

**International Congress of Aesthetics 2007  
“Aesthetics Bridging Cultures”**

**Translating Lines: Drawings’ Aesthetic  
Agency in Architecture**

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Starting with the assumption that the institution of architecture is maintained by its discourse, I will focus on the theoretical and practical frameworks of architectural drawings, representation as a broader definition, which itself has an indispensable role within the constitution of architecture’s discourse that also relates the discipline externally.

Historically, architectural representation has been signifying an interval where the shift between the mental conception and its material production has taken place. Since architectural production – from the initial idea to the built object of architecture – incorporates various agents, the representational forms utilized in the production of the architectural artifact are accepted as “transitional stages,”<sup>1</sup> or within the limits of a codified language that requires to be “translated” rather than a set of ideal templates and operations to be “transcribed” at the site.<sup>2</sup> This transitional or translational stage presumes that there is an interval between the creative imagination and material realization, which is fulfilled by the theoretical and practical operations covered by architectural representation.<sup>3</sup> As it was also pointed out by Diana Agrest that “architecture is produced in three different registers, through three different texts: drawing, writing and building,” the interval mentioned here should be conceived in conjunction with that.<sup>4</sup> When referred to representation it is always related to a domain of surrogates either in the symbolic representation of language, in the geometric order of visual representation or linguistic structural model of signs. In this regard, it can be claimed that the discourse of architecture can only be constructed within the domain of representations, be it in the form of text, drawings, models or any kind of narratives. Therefore, architectural representation being also the discourse is reconsidered with its relation to the changing “modes of production.” More clearly, it can be claimed that the medium of architectural conception coincides with its apparatus of projection and if there is an aesthetic dimension or an aesthetic agency of architectural drawings it has to take place within this interval of representation. A similar approach to the relation of representation with the production of the edifice is put forward by Agrest. She suggests that “the mode of representation while developing its own discourse, becomes a part of the process of production of architecture and that the development of techniques of drawing and design have an impact as important, as building techniques themselves.”<sup>5</sup>

The task of representation in architecture originates in the resolution of practical and instrumental limitations, but primarily because of the difference between the

environments of design and its translation into the instruments of construction. The evident form of this translation is drawing, which either captures the physical materiality or projects the mental images of the architect into the space.

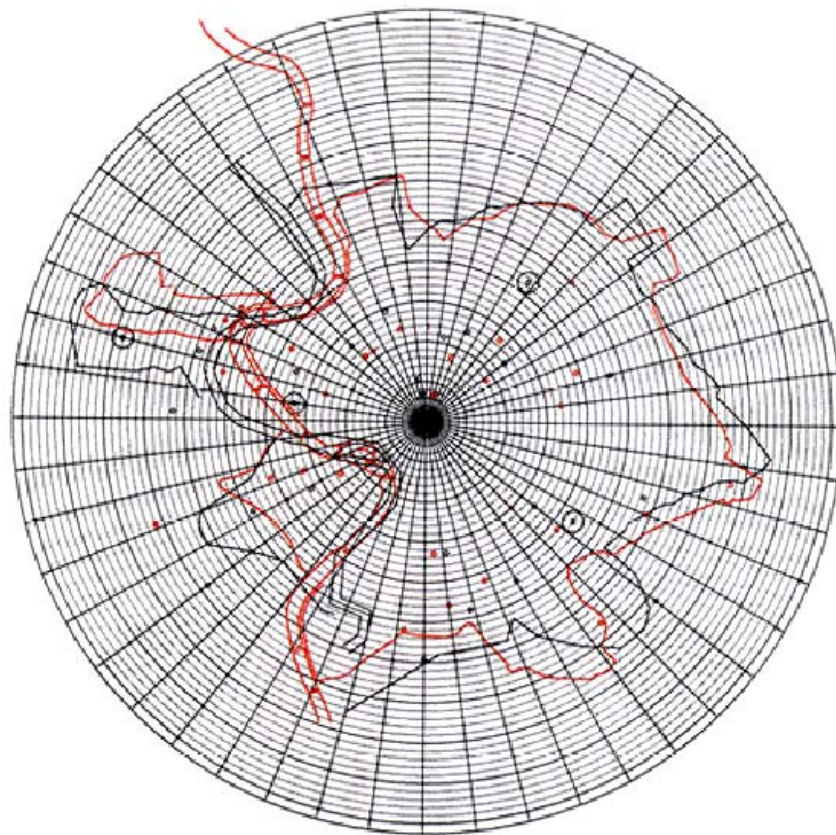
Drawing, except being a physical act and the artifact out of this act, becomes the conceptual tool in translation between various codes of design utilized in architectural practice. However, the constitution of drawing as a medium also requires a priori conceptual tools. Each drawing starts with the act of "framing" of the perceived or projected reality. Architects have developed techniques and methods to manage this process of translation. The group of plans, sections and elevations is called "orthographic set," which is accepted as a universal code in architecture. Although there are many additional instruments in the toolbox of the architects, the orthographic projection is attributed with the basic premise of being "objective" and "scientific." This attributed character of the drawings, which is best illustrated within the orthographic set and seems to be preserved within new techniques of representation, requires reconsideration with an outlook to their aesthetic agency as well. Therefore, rather than musing directly on architectural drawings I will be basically dwelling on certain interconnections to other disciplines and to the domains of art, which would cast light to the aesthetic functions of architectural drawings. From this point onward, it can be also said that any shift in both domains are translated via the discursive field of representation, which then acts as an index to the other. Therefore, any study focused on architectural representation would come up with the agents of a relational dialogue between different practices in the field.

With regard to this, I will focus on the concept of projection that is a key term in the production of drawings in architecture. The shift in the medium of "projection" impacts the processes of production and the object of architecture in the end. Also for Hubert Damisch, marking the linkage between the conception of architecture and its material realization, the connection is provided by the term "projection". He suggests that the connection induced by projection actually creates an interval, a critical "distanciation," which is tightly bound to the modes of production at large.<sup>6</sup> The role of paper, conceived by him as "the integral aspect of architecture since the period of linear perspective which provided a valid model and tool for both the art of building and that of painting," epitomizes that kind of "distanciation" induced by the mode of projection.<sup>7</sup>

Historian Mario Carpo, for instance, explicates this connection in his book *Architecture in the Age of Printing*, where he focuses on different modes of architectural representation before and after the invention of printed media. Let me exemplify this with Alberti's distrust into images in his treatises and the methods he utilized to avoid to resort to them. Alberti's case seems appropriate to elaborate this relationship since he's been acknowledged to be the first to construct a fundamental framework for the architectural theory. On the basis of his conception of architecture at a more abstract and conceptual level and with his distrust in images' capability of transmitting information accurately, it is quite allusive to reframe architectural representation in text. However, Alberti's avoidance of images in fact expands the terrain of representation at large. Especially, the narrative used by Alberti to overcome the shortcomings of the image could be exemplary to elaborate the object-representation relationship, in which the inspirational sources for architecture could be found, apparently with a concern for precision but producing an aesthetic object at the end.

Carpo's account on Alberti's two treatises on architecture and painting is significant in that he interprets Alberti's abstraction of the canonic organization of architectural orders by defining them as "abstract rules" to be a "turning point" in architectural theory. Carpo explains Alberti's avoidance of images as follows:

"The desire to avoid the use of visual media for the recording and transmitting of scientific data is evident in two of Alberti's other Latin works: the *Descriptio Urbis Romae* and *De Statua*. In both cases, Alberti invented a mechanism (in the literal sense of a mechanical device or piece of hardware) and a method (the software) for translating images into text. The *Descriptio* transforms a survey map of Rome into a system of points designated only by polar coordinates, without any other form of graphic documentation."<sup>8</sup>



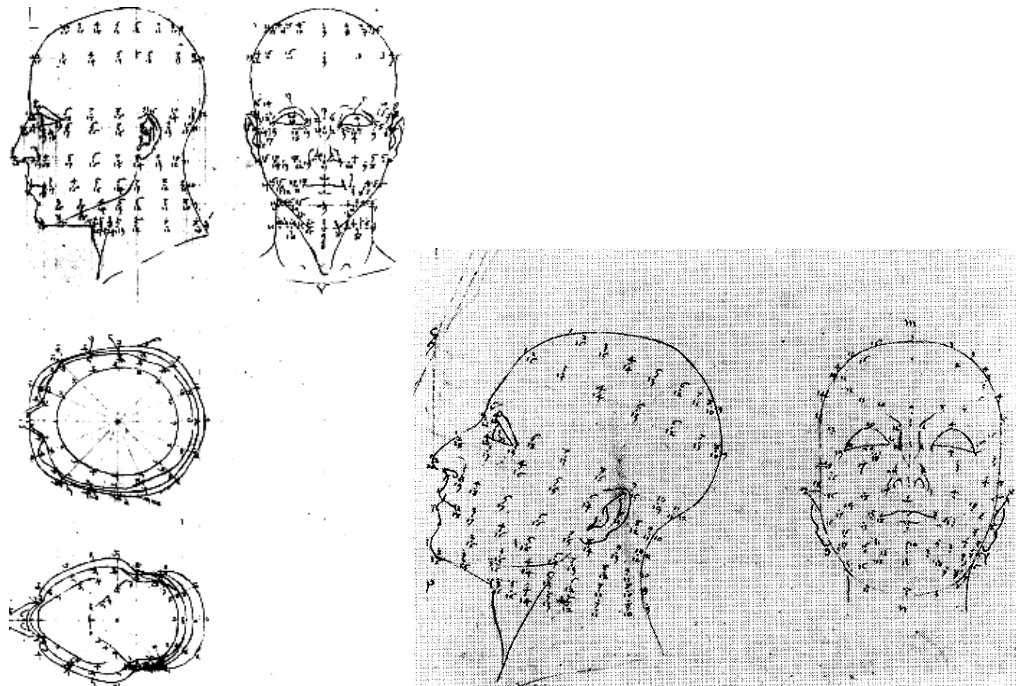
**Figure 1.** Leon Battista Alberti, *Descriptio Urbis Romae* (*The Panorama of the City of Rome*). A graphic reconstruction of the plan of Rome based on the polar coordinates supplied by Alberti.

Translating images into text, "mapping" in contemporary terms, cannot be simply read as visual registers and it is not a verbal transcription of a visual register either. Alberti utilized mechanization in order to avoid any human mistake and abstraction in order to attain an elevated sense of objectivity in his medium. His endeavor to make a bridge between numbers and words through images, mapping in its literal sense, provided him with an apparatus of multiplication (reproduction). In this respect, the operative function of his "information-saturated map" has to be considered as the central element in its representative capacity, which makes it to become an operative image. The act of

“mapping” can be seen as a way of looking in modernism. Like Rosalind Krauss’ conception of “grid” as a modern paradigm, model or abstract visual structure rejecting any narrative or sequential reading, Gilles Deleuze’s conception of image in this sense diachronically resonates with Alberti’s avoidance of it:<sup>9</sup>

“The image is not an object but a process...[T]he image is more profound because it frees itself from its object, in order to become a process itself, that is, an event as “possible” that no longer even needs to be realized in a body or an object...The image is precisely this: not a representation of an object but a movement in the world of the mind...”<sup>10</sup>

Another example of drawings that were immersed with the algebraic setup of the delineation of lines can be found first in the Renaissance around 1470’s. Piero Della Francesca (1420?-1492), Italian painter, was in search for alternative perspective methods, which was called the “Other Method” by him. It is significant to mention here, because this method, in Robin Evans’s words, “makes pictures of light paths between points in exactly the same way that architects make pictures of building.”<sup>11</sup> The alliance between linear perspective and architectural drawing was already established by Brunelleschi in the first quarter of 15th Century; however, it only allowed depicting easily pure geometrical shapes, which can be expressed in lines and arches. In contrast to that, Piero’s attitude was to establish a method in order to systematize the human body’s representation, which did not easily “submit to linear perspective.”<sup>12</sup>



**Figure 2.** (left) *Orthographic projections of a head, Piero Della Francesca.* (Source: Evans, *The Projective Cast*. 1995: 153.)

(right) *Orthographic projections of a tilted head, Piero Della Francesca.* (Source: *Ibid.* 1995: 157.)

Francesca's method was based on the projective geometry, which is effective in plotting the position and the foreshortening of irregular solids placed in the space, human body in his instance. Though, Robin Evans dates it back to Dürer that his perspective machines just worked in the same principle of identifying the points in space on a simple two-dimensional plane, he also adds that until Francesca's theorization of the procedure it remained highly practical and literal.<sup>13</sup>

As Evans describes the method, Francesca starts with plans and elevations. However, it is not easy to produce plans and elevations of a human head. Therefore, he divides the planimetric projection of the head into equal angular intervals and identifies them with numbers. Then, he repeats this procedure for all the projected slices until the drawings reach to a resolution of information enough for a perspective projection of the human head. The slide displays how Piero has saturated the drawings with the numbers systematically distributed on the human head. These coordinates, identified additionally with a series of numbers marked by the successive virtual slices of the head and the corresponding numbers of points, however, are not able to define the shape of the head on their own. They are immersed within the drawing; drawing would exist without them, but the numbers could not without the drawing. So, it is suggested, contrasting to Robin Evans, that until Francesca's systematization of projection the earlier attempts of drawing perspective or orthographic projections were actually limited to the concept of "tracing" or "delineation." Obviously, this seems conflicting that Francesca's method was almost fifty years later than the invention of perspective, which is accepted as a major step in the conception of projective geometry. Yet, the technique is highly practical than being theoretical, as it can be remarked through the relationship of orthogonal drawings to the perspective projections, which only accomplishes the necessary transition between drawings from one plane of projection to the other, in the way Dürer did literally. As a matter of fact, what Francesca did was still immature in the sense of an abstract mathematical language; yet, also Robin Evans affirms that his method was the first example of conception of projection in its theoretical entirety. He states the significance of this step that Francesca had taken, as "it demonstrates that the vanishing point is not inherent to perspective construction."<sup>14</sup>

Apparently, projection as a key term in architectural representation preserved its central position, when the Modern Movement at the turn of the twentieth century was also striving to appropriate different projective techniques. Obviously painting continued to serve as a "model" for architecture, yet other categories like photography and moving image were added, whose projective characteristics were influential in the conception of not only of space but also of time.<sup>15</sup> Though photography has been carrying the typical characteristics of the perspectival frame, the limited control of the function of time in the snapshot (exposure time) and the use of various lenses made it appropriated for architectural purposes. With its complex projective capacity, conveying its content over a function of time, and displacing the subject and object, it was obviously an attractive medium for not only artists but also architects. These show that projection was a central problem again attracting attention of many actors in the layered structure of the modern culture. The scientists, artists and architects, indeed, started to challenge the "plane of composition" once again.

Walter Benjamin, in this context, conceived the essence of the work of art in its infiltration into the layers of social structure and contended that its reception as a

reproducible artifact liberated it from being static, thus it became continuously reworked within this relationship. He touched upon a vast range of domains of art from painting, to film and suggested that printing was the first form affected by the mechanical modes of reproduction, which not only permitted graphic art to become an object of daily life, but also gave way to the perception of them to become classified among the very artistic processes.

Architectural representation, in resonance with these, makes the invisible line of architectural thought apparent, which can be conveyed through the modes of representation, since they are strictly tied to the paths of thinking. In this regard, I have attempted to exhibit a shift as such by a reconsideration of architecture's external connections, which might have looked strange at first.

"Modes of representation" are not simple resemblances of "modes of production", but they exhibit the implicit qualities of thought that gave way to them.

To conclude, I will turn to Ortega y Gasset's proclamation that "the dimension of depth, whether of space or time, whether visual or aural, always appears in one surface, so that this surface really possesses two values: one when we take it for what it is materially, the other when we see it in its second virtual life. In the latter case the surface, without ceasing to be flat, expands in depth."<sup>16</sup> In short, drawing in architecture denotes the desire for visibility, as it usually serves the invisible in architecture. Although it is a cut into the material body of architectural edifice, built or yet to exist, it does not only operate by making explicit the invisible, but also excludes, or better de-frames the visible that is implicit, which multiplies significance of the means of representation as a terrain of potential tracks for architectural thought.

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<sup>1</sup> Mark Wigley. "Paper, Scissors, Blur." The Activist Drawing: Retracing Situationist Architectures from Constant's New Babylon to Beyond. Eds. Catherine De Zegher and Mark Wigley. Cambridge, Massachusetts: The MIT Press, 2001: 32.

<sup>2</sup> Alberto Pérez-Gómez and Louise Pelletier. Architectural Representation and the Perspective Hinge. Cambridge, Mass.: MIT Press, 1997: 3-7.

<sup>3</sup> The articulation between architectural theory and practice is emphasized by Diana Agrest that it is the architectural representation which relates them to each other. In this respect, representation becomes the interval between the theoretical and practical realms of architecture. See Diana Agrest. "Representation as Articulation Between Theory and Practice." Practice: Architecture, Technique and Representation. Stan Allen. London: Routledge, 2003: 164.

<sup>4</sup> Diana Agrest. "Representation as Articulation between Theory and Practice." Practice: Architecture, Technique and Representation. Stan Allen. London: Routledge, 2003: 163.

<sup>5</sup> Ibid. p. 168.

<sup>6</sup> Hubert Damisch. "Anything But?" Anything. Ed. Cynthia C. Davidson. New York: Anyone Corporation. 2001: 249-54.

<sup>7</sup> Ibid. Damisch, 2001: 251.

<sup>8</sup> Mario Carpo. Architecture in the Age of Printing: Orality, Writing, Typography, and Printed Images in the History of Architectural Theory. Cambridge, MA: The MIT Press, 2001: 122.

<sup>9</sup> Rosalind Krauss. The Originality of the Avant-Garde and Other Modernist Myths. Cambridge, MA: The MIT Press, 1996:

<sup>10</sup> Alain Ménil. "The Time(s) of the Cinema." Introduction to the Philosophy of Gilles Deleuze. Ed. Jean Khalfa. London: Continuum, 1999: 85-6.

<sup>11</sup> Robin Evans. The Projective Cast: Architecture and Its Three Geometries. Cambridge, MA: The MIT Press, 1995: 151.

<sup>12</sup> Ibid. Evans, 1995: 154.

<sup>13</sup> Ibid. Evans, 1995: 154.

<sup>14</sup> Ibid. Evans, 1995: 154.

<sup>15</sup> Yve Alan-Bois discusses the relation of architecture to painting, where he criticizes De Stijl of being failed to interpret the projective capacities of the picture plane by simply incorporating the "oblique" as a potential motive into the architectural configuration. See Yvé Alan-Bois. Painting as Model. Cambridge, Massachusetts: MIT Press, 1990. Similarly, also Diana Agrest argues that at the turn of the twentieth century the primary model for architecture was still painting, whereby she tries to formulate further interconnections between architecture and moving image. See, Diana Agrest. "Notes on Film and Architecture." Architecture form Without: Theoretical Framings for a Critical Practice. Cambridge, Massachusetts: The MIT Press, 1993: 129-37.

<sup>16</sup> As quoted in Colin Rowe. The Mathematics of the Ideal Villa and Other Essays. Cambridge, Mass: The MIT Press, 1977: 186. (Originally in José Ortega y Gasset. Meditations on Quixote. New York, 1961: 68-9.)