analysis but also points towards further potential in the linking between the drawing process and spatial construction.

Aimé Laussedat describes in his book *La Métrophotographie* (1899) the benefits of using the camera lucida for geographical surveying. Even though camera obscura and photography have already been available, the precision of the camera lucida in avoiding lens distortion as well as the wider viewing angle of 60° instead of 25° possible at his time made it a viable solution. He applies the camera lucida in the *restitution of plan and elevation* from one perspective using a method called *Bildmesskunst* or *Iconomètrie*.

1 Aimé Laussedat, *La Métrophotographie* (1899), p.14ff
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Laussedat’s camera lucida is fixed to the drawing board by two arms with clamps, which are set exactly opposite each other by means of the scales drawn on the edges of the board (...). The adjustments are made in the following order:

1. The drawing board is leveled in the same way as a plane table
2. The upper face of the prism is leveled by means of the level shown above (...) and the slow motion screw at the side
3. The principal point is found with a plumb line touching the edge of the prism (...). The distance from this edge to the principal point is the distance line; it is measured with a scale. It can be made longer or shorter by changing the length of the two side arms of the instrument.
4. Horizon and principal lines: Suspend a plumb line at some distance in front. Turn the drawing board around its vertical axis till the image of the plumb line is seen passing through the principal point. This image is the principal line; it is traced with the pencil. A perpendicular through the principal point is the horizon line.

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Images

Figure 1: Helmut Newton, *Self-Portrait with Wife and Models*, ‘Vogue’ Studios, Paris, 1980, gelatin silver print (118.1 x 121cm.) © Helmut Newton Estate / Maconochie Photography

Figure 2: (p.3–9). Drawing by the author Drawing out Helmut Newton’s *Self-Portrait with Wife and Models*, ‘Vogue’ Studios, Paris, 1980* (2018) (176 x 126cm)

Figure 3: Photo by the author, *Drawing out: Model of the ‘Selfportrait’ with camera lucida* (2018) (80 x 125 cm)

Figure 4: Drawing by the author *Drawing out: Camera lucida tracing of the model* (2018) (21 x 28 cm)