Specific Transparencies

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Abstract *— The question of* Specific Transparencies *transgresses the common notions of transparency, the translucent, reflection or the opaque by focusing on how certain material innovations can be used, apart or against their intentions, for inserting complexities into spatial relations beyond quantitative dimensions, transforming perceptional qualities on a sensory level instead. This conceptual approach is exemplified through short discussions of selected projects dating from 1914 until the present and based on brief theoretical discourses in-between art, architecture and philosophy.*

Index Terms —history & theory, materiality, perception, technology

The development of transparencies in architecture has always been linked to technological innovation as much as it has been conceived with theoretical polarization. What binds one to the other, or rather what can be a blind-spot for both, is the potential distance they take from what architecture can also be about: a comprehensive stimulus for our senses or enriched experience by means of the built environment. While one is easily attracted by technological innovation or the new, the following short interrogation will open up a divergent path to differences within the great realm of transparency in architecture, towards the niche of *Specific Transparencies*.

The examples presented are probably widely known, still one might feel them differently, instead of reading them, this time around – which of course this is something paradox to ask for, as we can not bring them to where we are. Nevertheless the attempt is a kind of multisensorial approach, with the explicit goal being, to avoid the prevailing dichotomy between theory and practice of architecture. These polarizations are nothing to believe in. Neither should any linear progression in the development of architecture nor in its transparencies be trusted. Therefore `challenging the limits´ must be understood not in a way of larger, stronger or any new effect applied onto or put inside a glass-surface or the digital realm. Whenever one talks about quantitative performance, which is of the same importance, we talk about building – not architecture. A duality one does not need to separate, but also should not confuse. So instead of opening up an opposition against technological progress the following examples will be used for showing conceptual transformations based on innovative applications within architectures of glass. Strategies that, at different times as from different angles, have lead towards *Specific Transparencies*.

As might be guessed, the term of the `specific´ is borrowed from Donald Judd, who used it to describe the work of his fellow US-artists in the 1960s as `specific objects´. In these he sensed a distinct relation of supposedly non-compatible parts, in that case painting and sculpture. The fusion of different aspects or singularities such as form, image, color and texture into an indivisible multisensorial whole fascinated him (Judd 1998: 69). He himself later on tried just that by using colored and sometimes also transparent acrylic glass or the reflection of color on metal-surfaces in a precise manner, as the basis for his transformation of our perception of industrial materials.

The material for our contemporary interrogation of transparency still is glass most of the time, which today can take on a vast range of quantitative and qualitative effects. To distinguish between these, to give words to what can be felt in these spaces of transparency and to focus on strategies of transformation, like inversion or misuse, is the objective for this paper. Therefore some relevant solutions for transparencies in architecture from the last one hundred years will be highlighted briefly, while at the same time further clarification of concepts and terms will be introduced for targeting *Specific Transparencies*.

Whenever one starts with the transparent in architecture one finds the reality and myth of dematerialization, the strive of engineers as architects to make the skin, that usually delimits space, disappear. The aging debate between the literal and phenomenal aspects of transparencies needs no prolongation here. Instead Reyner Banham should guide us with his reminder that also within the so-called modern movement(s) the interrogation of the material qualities of glass was on the agenda as one can imagine with the pavilion of colored glass by Bruno Taut on the Cologne Werkbund-Exhibition of 1914, when together with Paul Scheerbart he imagined transformations based on transparency way

beyond the accepted four dimensions of architecture (Scheerbart 1971: 137). In a different context ten years later Pierre Chareau was working on thickening the glass-enclosure of his `Maison de Verre´, both projects diverting from the path towards dematerialization, early on experimenting with the effects of translucency (Banham 1996: 261).

At the same time inside and outside the canon of transparent architecture was Ludwig Mies van der Rohe who seems to have taken on a new challenge for transparency with every project he did, and therefore avoided dematerialization as an easy answer. Instead he worked hard on the reflective qualities of glass early on, as his coal drawings and marquette-experiments for his Friedrichstrasse-sky-scraper-projects of 1921 and '22 clearly show. And in 1927 on the occasion of the Werkund-Exhibition `Die Wohnung´ (or `the apartment´) in Stuttgart he experimented together with Lilly Reich on a rematerialization of glass-screens by using them in white, grey or olive-green coloring (Mertins 2001: 128). The most radical implementation by Mies can be found in the facade of the Seagram Building of 1954-58 where the contrast between structure and infill is played down by using bronze-tinted glass and I-beams as well as other cladding-material consisting of copper mostly (Lambert 2001: 400). Instead of attempting to make the wall of the skyscraper most transparent he opted for a *Specific Transparency*, one that contradicts the expectations towards the material qualities by blurring them. Mies designed the parts while focusing on the whole, because of the complete object itself being the most relevant for our every-day-perception.

The way transparencies are perceived depends on many factors that, among others, refer to what we are used to. But there also seems to be a difference depending on how many of our senses and levels of comprehension are engaged or left unaddressed. For understanding emotions and their relation to our perception Gilles Deleuze gave a visual insight when discussing the work of Francis Bacon as `The Logic of Sensation´. There he described sensation to be the opposite of the easy or the cliché but also (and most important) of the sensational. As can be seen in the painting `Sand Dune´ of 1981 for example, where Bacon used local blurrings and free markations within the same piece to transform one order to another, to go from one layer to another (Deleuze 1995: 27). In this way the question concerning sensation can be used to support the notion of the specific, as both address a certain complexity beyond the rational thought, instead addressing many comprehensions at once.

To not forget, Mies also was sensational sometimes, as by introducing disappearing glass-walls into the Tugendhat-House of 1929, a technological feature that, after its surprising effect, one rationalizes, memorizes and through this looses its effect as an emotional experience for the future. Instead the greenhouse-room in the corner of the lower floor, delivers a sequence of glass-panes together with different layers of greenery that would, from my understanding, be more of a sensation. Not unlike the `Fondation Cartier´ by Jean Nouvel where such a layering results in the fact that no effect will be

repeated one-to-one due to the change of light, nature and perspectives – what Jean Beaudrillard described as `the destabilization of our perception´(Baudrillard 1999: 12).

Instead of those lasting qualities to be perceived, short-lived technological sensationalism of quantities can often be found in the applications of structural glass. As experienced with most glass-floors or bridges made of the formerly fragile material, an external logic brings along sensational structures but often lacks the spatial or perceptive complexity that would deliver a feeling of sensation that lasts or could be called specific.

While the artist Dan Graham started out with conceptual discourses and then an almost political interrogation of transparencies in architecture, his early works still show his link to performance art of that time and incorporated video-loops for creating complex spatial perceptions. He then moved on to colonize architectures materiality and managed to create instable views by using glass with different reflective capacities in his pavilions. There he used technologies of glass-production beyond their intended use for climate-control or surveillance. Further more he confronted a modernist intention with a corporate imagery (Graham 2001: 20), shifting our perspective on space as it relates to the gaze instead, especially when the general public is present. These bi-directional and potentially performative spaces combine disparate conditions like material, weather and habits to present yet another angle on *Specific Transparencies*.

With Graham's pavilions the different levels on which construction and perception of transparencies work become obvious and can be linked to a precise notion of Martin Heidegger who argued that the nature of technology is nothing technical at all (Heidegger 1967: 5). Rather the physical becomes a cultural construction as it is experienced not in distinguished singularities but as a totality to be uncovered – *Specific Transparencies* that are neither technical, nor phenomenal in the first place.

So this is where materials, techniques and concepts can guide architecture to go beyond determined applications of technology but instead transform them through their use or misuse. Bernard Tschumi's video-pavilion of 1990 in Groningen, the Netherlands can be interpreted as a project that mixes disparate technologies to reveal each others nature in a straight-forward manner. By using state of the art structural-glass to build a space for showing erotic video-clips the architect does not only put an issue of supposed morality out into the open, which it is not. He also contradicts the presumed dematerialization by triggering the glass to rematerialize through explicit reflections when it supposedly is most transparent – at night. Through this interrogation of transparency through program Tschumi also offers something that Terence Riley in his discourse on Light Construction named to be a rediscovery of the facade as an in-between (Riley 1995: 14). With this, the bi-polar thinking of inside and outside, space and enclosure, construction and skin begin to vanish as the structure is intensified in terms of qualities, much more than quantities.

Before reaching the final project in this search for *Specific Transparencies* it might help to remember the two glass-houses of Ludwig Mies van der Rohe and Philip Johnson, because of their straight forward typology of reducing the skin of the space to a minimum, even though the glass does not replace the load baring structure. Much has been written about these projects of the late 1940s. Here they are used only as a background to the competition held for Leerdam, the Netherlands in 1995 in search for a glass-house of the 21st century. The house that won and was completed in 2001 by Gerd Kruunenberg and Martin van der Erve, takes up the discourse around the translucent highlighted by the exhibition Light Construction at the Museum of Modern Art, New York in 1995. But instead of using yet another technology for veiling the inhabitants, or working on the beauty of the shadows on a translucent glass-wall, the architects chose to transform a certain technology of transparency, manipulating it in a particular and radical way to arrive at a transparency that is as complex as it is specific. The house as a whole can not be discussed here at length, even though it builds the heart of the author's research. For this time around the focus needs to be on the construction and its effects, for delivering an idea of the spaces and why they are different.

It is well known how, since about 20 years, glass is laminated with polymer-foil to be more secure or to build up a glass-sandwich where the load baring sheet is protected from external influences. `Laminata´, as the house is called, misuses this technique on a conceptual level to built a solid block of glass that is then split open or carved out to create spaces engulfed by glass walls that feel solid, almost cave-like, and are transparent at the same time. At the long side of the house the glass-sheets are turned 90 degrees from what would be expected along the facade, where the depth of the wall ranges from 20 to 170 centimeters. At the short sides of the box those glass-panes make wall-size frameless windows as we are used to. Because of budget limitations the glass-roof, proposed to be part of the same structure, was not realized. Still the long corridor on the side, with its solid glass-ceiling, can give an idea of being surrounded by an all-glass-solid. To maintain natural ventilation regular frameless glass-windows were placed inside the solid glass-walls, but they also accentuate a perceptive uncertainty of what transparency means in this peculiar case of contradiction. The literal transparency of these walls changes depending on how you look at them. Objects are duplicated and while the image is blurred if you stand in front of the wall, it seems to become clearer as you walk along and the sequence of images is overlapping in our perception.

What makes this project especially interesting, even though it is full of compromises, which originate from the struggle of getting it built, is the significant opposition it gives to our perception of transparencies that is all too well trained these days. The abuse of material innovation – lamination of glass – or rather a technological misunderstanding, as it was glued together on-site in the end, resulted in a thickening of the skin where the perception of solid mass, transmitting light and the image of what is behind, opens up multiple levels of experience or rather a `sensation´ of transparency. What was formerly known as surface became three dimensional and transforms even further once movement is involved. The adjacencies of regular or smooth reflections and visual fractions or surface-texture intensify the oscillatory effect of the structure itself. In the end a transparent solid is experienced, way beyond the dichotomy of space and facade as the glass wall takes on its own spatial and haptic dimension that belongs to the inside as much as it belongs to the outside or rather to itself?

The sensation lasts because between two forms of optimization the richest experience can be found, like in this case between something solid and transparent. And it is not the quantitative load baring capacity of the structure that features a technological tour-de-force; rather it is the unmasking of everyday technology that, if perceived at all, delivers a multiplicity of its being. Still the material organization does not bear a meaning to be read, but offers a qualitative experience that lingers on a

middle condition that *Specific Transparencies* are all about. Much too often transparencies are applied that erase differences in spatial configurations through over-optimized technology which bring us homogenized spaces and experiences. While innovation as shown is more than welcome, it is the role of architecture to bring about transformations from within – searching for intermediate states such as *Specific Transparencies*.

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Lecture held on June 3rd 2006 during the international conference 'Transparency & Architecture – Challenging the Linits' at the Aristotle University of Thessaloniki, Greece, where the author was also co-chair of one session.

Published in:
Fani Vavili / Evanthia Dova, Transparency & Architecture, ZITI Publications, Thessaloniki 2007, pages 479-484