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TOWARDS EXPERIENTIAL REPRESENTATION IN ARCHITECTURE

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Abstract. Planning and predicting the experiences that buildings will produce is an essential part of architectural design. The importance of representation lies in its ability to communicate experiences before a building is materialized. This article will treat the topic of representation of architecture works without putting aside our direct experience with edifices. By understanding the perceptual, associative and interactive phenomena that arise from the human encounter with buildings, it becomes possible to comprehend the representation of these phenomena through pictorial means. The first objective of this theoretical article is to define the inherent and unavoidable factors that are present in the creation and interpretation of all architectural representations, regardless of the technical means used. Any representation conveys two processes: the representation of experience (a creative process), and the experience of representation (an interpretive process). Furthermore, there exist two layers in any representation: the what (the architectural object) and the how (the representational medium). The second objective is to suggest alternatives to visual realism, in order to create representations that embody the particular phenomena that an architectural work will be able to produce. On the one hand, representations that pretend to copy reality produce in the observers detailed visual experiences; on the other hand, certain representations reflect the experiences themselves after they have been produced; they represent buildings as they are transformed by experience. This article focuses on those representations that are not only the reflection of an object, but also the reflection of our way of experiencing it.

Keywords: representation, architecture, experience, attention, perception, communication.

Introduction: qualitative representation in architecture

This article addresses the question of how representations show or predict experiences and is, therefore, interested in the ostensive or communicative function of representation. Plans and sections provide the dimensions of the architectural spaces and elements; by doing so, they allow buildings to be built but do not show their appearance. Lockard (1982: 72) distinguishes between qualitative representations, such as perspective drawings, and quantitative representations, focused on measurements: "Perspectives are more qualitative than quantitative. The experiential qualities of an environment or object can be perceived directly from a perspective.". Visualization images or renderings are the types of representation that best satisfy the ostensive function. These qualitative representations of architecture, by showing the appearance of buildings, could be classified as *experiential representations*, as opposed to representations of measurable "realities."

Much of the theory of architectural representation has been focused on the types of graphical projection. However, although building representation takes advantage of descriptive geometry in order to create quantitative representations, it is not limited to it. Indeed, while trying to show an architectural object, or the idea of an architectural object, the maker has to consider the experience that the representation will create for the end viewers. The maker is thus aware of the perceptual processes that his or her work is able to produce. This makes it clear that descriptive geometry does not tell us everything there is to know about representation in architecture. This research is interested precisely in the cognitive aspect that underlies all qualitative or experiential architectural representations.

The referential quality of representation; the experience of architecture as the origin of representation

According to Boudon and Poussin (1993: 105), the referent of a representation is the "real or virtual object that the figure refers to." When talking about the referent of a representation, it could be understood that what is represented is something external and independent of the human being. However, by taking the experience of architecture as the referent, both the architectural work and the way our own physiological and cognitive mechanisms make us experience architecture in a particular way are taken into consideration. What is depicted on paper, then, are not "realities," but experiences of objects. Gubern (1987: 116–17) remarks that iconic representations are not similar or related to objects, but rather to the visual percept of these objects. The visual appearance of an object and our general experience of it are humanly inseparable of the object; it is thus impossible to truly represent reality, i.e. to represent it removing all traces of the particular manner the world is experienced by humans. An object is not represented as it is directly received by us, but as it is interpreted or perceived: with its size calculated according to the distance at which we localize it in space, with surface colors receiving a certain lighting, etc. Therefore, what is really represented is the experience of an existing or a non-existing object – an experience that, in most cases, is a visual one.

The expression "representation of an experience" does not necessarily mean the representation of the experience we are having at this moment; we might want to capture a past experience, or it may be that the experience to be represented has not happened yet, and we want to predict it. The latter situation is, actually, the most common in architectural representation. When representing a present experience, the maker faces a referent – the architectural space or element being experienced – that he captures into an image or physical model (Boudon *et al.* 1993: 22). On the contrary, when a representation is made by memory, the strokes drawn by the maker are based on his or her mental image or internal representation of a previous experience with these architectural elements.

Furthermore, exploratory models and drawings allow creating while representing; they thus entail both a representational and a strong creative component. *Ideational representation*, unlike other types of representation, refers to those designs whose referent is originally non-existent and emerges during the act of representation. As stated by Peterson Littenberg, "It is not just a rendering of what is already known: the production of the drawing itself constitutes design." (Allen *et al.* 1981: 106).

Owing to its divergent nature, this type of representation is the one used in creative thinking, as it is useful for generating ideas. The epitome of ideational representation is the sketch which, due to its unfinished nature, is left open to interpretation – as is a Rorschach inkblot test – , allowing new design alternatives to be explored. According to Goel (1992: 66), while sketching the designer explores with *lateral transformations*: " . . . where movement is from one idea to a slightly different idea rather than a more detailed version of the same idea."

Robert A. M. Stern notes that to draw ". . . is at once an imitation of previous realities and an imitation of realities to come." (Allen *et al.* 1981: 88). Therefore, while the origin (referent) of a representation can vary, as it can be the product of memory, ideation or another process, the "origin of this origin" is always our previous experience of the world, the "imitation of previous realities," in the words of Stern.

Beyond ideational representation, a *visualization* is an image or model that also shows the non-existent, but tends to be specific and well-defined, as it does not aim to translate ideas onto paper for working purposes, but to allow to communicate to the end viewers an architectural environment before its realization. Since visualizations e.g. perspectives show more architectural details – compared with the spontaneous ideational representations – , they require planning and are usually created based on other representations in which ideas have been already worked out. Thus, creating visualizations does not consist of designing while representing. In a contradictory manner, a perspective created by a rigorous construction method is quantitative in its creation, but the created image results qualitative, since it shows clearly the appearance of an architectural space.

The visualization image of a project is commonly known as a *rendering*, " . . . an effective way of presenting an architectural project as if it were already part of reality." (Bernath 2007: 45). Due to the lack of a proper referent, visualizations, like fiction films, are objects that produce what Metz (1982: 40) calls the *referential illusion*, or the previous existence effect: " . . . a product which is its own production in reverse." . Representations that show as existing something that does not exist are the main subject of this article (Fig. 1).

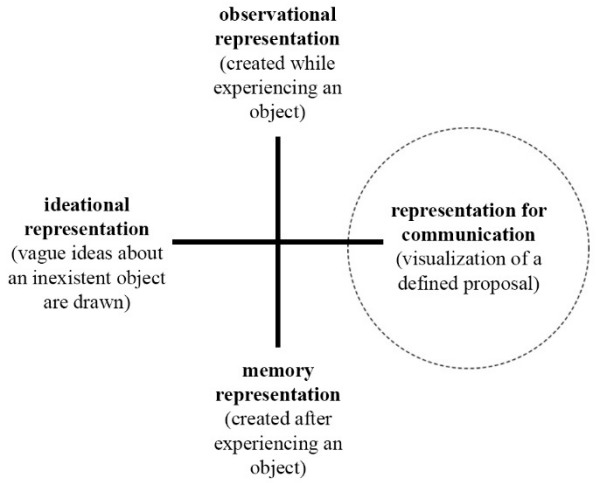

Fig. 1. Dichotomies discussed in this chapter; the category on which this article will be focused appears encircled

The recognizable quality of representation; the interpretation of architectural representations

Architectural visualization has a double intention: on the one hand, it proposes a project's or a building's intent, and on the other, it aims to communicate. If the only inherent quality of a representation was that it is created in reference to something, the person who represents would be the only one who notices that the object being created is a representation, as it could not be interpreted as such by the viewers. Indeed, the factors that allow the existence of representations – such as the intention of the maker or, in the case of photography, the photochemical process involved in their production – do not make the viewer capable of interpreting a representation *qua* representation. Black (1973: 111) warns about this point: "Suppose I set out to draw a horse and, in my lack of skill, produce something that nobody could distinguish from a cow by simply looking; would it then necessarily be a drawing of a horse, just because that was what I had intended?"

In addition to the referent, any representation consists of two other elements: the representing and the represented; the former is "the material aspect of a graphism" (Boudon *et al.* 1993: 105), while the latter is the object or scene evoked in the viewer based on the representing. However, it is not possible to understand the representing without the represented that emerges before us; just as it is not possible to analyze a figure independently of the representational experiences that it induces in us. It makes no sense, therefore, to address the representing or vehicle in itself, as it is a blind spot in our experience of a representation (Fig. 2).

The term "representation" can refer to both the material object or the representing (e.g. the painting, the photograph, the sculpture) and the act of creating this object, that is, choosing a referent and depicting it in a representational object. However, to consider a representation as a resulting object is an incomplete approach, for this representational object is not a static or finished product, but something created to be experienced, i.e. an object capable of evoking the represented in the mind of the viewer. Duchamp states: "The spectator makes the picture." (Judovitz 1987: 187). It may be asserted that for the viewers – including the maker – , a representation is an object that brings about an interpretive process which, in turn, completes the work (Fig. 3).

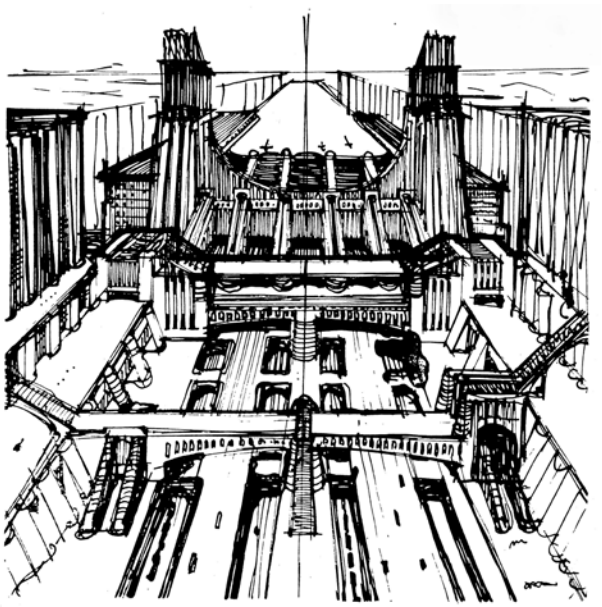

Fig. 2. *Cittá Nuova*, Antonio Sant´Elia, 1913–14 (Magnago 1983: 69).
Note: It is impossible to distinguish between the lines and drawing elements that are part of the physical vehicle or the representing, and the lines or stripes that are part of the architectural object represented, such as buttresses, ribs, slits and shadows. The distinction between the representing elements and the represented elements is thus a theoretical one that only prevents us from understanding the true experience of representation.

Fig. 3. Drawing No. 126 in *Fundamentals of Contemporary Architecture* (Chernikhov 1930: 77).
Note: Through the use of unconnected planes, Chernikhov sets in motion the viewer's ability to perceptually complete a three-dimensional shape, which is then recognized as a building.

According to Schier (1986: 186–87), the human being's natural ability to recognize objects is what allows him or her to interpret representations: "The respect in which S resembles its depictum O is this: there is an overlap between the recognitional abilities triggered by S and O." For an iconic representation to be considered as such, it does not only need to have been created based on a referential object; it must also be able to show this object, in other words, a representation must always be *recognizable*. We can thus speak of a representation if and only if it has been intentionally created as such and it functions as such. The first condition excludes the figures in rocks and random stains from being representations, while the latter excludes unintelligible scribbles.

The inherent qualities of experiential representation

Based on what has been said in the preceding paragraphs, it can be stated that there are two types of process that are inevitably embedded in images or models of buildings: the process of capturing an architectural referent in some material medium, and the process of interpreting a representation from the part of the viewer. Trying to define *representation* – and establishing the qualities for a representational work to be considered as such – is a difficult task if no distinction is made between the *representation of experience* (a creative process), the *experience of representation* (an interpretive process), and the two layers or levels of representation proposed here: the *what* (the architectural object) and the *how* (the representational medium). The *what* has been referred to as the "content," "meaning," "message" or "subject," while the *how* has been seen as equivalent to concepts such as "form," "expression," "medium," "signifier" and "physical vehicle," among others. On the one hand, a representation aims to show an architectural object – the *what* of representation – and on the other, a representation is an object that is of a different nature than a work of architecture and involves a particular way of showing it – the *how* of representation. The *what* is the component of representation that is commonly considered independent of the representational medium and the way it has been produced (the *how*), e.g. the house that is represented, whether by a model or a photograph (Table 1).

Table 1. The components of experiential representation

	Representation of experience (production)	*Experience of representation* (reception)
What	What is represented?	What is experienced?
How	How is it represented?	How is it experienced?

The *what* of the *representation of experience* is the referent on which the maker bases his or her work and which he tries to capture. Representation is thus *referential*.

The *what* of the *experience of representation* is, for example, the architectural object that is interpreted through the representational work, i.e. the represented. For interpretation to be carried out, the representation must be *recognizable*.

Since the first two qualities described above are closely related to each other, they can be considered as two sides of the same process of representation; while depicting the qualities of an object, indeed, the maker of a representation is able to recognize that object in his or her creation.

The *how* of the *representation of experience*, as for it, is the material medium through which the represented is evoked. Because the referent is recreated in a different medium than its original one, it can be said that representation is *transcriptional*.

Finally, the *how* of the *experience of representation* is the particular phenomena that arise from the viewer's encounter with a representation, which are different from the direct experience he or she would have from a real architectural work. Any representation is an artificial object intentionally created to be recognized as another object; it therefore triggers experiences of an object without actually being what is shown. This is the reason why representation is always *fictional*. Based on the four qualities described above, a representation can thus be defined as *a referential transcription causing fictional recognition*.

This paper addresses the qualities of representation related to the *what* or the content of representation; it will not delve into the techniques of its creation and the particular experiences related to them, i.e. the *how*. Regarding the architectural content of a representation, it should be noted that two other factors are implicit in the qualities of being referential and recognizable. As mentioned earlier, a representation originates from the referent. However, it is important to specify that when creating a representation, some, but not all aspects or elements of the referent are depicted; representation can thus be said to be *selective*. Moreover, given that a representation only displays some of the object's features, directing the viewer's attention and making him or her focus on certain aspects of the object, it is also *directive* regarding the viewer's experience of this object (Table 2). In the following sections, the selective and directive qualities of representation will be discussed, emphasizing how these factors manifest themselves in an architectural representation.

Table 2. The sine qua non qualities or conditions of representation in relation to the content or the *what* of representation.

	Representation of experience (production)	*Experience of representation* (reception)
What	What is represented? A representation originates from an object or scene and is therefore: *referential*	What is experienced? A representation is interpreted as an object or scene and is then: *recognizable*
	A representation includes only some aspects or elements of the referent and is thus: *selective*	A representation directs or focuses the viewer´s attention towards certain aspects of the object and is thus: *directive*

The selective quality of representation and the selective processes in the experience of architecture

> Art corrects and simplifies nature. It reveals and reunites in one particular place and, according to a particular perception, everything beautiful and spare that our consciousness can grasp (Massimo Scolari 2007: 13).

It is impossible to experience an object "as it truly is," just as it is impossible to have a thorough knowledge of it: there is a series of filters through which the human being experiences reality, as well as other filters – inherently human as well – that interfere with the way something is represented. Representation is selective because experience itself is selective, and it is also limited: our sensory receptors act as filters as they impose certain limits – like visual acuity or the size of our visual field – on our view of the world. In addition, our ability to pay attention to objects in the environment is also limited, as is our capacity to understand what is presented to us, and we have physical limitations to interacting with the world. Therefore, the aspects of reality that we experience – the ones we can have access to in a specific environment – depend on all these factors, and a representation based on our experience can only be a partial reflection of the outside world.

If an experience is the way something is presented, to represent is to capture, in a specific medium, some of the many aspects or qualities that an object may possess. According to Goodman (1968: 6): " . . . the world is as many ways as it can be truly described, seen, pictured, etc., . . . there is no such thing as *the* way the world is." Representation is selective not only because of its inability to include all aspects of our experience of objects, but also because the person creating a representation or planning a building is interested in some of the referent's elements, or some phenomena produced by the architectural work, more than in others. A contour drawing is the result of the human tendency to see some features of an object, like edges and outlines, as more relevant than other features, these lines then become: " . . . the most informative iconic feature . . ." (Gubern 1987: 112). This representational technique has resulted useful in architecture, since it shows the boundaries of the physical object depicted (Fig. 4).

In addition to being selective by capturing the object's elements or qualities that are considered more relevant, representation is also selective because it establishes a point of view and frames the area of the environment that is presented. In architectural visualization, a particular time of day – with its specific lighting conditions – is, in most cases, chosen as well.

Fig. 4. Antoine Predock sketch for the American Heritage Center and Art Museum, Laramie, Wyoming, 1988. © Antoine Predock Architect PC.
Note: The selective quality of representation is more apparent in drawings that focus on the contours of the most prominent shapes than in "realistic" representations which, apparently, do not privilege certain features of the referent over others.

The directive quality of representation; architectural representation as a frozen and pre-selected experience

> ... Drawing and painting can also teach us to recognize, classify and specify a visual and emotional effect that has always been present in our experience, but that we had only appreciated through that code (Montes 1992: 180) (free translation by the author).

A photograph has the power to make us appreciate or reconsider the object shown, to such an extent that a building that we usually overlook when walking down a street can become an object of appreciation and analysis. As stated by Sontag (1977: 28): "To photograph is to confer importance." From this it may be concluded that two complementary processes occur in any representation: what is considered to be important is represented, and what is represented gains in importance. As a consequence of its selective quality, a representation has the ability to focus or direct the viewer's attention towards certain elements that are shown as being more important (Figs 5–6). The selective and directive qualities of representation are highlighted by Allen and Oliver (1981) in what follows:

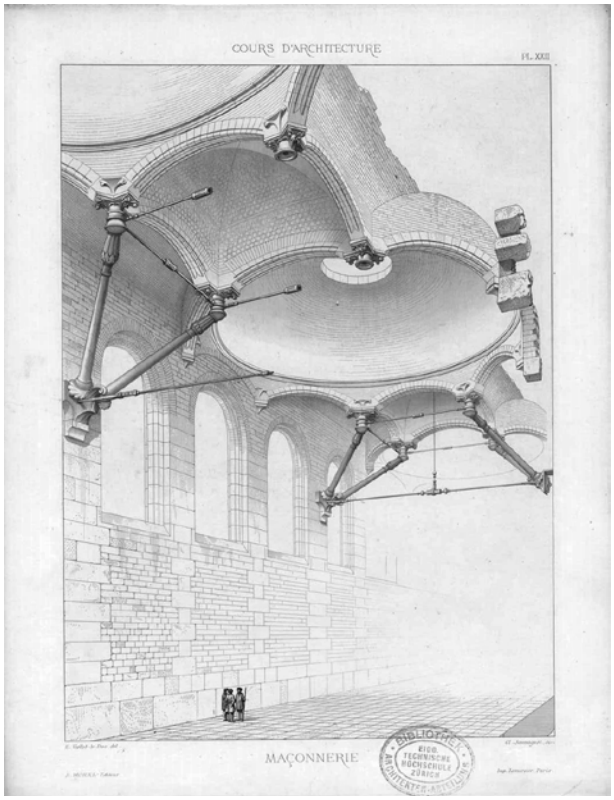

Fig. 5. Masonry design. (Viollet-le-Duc 1864, plate XXII). *Note:* By fading the non-essential aspects (selective quality of representation), this representation was planned for us to focus on the metal structure supporting the domes (directive quality of representation).

Fig. 6. Rough Grounds, Octagon House, Gloucestershire, UK, Pierre D´Avoine Architects, 2006. © Pierre D´Avoine Architects. *Note:* Representation, by isolating some of the multiple factors present in a work of architecture, directs our attention to one or more of them. In this case, the architect may intend to highlight the perceptual dissolution of a house which is surrounded by a forest.

> An architect´s early design sketches, tentative and evocative, can often give a remarkably accurate idea of the overall impression the final building is intended to make, and they usually do this without much regard to many of the details. (…) Their power is that they limit what is being portrayed and therefore dramatize certain architectural aspects while muting or even altogether silencing others. (p. 14).

Representation is more effective in directing the viewer's attention to one aspect of the displayed object than is direct experience with that object or scene. When we directly experience a rapidly moving object, for example, we may or may not pay attention to the fact that it is out of focus before our eyes. However, a photograph taken at a slow shutter speed, in which the moving object appears blurred, makes this phenomenon impossible to go unnoticed by the viewer of the image.

Also, the connection between the frame captured by the camera and the human visual field is not noticed by the viewer when the vertical and horizontal lines of the rectangular frame match the objects' orientation. However, while talking about the frame in cinema, Metz (1982: 55) highlights the role of unconventional camera angles in directing the viewer's attention: ". . . the uncommon angle makes us more aware of what we had merely forgotten to some extent in its absence: an identification with the camera (with 'the author's viewpoint')." (Fig. 7).

With regard to comics, the viewer's implicit point of view and the proximity of the viewed object may serve to emphasize the viewer's relationship with the things being portrayed, and the same could apply to representation in architecture (Fig. 8). Eisner (2000: 89) describes how comics may create an emotional response in the reader: "Looking at a scene from above it the viewer has a sense of detachment – an observer rather than a participant. However, when the reader views a scene from below it, then his position evokes a sense of smallness which stimulates a sensation of fear."

Unlike a three-dimensional representation and, even more so, a real-life architectural experience, a two-dimensional representation (whether it is a picture, a series of pictures or a movie) functions as an inflexible guide in our vicarious experience of the architectural object, as it does not allow us to choose what to look at or from which point of view to look at it. Even in an animation or a video showing what a viewer sees while moving, a specific route has been pre-selected that focuses on specific experiential aspects and objects of the environment.

Pictorial images are "objectifications" of phenomena made accessible to others (Kondor 2011: 68); by representing architecture, the various dynamic factors that determine our experience of buildings are frozen in the form of an image or model. Therefore, it is more difficult to analyze the experiences that give rise to representations than the representations themselves; in the first case, indeed, we deal with

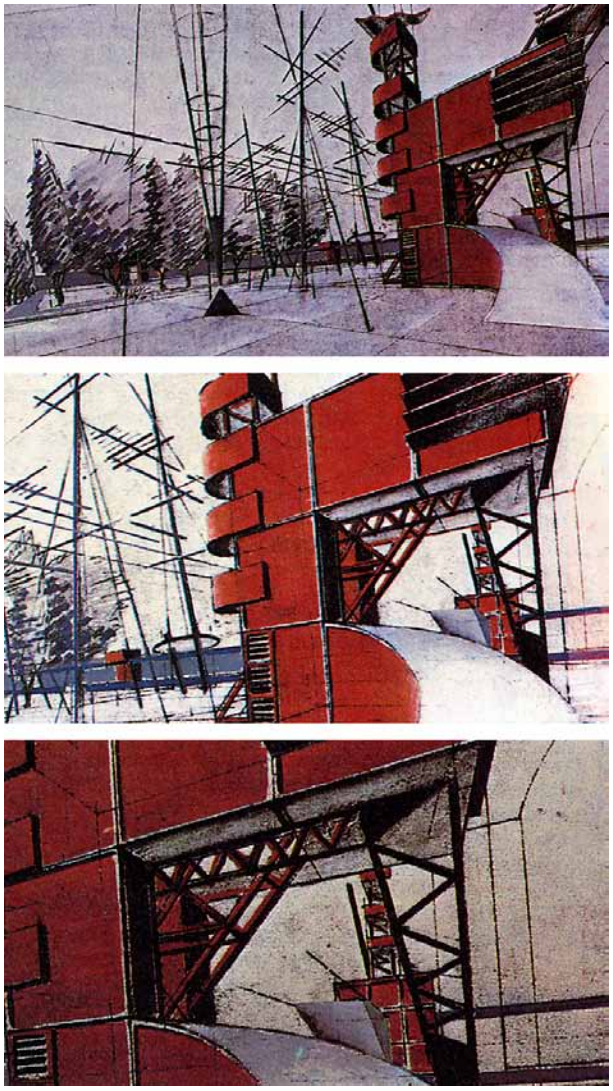

Fig. 7. Drawings for the *Parc de la Villette*, Bernard Tschumi, 1984. © Bernard Tschumi Architects.
Note: The stationary quality of a two-dimensional representation is compensated for through a series of oblique frames that emphasize the movement of the viewer's visual field.

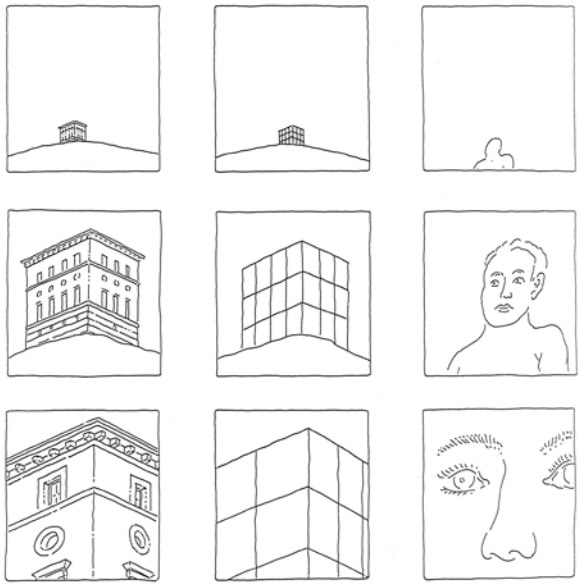

Fig. 8. *Distance & Detail*, León Krier. © University of Notre Dame. (Krier 2009: 17).
Note: Representation of the viewer's approach toward a building, showing the change in attention from global features to small details.

something intangible, while in the second, we deal with "objects" or experiences frozen in physical or digital media. As noted by Walter Benjamin (1980: 212): "Anyone will be able to observe how much more easily a painting and above all, a sculpture or architecture, can be grasped in photographs than in reality."

While a work of architecture is presented to us directly, a representation shows it indirectly. Inversely, the aspects of a building that the designer wants the viewer to notice are often shown directly in the representation and indirectly in the work itself, hence the directive quality of representation. The best experiential representations are then "user's manuals on how to experience a building."

For a representation to be considered as truly *experiential*, it must be able to connect the phenomena towards which the attention of the viewer of the representation is directed with the phenomena that are actually produced by the architectural object that is taken as the referent. An architectural representation depicts a referent that is not yet built; for this reason, the phenomena that are represented are intentional experiences, planned by the architect (Fig. 9).

An image showing a building under unrealistically ideal lighting conditions, with an unrealistically ideal viewing point or surrounding landscape, or a technical drawing that abstracts only the geometric features of an architectural work, are not representations that unify the experience they produce (as images) with the experience the building actually creates for us. Such images are the product of standardized methods and are not intended for experiencing buildings, as they are created by using the representational styles, techniques and aesthetics of the moment. These representational methods, whether related to projective geometry or specific artistic techniques, can remove all trace of the experiential character of a building when used unthinkingly.

Likewise, the Acropolis of Athens shown through a bird's eye-view animation would neglect the *serial vision*, in the words of Gordon Cullen (1961: 9), of the different elements that appear while walking at ground level. As a result, one of the main experiences planned for the Acropolis – and that gave it its particular confi-

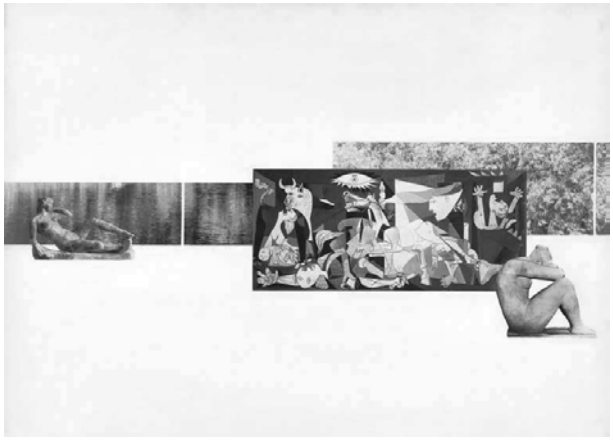

Fig. 9. Interior perspective, Museum for a Small City, 1941–43. © Artists Rights Society. (Spankie 2009: 97)
Note: Without using accurate linear perspective, Mies captures in this image the main experience that his buildings intend to create, the perceptual minimization of the architectural elements that define a space. The view to the outside is only interrupted by the vertical window bars, and the upper and lower horizontal planes, despite not being drawn, are implicitly suggested in the image. This representation shows not only a building, but the intention of an architectural experience.

Fig. 10. Interior study, Chapel of St. Ignatius, Seattle University, Washington, 1994–97. © Steven Holl Architects.
Note: The irregular stains of Steven Holl's watercolors evoke the tactile experiences that a building's surfaces might provide us. Holl manages to direct the viewer's attention to the possibility of touching the built work, a fact that usually escapes his or her attention in smooth-surface renderings created by computer.

guration – would be absent from the representation. A representation that is independent of the specific project on which the architect works does not promote awareness of the building as a producer of experiences and, therefore, does not function as a tool or method of research on the design process.

It is important to mention that the directive quality of representation is not limited to the visual form of architectural elements; all architectural experiences – several of which are not visual – can be part of an experiential representation of architecture. By the term *architectural experiences* we refer to the phenomena that buildings can cause in humans, i.e. those arising from the interaction between our senses, body and mind and the building. Such phenomena include the sensory encounter with architectural works – e.g. tactile, auditory, visual, etc. – , the perception of depth and lighting, our movements and activities in space, the meanings, thoughts and emotions that architecture produces in us, etc. This article focuses on the study of representations that are effective and creative in the way they depict the multiple phenomena produced by architectural works; the article is not, therefore, aimed at the creative design of the phenomena themselves, as it has already been discussed elsewhere (de la Fuente 2013a, 2013b).

The definition of "iconic representation" should be expanded to include phenomena other than visual or, alternatively, it should be made clear that the term "experiential representation" implies that what is represented is more than just what is seen of a building. In other words, although the iconic representation is a human product created to be seen, it is not necessarily limited to show what can be seen. Pallasmaa (2009: 102) warns about this situation: "Drawing, and especially painting, is not solely a matter of recording the visual essence of the scene; the apparently visual percept conveys the entire sensual essence of the thing." (Fig. 10). This article aims at highlighting the multi-experiential quality of architecture, and is thus interested in representations that provide a variety of experiences. In accordance with this approach, it can be said that a building requires as many representations as there are types of experiences it can provide, and that each representation promotes a particular way of experiencing the built environment (directive quality of representation).

In general, a representation that is selective and centers the attention of the observer to certain elements or qualities of architecture could be designated as *emphatic*, while a representation that shows us all things with a similar level of detail, as happens with "realistic" renderings, could be called *comprehensive*. In the following section another dichotomy will be introduced in order to better comprehend the concept of experiential representation.

Representing a building transformed by experience

> These efforts to mirror a building before it is built, I would argue, only push architects further away from (rather than closer to) understanding and representing the ephemeral and in-

> visible qualities found in the eventual buildings and spaces that make them truly fulfilling. (Ratinam 2012: 7).

Any representation of a building implies a certain opinion or conception of what the maker considers to be an architectural experience, in general, or the experience of a building, in particular. Someone who understands experience as that which can be seen of an object or scene would probably describe iconic representation as Gubern (1987: 142–143) does, connecting it to the concept of visual field: " . . . those visible symbolic forms without phonetic value, which meaning is referred to a real or imaginary visual field . . . " It can be noted that this description is equivalent to the *visual realism* mentioned by Luquet (1927), which in the words of Marr (1982) corresponds to a "viewer-centered" representation. Visual realism is the counterpart of intellectual realism or "object-centered" representation, which is not focused on the visual appearance under which things appear to us, but on our "knowledge" of them (Matthews 2002: 60).

Digital techniques that create "photorealistic" images are currently in the center of attention in architectural graphic expression; such rendering techniques surpass the architectural content of the images in relevance. Digital representations are criticized by Frascari (2013: 2): " . . . the aim is to produce 'photorealistic' images that do not aim to emulate the human phenomenology of perception, but rather that of the photographic camera." A realistic representation intends to produce an experience of an object in viewers, i.e. it allows the viewer to perceive in great detail the spatial, chromatic and lighting qualities of the depicted scene. Such a representation recreates, through a two-dimensional medium, the light and color stimuli coming from the object and which is received by the retina; it may thus also be called *pre-experiential representation* or *representation to be experienced*.

In addition to pre-experiential representation, the existence of *post-experiential representation* or *representation of the experienced* is proposed here, which seeks to capture the experiences already provided by a work of architecture, i.e. the phenomena produced or planned to be produced by a building. This type of representation is intended to emphasize that what is shown is not only an object or external reality, but the viewer's experience of that object. The drawing by León Krier (Fig. 8) shows us not only an object to pay attention to, but show us the process of paying attention to a building. As affirmed here, a post-experiential representation is the type of image that truly emulates the phenomenology of human perception, as happens with Holls´s watercolors and their emphasis on the tactile experience of a place.

The human being's capabilities to feel, perceive, and give meaning to its environment are fundamental to understanding the experience he or she has of it, for they color the world that is seen. If, as mentioned above, the origin of any iconic representation is a person's past or present experience of objects, then it might be thought that all representations are post-experiential, since they are graphic recordings created after the experience. However, post-experiential representation is not simply the type of representation that occurs after experiencing a building – since even a photograph is produced after the experience – ; it is a representation that shows objects as colored by a person's filters for apprehending them; it considers experience as an interpretation, modification or enhancement of certain aspects of reality, and shows it exactly that way (Figs 11, 12).

Both *pre* and *post-experiential* representations are *experiential* in the sense that they are interested in

Fig. 11. Panoramic view of the city center of Pskov from the old market side, image-based "reading". © Alexander Barabanov. (Barabanov 2002).
Note: While a realistic representation shows buildings "to be experienced," a representation "of the experienced" is able to show buildings modified by psychological phenomena such as pareidolia. In this figure, a spontaneous and vague interpretation of the shapes of buildings as people is portrayed.

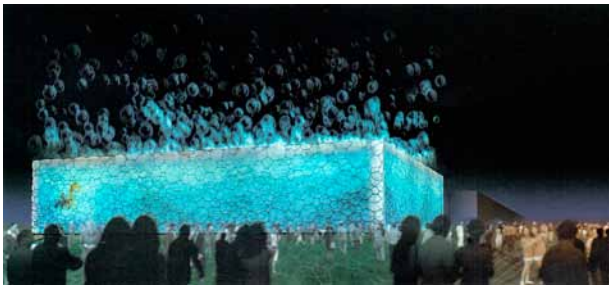

Fig. 12. PTW, Beijing, China, 2004–2007. © CSCEC + PTW + CCDI and ARUP.
Note: The naive interpretation of the Beijing National Swimming Centre's surface as soap bubbles is made explicit in this post-experiential image.

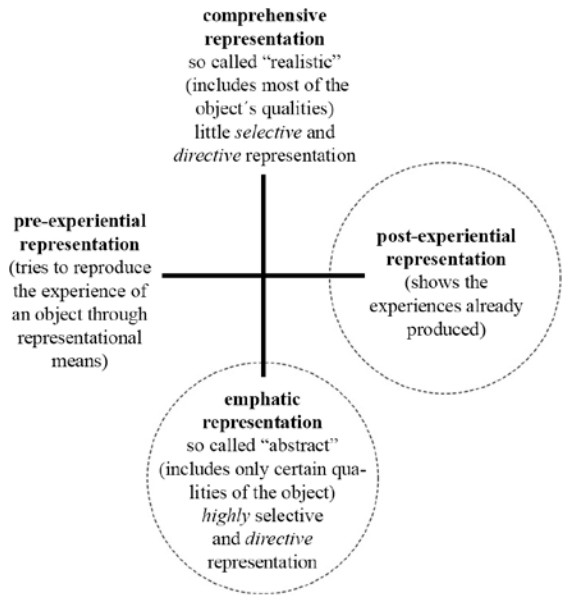

Fig. 13. Dichotomies discussed in this chapter and the previous one; the categories on which this article has focused appear encircled.

capturing or producing experiences through representational means. Nevertheless, while pre-experiential representations e.g. perspective views, direct our attention to certain architectural elements that appear inside their frame from a certain point of view, post-experiential representations are directive in a greater extent; they not only show us something to look at, but also tell us how to look at it.

As happens in the rendering of the Swimming Centre above, a post-experiential representation could be quite "realistic" in order to show an already produced experience. As can be noted, post-experiential representation is not synonymous with "abstract" or simplified representation.

In the same manner; a pre-experiential representation does not have to be realistic, comprehensive and detailed, but might be emphatic and concise. A hidden line wireframe image of a building induces us to perceive its three-dimensionality (it is pre-experiential), but the quality of its lines is not interpreted by the observer as being based on a selective human experience, as they are clearly uniform and computer-generated (therefore, it is not post-experiential). In order to clarify the mentioned categories, a diagram of the dichotomies is presented (Fig. 13).

Returning to the specific subject of post-experiential representation; the perceptual experiences that architecture creates for us may also be captured by this kind of representation. Choisy (1899: 407) describes the distortion that can be seen in a Greek temple without optical corrections: "While the vertical lines diverge, the horizontal lines of the entablature bend and turn their concavity toward the sky, as if the colonnade gave way at its center under the overload of the pediment." (Free translation by the author) (Fig. 14).

A quality seen in many architectural sketches is directionality, with which we perceive the sharp or elongated shapes of some architectural compositions, such as those of the Streamline Moderne style. To the viewer, this type of building seems to make a straight or curved movement in a certain direction. By their lines, Erich Mendelsohn's sketches, Iakov Chernikov's and Antonio Sant'Elia's visionary works and Zaha Hadid's drawings emphasize the directionality with which we will perceive a building's volumes and edges once constructed. In his drawings, Mendelsohn establishes a clear connection between the strength of the stroke and the motion intensity with which he expects the building to be perceived (Fig. 15). This contradicts the belief that the thickness of a drawn line is not a mimetic quality, but rather a conventional or arbitrary one, i.e. that it is unrelated to the architectural referent or to the viewer's experience of it: " . . . the lines used in drawing contours of objects have curvature and direction that are clearly depictive . . . On the other hand, the line has a thickness that does not correspond to any part of the object represented but has a descriptive meaning

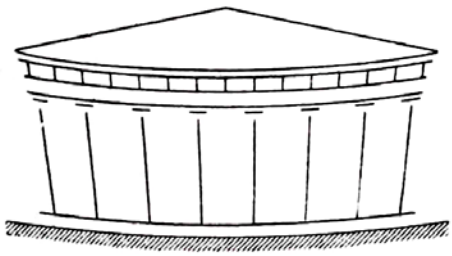

Fig. 14. Substitution of curves and horizontal lines in the Parthenon façade (Choisy 1899: 407).
Note: Representation of the perceived curvature of a Greek temple that was not optically corrected.

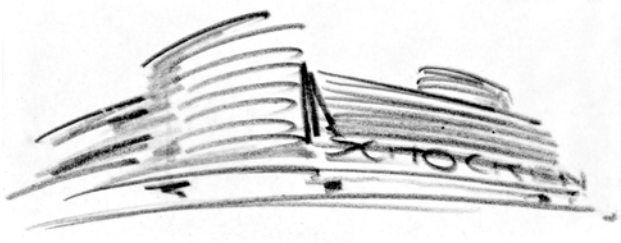

Fig. 15. Sketch of Schocken Department Stores, 1926–27 (fragment). © Bildarchiv Preußischer Kulturbesitz (BPK).
Note: Mendelsohn transfers the intensity of the perceived motion of linear architectural elements to the components of a drawing.

analogous to the sign systems used in the maps" (Fish *et al.* 1990: 118).

When a representation presents a suitable selection of a building's qualities, it may thus result to be closely related to the experience we may have of that building. As a result, the category of the abstract, understood as that which is separated from experience, is inadequate to refer to such representations.

The concepts and dichotomies presented here are not immovable categories possessed by the representational objects; in certain cases it is the observer who decides whether to interpret a representation as pre or post experiential. This kind of ambiguity of interpretation may be found in the drawing of the masonry design by Viollet-le-Duc (Fig. 5), which is pre-experiential if the observer considers that it provokes the experience of the metal structure and the domes with more detail than the other architectural elements. Nevertheless, the picture may also be interpreted as a post-experiential representation that reflects the experience that an observer has when paying attention to a certain area of the building, leaving the remainder areas out of his consideration.

Conclusions

A representation is an object that turns a viewer's dynamic experience of a building into something static, by capturing only some of its many possible aspects or qualities. The term experiential representation is intended to encompass the representation of architectural phenomena in general without being limited to visual experiences, on which iconic representation is solely focused.

Both its intentional creation and the possibility of interpreting what has been created are sine qua non conditions of any representation. It can be said that whoever creates an architectural representation should be knowledgeable about the experiences created by buildings, the representation of these experiences, and how people may experience or interpret such representations. Therefore, the understanding of the cognitive processes involved in our experience of architecture and our experience of representations may be useful if the architect wants to create truly experiential representations.

There is still much to learn from art in general, and cinema and comics in particular, about the representation of experiences, especially how point of view and framing enhance the viewer's emotional encounter with buildings. There are multiple architectural experiences deserving to be represented but that have not been included in any architectural visualization. It was not the intention of this article of being exhaustive in that regard, but to show general paths to follow in architectural representation.

The representation of architecture should not be considered as independent of design, or as something to be performed after the architect completes the design process. The techniques of representation should be subject to an ongoing process of experimentation and reflection, as happens during an architecture project. On the one hand, a "realistic" pre-experiential representation is more detailed and its interpretation is closer to be univocal compared with the other kind of representation. On the other hand, post-experiential representation shows a process of experiencing an object, and is more capable of awakening the imagination of the makers and observers, allowing the emergence of new design ideas, as a sketch does. The combination of both kinds of representation in an architectural project would complement their strengths.

Unfortunately, due to the dominance of visual realism in architectural representation, other approaches to representation have been little studied. The contribution of professionals in architecture to research on representation has generally been scarce, except in a few cases, some of which were used to exemplify this text. Architects seem to lack critical background about topics related to representation. In this regard, this article tried to make a contribution in order to fill that gap.

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