Envisioning architecture interiors through model photography: Caruso St John Architects

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Abstract Through the examination of the work of Caruso St John, this inquiry addresses some of the attributes of model photography that might be considered significant to respond to the firm's aspirations in terms of visualization and discusses the way this representation device is modulated to perform as a working tool in the design process. Considering model photography has been referred to as a means to access the future atmosphere of the built environment, it also aspires to critically examine some of their general potentials and limitations of in terms of accomplishing this. The path taken combines a brief description of some key aspects of the offices' approach to architecture with a visual comparison between images of physical models and those of the built outcome of the Brick House project in London.

Employed in a process of empirical experimentation, the realistic models photographs are found to be helpful to convincingly evaluate the situated performance of aspects such as material appearance and natural lighting, thus responding to the architects' intentions of designing interior spaces that have appropriate character and may offer meaningful sensorial experiences.

The images by Caruso St John are found to pursuit minimal ocular distortion, but also sustain a descriptive gaze and attaining seductive visual expression, being interpreted here as a stylized realism, with ambivalent relationship with the disclosure of future perception. By means of their sharp visual objectivity, they place factors directly related to the building's material and spatial configurations as the sole ingredients of the generations of potential atmospheres. Their realism, however, may stimulate the observer's imagination, hence evoking of more complex situations drawn from his own sensorial experiences. In their silence and emptiness, they also remain open to conjectures regarding the potentials of architecture as a liveable space.

Fig. 1 Model Photograph of the Brick House project. Retrieved from http://www.architecturefoundation.org.uk

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Model Photography in Contemporary Architecture

In the hands of architects, visualization tools that help disclose future perception of the built environment are never neutral. Due to their capacity to highlight certain dimensions of a project, they are often selected and transformed in order to stimulate specific manners of interpreting a given design. Thus, besides supporting an architect's of argumentation when used in presentations, they can be are also seen as a way to adjust one's approach to his/her own design efforts by modulating his/her own reading of the situation handled in the conception process. Following such premises, this paper shall present a study on the use of photographic images of interiors of physical models by Caruso St John Architects as part of a broader research effort concerning the use of interior model photography by contemporary architects as an alternative to digitally produced images in the process of design and communicating their projects.

Such interrogations were impelled by the seemingly anachronistic use of model photography in contemporary architecture. As described by Davide Deriu (2012), model photographs have enabled architects of the modern movement to publish some of the as images of the buildings "as if" they were built: persuasive and credible illusions that seemed to overwhelm perspective drawings. In the post second world war North-America the power of persuasion of model photographs was coopted by real-estate marketing strategists, who employed them extensively in print advertisement, leading to a decrease in its attributed truth value as a consequence of the false promises they helped sell. This process was paralleled by the disinterest of more erudite architectural circles, which elected less direct and more diagrammatic means for conveying their response to modern architecture's fate in late 1960s and 1970s. In face of the recent developments in digital modeling and image production and with the very credibility of images at stake in architectural culture (Sacher, 2012), the present use of physical model photography in contemporary practice seen the works of Peter Zumthor, DRDH, Christoff Quinton, Christ & Gantenbein and Caruso St John, as well as in some leading architecture schools[1], indicates this mode of visualization has an appeal that may deserve attention.

Through the examination of the work of Caruso St John, this specific inquiry aims to addresses some of the attributes of model photography that might be considered relevant to respond to the firm's aspirations in terms of visualization and communication of a project and discuss the way this representation device is modulated to perform as a working tool in the design process. Considering model photography has been referred as a means to access the future atmosphere of the built environment in the design process, it also aspires to critically examine some of the general potentials and limitations of model photography in terms of accomplishing this task effectively. The path chosen to address combines an interpretative account of some key aspects of the offices' approach to architecture with a visual examination of the attributes of model photographs in a comparison between the images of models and those of the built outcome of the Brick House project in London.

Verisimilar Physical Models for Immersive Visualization

The predilection for the use of physical models by Caruso St John Architects has been attributed to Peter St John`s fondness for craft and manual work (Floris & Teeds, 2011) and reflects the attention given to detailing and construction in the firm. The great number and the variety of types of models seen in the shelves indicate their use is quite pervasive in the design process. Among all kinds, however, our research interest befalls on the ones conceived to visualize the interiors of buildings allowing the generations of realistic depictions through photography.

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[1] The most notable case are the impressive interior and exterior model photographs employed in student work in recent years in studios at the ETH in Switzerland taught, among others, by Tom Emerson (http://www.emerson.arch.ethz.ch), Christ and Gantenbein (http://www.christ-gantenbein.arch.ethz.ch) and Adam Caruso himself (http://www.caruso.arch.ethz.ch).

Fig. 2 Photographic images from models for the respective projects: Arosa Sporttheatre, Graubunden, 2000; Novartis Visitors' Centre and Offices, Basel, 2003; Musée Cantonal des Beaux-Arts, Lausanne, 2011. Retrieved from http://www.carusostjohn.com

Although sometimes seen as buildings in miniature due to their strong visual similarity with the intended outcome, the models' relationship to actual buildings can still be considered one of analogy: where two different and independent entities relate through partial equivalence. In the case of realistic physical models such equivalence is mainly of proportion and of visual resemblance, a feature that distinguishes them from the so called conceptual or sketch models. Conversely, buildings and models usually diverge in size, manufacturing technique and materials, having a structure and a design of their own. Caruso St John interior models, usually in scales 1:50 and larger[2], consist of only part of the building, present visually convincing materials and have an open (or removable) wall to allow a camera inside, indicating their main purpose is precisely to provide immersive visualization and generate realistic photographic images.

Notably, such models also integrate the decision-making process as very operable devices. According to Adam Caruso (Floris & Teeds, 2011), they are regarded in the office as "open" working tools, made of foam-board and paper, materials of simple and easily handling that allow direct interference after assembled. By shortening the gap between design moves and the evaluation of their effects, the models act as an empirical testing ground, where the image is a key player by allowing contemplative scrutiny and evaluative discussions by different members of the team simultaneously.

We argue that certain stylistic traits identified in several of their projects tend to facilitate the use of realistic depictions in intermediate – and thus transitory – representations. For instance, one can observe that the adoption of visually uncomplicated details and simple geometry allows precise assemblage of the model parts. The fine detailing of specific components, such as wall treatments, window frames and trusses – a benefit of laser cutters and good plotters – sustains the creation of images that are consistent in scale with the intended visual reality of the building while still compatible with relatively uncomplicated craft. Another relevant stylistic choice is the predominant use of vertical planes as space defining devices. Notably, free plans and free-standing columns are rarely seen in Caruso St John's projects.[3] This contributes greatly to the operability of the model, affording the use of easy handling flat components made of foam-board instead of the repetition of smaller parts and delicate joints.

Material Surfaces

The idea of geometrical simplicity in Caruso St John, however, does not represent a case for abstraction. It is true that many models are composed of bright white walls, but this is simply because they represent exhibition spaces that are designed as neutral white rooms. The general

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[2] The making of larger models has the implication of requiring the solution details that would otherwise be imperceptible in smaller ones. This has lead the architects to abandon the preference for 1:20 models and try to make them as small as possible in order to allow faster results with simpler craft (Floris & Teeds, 2011).

[3] For a critical commentary on the importance given to the vertical plane of the wall as perceivable and expressive element see Aureli, 2013a.

rule is that the treatment of the models' surfaces must match the materiality of the future building. The walls in the models for the Brick House, for example, appear with two distinct types of covering: sand colored stripped craft paper in an earlier version (Fig. 3, Fig. 4, Fig. 5) and plotted paper with brick pattern in a latter version (Fig. 1). In both cases the surfaces point to the texture and color of the brick used in the construction, an early material choice. The use of paper covering also indicates that materiality in the models is considered according to its external appearance – having to be convincing enough for the camera.

Fig. 3 Brick House. Comparison of photographs of the building (Den & Halfiger, 2002) and model (El Croquis, 166, 2013)

The attention given to the material surfaces is a significant aspect of Caruso St John`s architectural approach and should receive further examination. Known to be attentive of the design of interiors in all projects, they emphasize the relevance of conceiving spaces with specific character, providing the buildings with several different types of rooms suitable to the uses they may hold (Caruso, 2008). The capacity to afford emotional experiences and appropriateness to a room`s character – it`s suitability in relation to its purpose and social meaning – owes greatly the visible surfaces of the vertical planes that define it. Hence, the materiality of a wall is accounted in the design process primarily through their visual appearance, rather than by what lays inside it (Aureli, 2013b). As a consequence, the consideration of the wall as a visually perceivable elevation both inside and outside the buildings has led the exploration of distinct ways of dressing and treating the vertical planes, such as distinct cladding systems, material textures, color and ornamentation (Caruso, 1997b).

Such positions have repeatedly been related to the ideas of Gottfried Semper and Adolf Loos regarding architectural spatiality. Semper's (1851) thesis about the textile origin of the wall, for instance, links the notion of spatial enclosure to that of meaningful surface through the argument that the wall derived from the tensile space dividers of primitive societies – an element that offered room for artistic expression through the craft of weaving and braiding – progressing to the hanging of carpets as wall dressings and the painting the surfaces of solid structures. The wall as a solid element would only came about as a necessity of climate protection and endurance, with its visible surface still being the most relevant feature. In the same direction, Adolf Loos (1989) claimed, forty years later, that architecture's most prominent purpose is triggering and enhancing

emotions. Such undertaking would require attention to the appropriateness of the character of a space in relation to social mores and the customs of daily life, asking for the correct handling of surfaces through the exploration of the very materiality of the wall or of its covering elements.

In order to work within these premises, Caruso St John's choice for visualization must bring to view the material appearance of surfaces so they can be discussed and evaluated in terms of their situated visual performance within a given space, being considered not only for its form.

Photography as perspective

While tridimensional models are remarkable for not pre-determining angles of vision, photography imposes a fixed point of view. Although models may be explored through different perspectives with a camera, the act of shooting a picture implies in selecting the perspectives through which the environments should be accessed. In the case of Caruso St John, the views favor a subjective viewpoint, nearly always paralleling the vantage point of a person penetrating the space. In the images, the models appear to be "full scale" buildings, forced out of their condition of miniatures and into the realm of architectural photography. The visual trick is very convincing, but the images retain their ambiguous conditions, for they give away their origin in the physical models to any attentive observer.

For the image not to be confined in the world of miniatures, a few technical aspects are observed and will be described here. Firstly, there is a preference for a 50mm lens, used to minimize distortion in relation to "normal" vision and to avoid making the space look much larger or more dynamic than in reality, thus suggesting a commitment to some degree of honesty or truthfulness.[4] This is evident in the comparison of the optical attributes of the model photographs of the Brick House (Fig. 3, 4, 5) published as an yet unbuilt project (Den & Halfiger, 2002) with those recently released in *El Croquis* magazine (2013) taken by Hisao Sukuki (Fig. 2, 4, 6). The use of a lens with wider angle allows much more to enter in the magazine`s photographs, providing more visual information, also making the space seem deeper and the house look larger. Notably, both groups of images differ from the photographic essay (Fig. 7) made by Swiss photographer Heléne Binet[5] shortly after the building was finished. As put by Philip Ursprung, (2008) in presenting outstanding compositions and exploring the rigorous contrasts in the roof these images may stand as works of art in their own right, but also may be related to the shifting gaze of a person who moves through the house stricken by particular corners and views.

Fig. 4 Brick House. Comparison between model photograph (Den & Halfiger, 2002) and building photographed by Hisao Suzuki (El Croquis, 166, 2013)

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[4] Caruso St John claim to pursuit and architecture that voids spetacularity or formal play that hints at the impression of latent movement (Caruso, 2008), although they recognize the intention, in projects of civic importance, of producing urban monuments.

[5] These photographs have been included in several publications of the Project and are available at the firm`s web site. Retrieved from http://www.carusostjohn.com/projects/brick-house/.

It has been mentioned that most photographs aim to match the position of a potential user in the space. In several images of the project for the Brick House, however, the camera is set lower than a normal person's eye level (Fig. 4). This might suggest either compromises in favor of persuasive compositions, the desire to show the distinctive ceiling design, the difficulty in positioning the camera correctly or the will to make the space seem taller, and thus contradicting the position of commitment to honesty presented earlier. Although such question is still to be answered, it denotes a willingness to digress from strict visual simulation.

It is relevant to mention that most model photographs face the challenge of dealing with a very short range of focal field, a consequence of the proximity of all elements and the great relative distance between them. To avoid this effect a combination of narrow opening and slow shutter speed is needed, calling for a greater sensibility to light and/or a fixed support, resulting in less practical action than just pointing and shooting. The deep range of focal sharpness viewed in Caruso St John's images indicates a conscious effort in diminishing their miniature effect. In comparison with the magazine photographs, however, the focal sharpness is not total, rendering the slight sensation of a thicker atmosphere by the space that rests between the elements in space.

Fig. 5 Model photographs of the Brick House project (Den & Halfiger, 2002)

Natural light

The perception of depth and tangibility in the images also results from the incidence of light in the models. Natural light, due to its a-scalar behavior, performs in the models in the same manner it would in full scale, allowing not only the production of credible images, but also enabling great accuracy in the verification of the luminous performance of the building[6]. This attribute, we argue, is crucial in favoring of model photography over digital visualization when considering the integration of sensorial perception in the design process.

Fig. 6 Photographs of the Brick House finished building by Hisao Susuki (El Croquis, 2013).

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[6] Such verification is conducted empirically through visual perception, not through quantitative assessment.

In the project for Brick House the architects made several physical models to explore and verify the performance of the skylights. Given the site`s confined conditions, this feature was considered crucial to let light into the space and to avoid the feeling of being over enclosed. When compared to the images of the built outcome, the model photographs prove to be quite accurate in anticipating the perceivable behavior of light. The evolution of the images also suggests they were important in the adjustments made during the design process. By observing the incidence of light on the walls of an earlier model (Fig. 5) on can note a greater contrast between the areas close to the vertical glass panes and those distant from them. As the project progressed, the light gradient managed to be attenuated by enlarging the openings and associating them to the walls, resulting in a more balanced luminosity[7] (Fig. 1, Fig. 4, Fig. 6).

Cause and effect

Although facilitated by images, the method of visualization using model photography is dependent on the very physicality of the models and on the visual properties of their surfaces, two features analogous between models and buildings. Albeit computer models might reach similar results in specific cases, the physical ones are considered by the architects to be faster (Floris & Teeds, 2011), for they respond immediately to changes in the models' physical configuration. Adam Caruso has referred to a relation of cause and effect to describe their predilection for physical models, since that the visual effects perceived in the models are caused by their physical attributes instead of being simulated by digital means. If the same effects are to be achieved by the building, it needs to reproduce what was constructed in the models. It can be argued that these notions render model photography convincible and trustworthy, and may have led to the renewal of its truth-value of among contemporary architects. Moreover, this might be interpreted as a response to a desire for anticipation and control that echoes the self-claimed compromise with reality alleged by Caruso St John and others (Caruso, 2008).

Fig. 7 Photographs of the Brick House by Eléne Binet, retrieved from http://www.carusostjohn.com

From a critical point of view, however, one must recognize that model photography does have significant shortcomings regarding the anticipation of future perception. Concerning the specific issue of light, for instance, there are clear limitations, like the incapability of accurately testing artificial lighting in a scale model, and potential distortions, such as penetration of light through the walls removed for the camera's insertion[8]. Severe misleading also may derive from the fact

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[7] Note that the presence of dark spots in the ceiling was maintained. According to Adam Caruso (1997a) this is a reference to St Mark`s Church by Sigurd Lewerentz, as are other aspects of the design of the house.

[8] This may have happened in Fig. 2, where the corridor in the model seems brighter than the built outcome.

that the cameras responsiveness to light does not necessarily matches the sensibility of the human eye and may afford inaccurate representations of light's perception. Moreover, flat and still photographic images, besides being restrained to the realm of vision, are widely recognized in their incapacity to emulate with precision embodied visual perception or registering directly the passage of time motion.

Stylized Realism

Suggesting his awareness of these limitations, Adam Caruso has remarked that their images can be considered to possess a "knowing distance from the real" and to have "kind of a pictorial realism" (Floris & Teeds, 2011, p. 131). He has compared them to Edward Hopper`s realistic paintings, which conjugate an objective gaze with emotional atmospheres filled in warm light, and mentioned their admiration for the photographers of the Düsseldorf School (Aureli, 2013b), known for their conceptual, dispassionate, objective and documental photographs. Both cases relate to images that call for a long attentive scrutiny to allow richness to be experimented in the ordinary and the banal. Perhaps Caruso St John's images can also be interpreted as a kind of stylized realism, ambivalent in relation to the disclosure of future perception. By means of their sharp visual objectivity, they place factors directly related to the building's material and spatial configurations as the sole ingredients of the generations of potential atmospheres and character. Through their realism, however, they may stimulate the observer's imagination evoking more complex situations drawn from his/her own sensorial experiences. In their silence and emptiness, they remain open to conjectures regarding the potentials of architecture as a liveable space.

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