

Translating the past: Suzhou garden as a generator in architecture

Linfan Liu

University of Pennsylvania, Philadelphia, PA

ABSTRACT: Until today, extensive studies on the traditional Suzhou gardens have primarily considered it a cultural artifact. The academic subject of garden history and garden art has crafted a rich narrative to define and refine the material culture of China's past. This essay, however, investigates the use of the ancient gardens as a generative means in contemporary architectural practice in China.

The study mainly analyzes and compares two specific projects and their garden "prototypes" to explore the topic in detail. The first project is I. M. Pei's Suzhou Museum (2002-06) and his childhood garden Lion Grove Garden; the second one is Wang Shu's Library of Wenzheng College (1999-2000) and The Garden of Cultivation. Although both architects acknowledged traditional gardens as the major inspiration of their modern designs, the two architects revealed distinct focuses and approaches in the process of translation, which are explained in the thematic and comparative discussions, including the symbolic image and the spatial type, cultural narrative and bodily experience. The initial interpretive analyses of the two projects anchor on the articulated aspects of the individual architect's interpretation respectively. The subsequent comparative study further demonstrates the complexity and parallels in the process of translation, thus realizing the comprehensive associations between the garden prototypes and architects' own design philosophies.

Through this comparative study, the essay aims to shift the interpretative paradigm of architecture through the lens of Suzhou garden. In contrast to the narrative constructed through ideological frameworks, the essay reasons how this spatial art is re-defined within a design discipline, and how the extracted concepts and techniques further shape contemporary architectural practice. Continuing the narrative of traditional gardens, the essay proposes the same metaphor of generative role of architectural design.

KEYWORDS: symbolic image, spatial type, cultural narrative, life experience

INTRODUCTION

The scholar's gardens in Suzhou represents one of the highest achievements of the classic gardens in China. The name, garden, which highlights the most celebrated feature in the design, however, cannot summarize the building type. Suzhou gardens were private residences of scholars and elites from the northern Song to the late Qing dynasties (11th-19th centuries). As a result, this building type has become an epitome of historical China. Extensive modern scholarship on garden history and garden art has crafted a rich narrative to define and refine the material culture of China's past. Meanwhile, Suzhou gardens are also considered an architectural treasure, particularly through recognized spatial complexity.¹ Recognized as an architectural category since the early 1950s, Suzhou gardens have been widely referenced by critics, reasoning the relevancy of this historical object in today's design discipline. Certainly, many architects have also looked into this building type for inspirations, yet, it was not until the beginning of the 21st century we began to witness a collective yet diverse effort in architectural practice that specifically dwelled on this spatial prototype. This short essay will mainly discuss two projects built around the turn of the century to examine the complexity within the emerging phenomenon. While exhibiting multiplicity in the interpretations, this comparative study aims to argue for a collective understanding in the use of garden in contemporary design, addressing an undertheorized concern in current architectural discipline.

1.0 A typical image of a garden in a museum

I. M. Pei projects in China are often more difficult to theorize for they are drastically shifted away from the architect's well-established language – rigorous geometry and sculptural form. On top of that, they seem to be covered with an "opaque" layer of iconic imagery of Suzhou garden, a personal sentiment only visible in his projects in Mainland China. The direct reference of Suzhou garden, Lion Grove Garden (*Shizi Lin*) (Fig. 1) in particular,² was evident in Pei's designs, exemplified in two major projects – the Fragrant Hill Hotel (1979-82) (Fig. 2) and Suzhou Museum (2002-06) (Fig. 3). With the general idea of creating a garden, Pei searched for an expression of cultural continuity in his modern buildings in China.



Figure 1: (left) A typical image of Suzhou Gardens, corridor in Lion Grove Garden, Suzhou. Source: (Author 2016)

Figure 2: (Middle) View of the main building from the east garden, Fragrant Hill Hotel, Beijing. Source: (Pei Cobb Freed & Partners, 1982)

Figure 3: (Right) View of building complex from the north garden, Suzhou Museum, Suzhou. Source: (Author 2016)

Reflected in these projects, Pei's garden references contained a level of consistency, particularly demonstrated in the persistent use of the key materials/elements in the designs. In this regard, while more than three decades apart, Fragrant Hill Hotel and Suzhou Museum bear many similarities. Despite the differences in physical settings, functions, and building scales, both projects realized a composed landscape of rocks, "pictorial" plantations, and water, which were further complimented and enclosed by a typical black-and-white traditional residence of Suzhou. Pei's inspiration of garden, thus, has manifested through resembling these key elements in his designs.

However, Pei's "formally resemblance" of a Suzhou garden often led to puzzling criticisms. From the stylistic manipulation of historical reference (Cannell 1995, 322-23) to the symbolic interpretation of cultural continuity (Dong 2007, 63), the remarks not only suggested the historicism in this modernist's approach, but also questioned the partiality in Pei's interpretation of cultural continuity. In these criticisms, garden was transformed into several typical images, highlighting the aesthetically and culturally appreciated features in Pei's design. Can this type of argument justify the role of garden in Pei's design? Or can the categorical claim of symbolism be the most appropriate understanding of Pei's garden interpretation? Scrutinizing on several recurring elements in the design of Suzhou Museum, in comparison with Pei's previous design solutions, I will demonstrate the nuances in the translating process, suggesting a careful refinement underwent within establishing this typical image of Suzhou garden.

1.1 Painting the rocks in the garden

Undoubtedly, rock is a key element of a garden in China. This unique feature was endowed with great aesthetic and philosophical significance in traditional culture. The rockery landscape realized in Suzhou gardens is a compelling example of the rock art, inhabiting the cosmic rhythms of yin and yang and the philosophical thinking of human and nature in construction. Generational practices of rockery landscape in gardens certainly cannot be considered an immutable endeavor; nonetheless, it had formulated an iconic look exemplified in the type of Great Lake rock (*Taihu Shi*), which the Lion Grove Garden is most famous for. (Fig. 4) Pei's fascination with rock was fostered in this family garden, and it has become a profound influence on his design development, frequently acknowledged in discussions. (Cannell 1995, 57)



Fig. 4: (left) Rockery landscape in Lion Grove Garden. Source: (Author 2016)

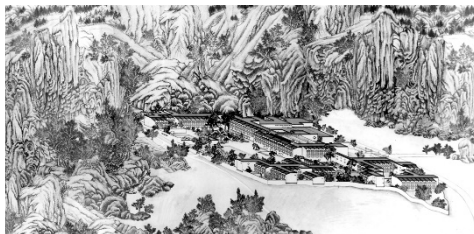


Fig. 5: (middle) Conceptual collage using a 17th century landscape painting as background, Fragrant Hill Hotel. Source: (Pei Cobb Freed & Partners, 1979)



Fig. 6: (right) Rockery landscape in the east garden, Fragrant Hill Hotel. Source: (Pei Cobb Freed & Partners, 1982)

In his "home-coming" project, Fragrant Hill Hotel, Pei already had the rock feature in mind in his design. Conceived as a part of the comprehensive scheme, rocks were first identified as a continuation of the natural mountains encircling the building site through the conceptual collage of the project. (Fig. 5) In execution, the limestones from Yunnan Stone Forest was chosen both in the outdoor garden as a grouped landscape feature and in the indoor atrium as independent sculptures, following the typical rockery constructions in traditional gardens. In expression, there was a visual alliance between the limestone and the "dramatic" Great Lake rocks

used in traditional gardens. Standing against the modern building, the articulated formal tension was pronounced in the design, alluding to the same idea realized in the Lion Grove Garden. (Fig. 6) In a sense, except for enlarging the sizes, the rockery landscape at Fragrant Hill Hotel still anchored on the established aesthetic criteria of the wonderful rocks and its cultural implications through a *specific look*.³

However, this *look* with associated formal characteristics seemed to have disappeared in the rockery landscape of Suzhou Museum. In this design, Pei used a handscroll painting of Mi Youren as the primary reference.⁴ (Fig. 7) In construction, the granites from Shandong Province were sliced into thin pieces and then shipped on to the site. They were arranged in parallel on three tiers of platforms, which were raised consecutively in elevation to simulate a vertical, planar organization in Chinese landscape painting. The stone was carefully treated to configure a simple triangular shape iconic of Mi's painting, and a blow torch was used to re-texturize the "peaks," in order to imitate the famous brush stroke "Mi dot." Hence, framed by the boundaries of walkway and the black tile eave, the rockery landscape was transformed as "painted mountains" viewed from the central hall of the museum. (Fig. 8)

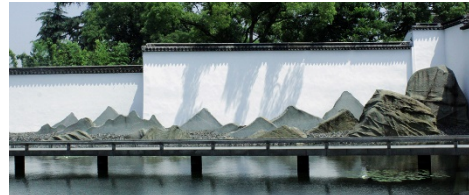


Fig. 7: (left) Mi Youren (1074-1153), *Cloudy Mountains*, section of a handscroll. Source: (Cleveland Museum of Art)

Fig. 8: (right) Rockery landscape in Suzhou Museum. Source: (Author 2016)

In Suzhou Museum, Pei detached the design from the classic aesthetics as well as the iconic image of the wonderful rocks. In a later interview, the architect acknowledged that the change of rockery landscape was to intentionally distant the feature from its symbolic expression of Chinese tradition while still maintaining a sense of connection to the past. (Pei and Lin 2003, 183-85) Pei's preference of this painting related to his interpretation of "literati painting" style, which did not focus on the formal imitation of a natural landscape, but aimed to realize the accordance through an integration between human's creation and models provided by nature. (Xu and Ni 2007, 66-68)

If the look, or the typical image, was significant for Pei, what was the purpose of altering it? Pei's own explanation on modifying the rockery landscape in Suzhou Museum begins to suggest the architect's self-revision of expressing cultural continuity. While still retaining the material nature of rocks, Pei was certainly aware of the confinement rooted in the visual resemblance of a typical image. While it ensures the notion of continuity, it can also be reduced to the symbol of rigid or even opaque meanings. The "un-changefulness" of this image also rejects possibility for further association in design development. In Suzhou Museum, by painting the "mountains" on the wall, Pei further anchored on the conceptual significance of rocks as the intermediary between natural object and human creation, a profound principle imbedded in the rock art.

1.2 The black-and-white image

The shift recognized in designing the rockery landscapes can be projected onto Pei's architectural solutions, particularly, in realizing a black-and-white image of the traditional gardens.

In the Fragrant Hill Hotel, the architect specified a vernacular tile along with the white stucco wall as the primary exterior wall finish materials. The chosen materials and the application of local constructional technique visualized another iconic image of traditional dwelling in Suzhou, namely, "white wall and black tile (*fen qiang dai wa*)." However, the application of the grey tile was critically challenged in most reviews of the project, interpreted as the formal manipulation of post-modernism. (Cannell 1995, 322-23) Even Pei admitted a decorative motif of the grey tile beyond its function of concealing the control joints on the facades. (Pei 1980, 20) The criticisms have a reasonable assumption, for the uneven layout of tile pattern on the façade does not correspond with the technical concern of distributing control joints. (Fig. 2) Another evidence is the different treatment of exposing control joints on the facades of the corridors. Similar to the rockery landscape employed in this project, the visual articulation of the grey tile, along with the expression of white stucco wall, aimed to create a typical black-and-white image of dwelling. Why did Pei insist on this building type? As the architect reasoned, the political upheaval did not change people's daily life and the meanings manifested by their living environment. "Architecture has to come out of people's homes," Pei claimed, therefore, the white wall and black tile of an ordinary residence rather than palaces of red pillars and golden roofs would be a more appropriate reference. (Cannell 1995, 305-06) This explanation, though partial and subjective in judgement, presented a

clear intention within the grand notion of cultural continuity, that is, to revive the specific meanings of continuity through the visual language construed from architecture.

Pei certainly understood the danger of this decorative use of material as a type of stylistic manipulation of historical reference. He directly responded to the criticism of post-modernism when he returned to Suzhou with a modification in mind. The Suzhou museum was finished with two similar materials – white stucco wall and black granite. (Fig. 3) In this project, even though the granite performed the same protective function as the grey tile of the Fragrant Hill Hotel, the material demonstrated a much clear construction logic in mind. Besides tiling the roof, which was also a typical building tradition in China, the black granite was the material for all type of edge trims of the building, including trim stones of all openings, edge trims at the corners of the surface, and trim divisions at the transition of floor levels and walls of different heights. Without decorative patterning, the design expressed a clearer construction logic of concealing the joints and panel transitions on the facades. In the end, the building remained the same black-and-white look. This appearance, while still an anticipated image of the design, could only be considered as the outcome following the continuous building tradition. Essentially, Pei's revision was a self-criticism of the symbolic expression of the "black edge" at Fragrant Hill Hotel. Similar to the revision that the architect made in the rockery landscape, this careful refinement of the "black edge" further bounded the visual image with the underlying conceptual significations, through which a modern building could sustain a sense of continuity of tradition.

Certainly, other key elements (i.e. plantations, water, window frames) in Pei's garden reference also deserve further scrutinizing. Nonetheless, this brief analysis begins to suggest not a *typical* but a *refined* image of Suzhou garden in Pei's design. Pei's interpretation of a garden certainly goes beyond this strategy of visualizing typical images, to which I will return later for further comparison. This strategy, visually pronounced yet problematic in interpretations, can be understood as one of the commonly applied methods in the translations of garden into architecture, precisely for its articulation of cultural continuity. Yet, learning from Pei, we need to be aware the power and the limitation of the narratives imbedded in these images. They can be quickly recognized as well as easily misread.

2.0 Garden as a type in a library

Compared to Pei's design approach of visualizing a typical image of a garden, Wang Shu's garden reference seems to intentionally avoid any figurative expression. Instead, the architect considered Suzhou gardens as the spatial types for contemporary architectural design.

2.1 The idea of type

Wang has long been interested in the concept of architectural type even before his doctoral study on Typology.⁵ However, Wang's interpretation of architectural type went beyond the notion of form searching. When summarizing in writing, Wang intentionally avoided any formal analysis. Instead, by referring to an example of the mountain type described in painting theory, the architect wrote:

Type is one of my favorite words. It embodies the life experience of people, though without external forms. (...) The type of mountain (in painting) contains many shapes but not concrete forms. The key (to construct a type) is the flexible organization (of shapes) in practice. It is not simply copying similar shapes, nor through arbitrary 'transformations.' Rather, it is to demonstrate an inner structure in complementary relationships, such as opposite scales within the same setting, contrary juxtaposition, unstable oblique views, reversed overlapping, and disrupted layering. These actions (through which a type is realized) are definitely not overpowering and arrogant, but seemingly trivial and joyful. (Wang 2008, 60)

If summarizing Wang's account, establishing a type contains two key aspects: first is to configure the type through inner structure rather than external form; secondly, type is realized through constructing complementary relationships, or rather, subtle plays of contradictions.

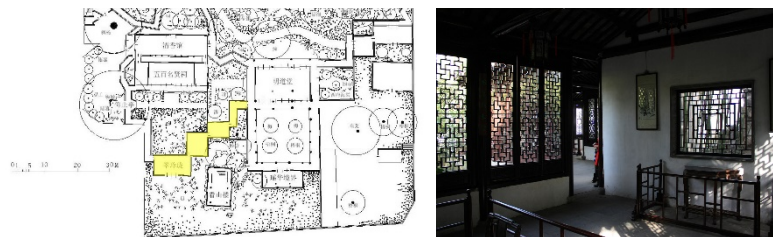


Fig. 9: (left) Plan of the southern portion of The Surge Waves Pavilion highlighted in yellow, modified by author. Source: (Tong, Jun, *Records of Jiangnan Garden*, 2nd ed., 2013)

Fig. 10: (right) View inside the Elegant Bamboo House. Source: (Gu, Kai, 2010)

This general statement found correspondences in specific applications, particularly in Wang's analysis of Suzhou gardens. During his repeated visits, the architect noticed a small building cluster named The Elegant

Bamboo House [*Cui Ling Long*] in The Surge Waves Pavilion [*Cang Lang Ting*]. This single-floor structure was encircled by a bamboo forest, revealing only a small entry way from the main corridor. Familiar with the spatial organization, the architect recalled a clear spatial layout of this building cluster in the plan – two transitional pavilions leading toward the main studio through a diagonal connection. (Wang 2009, 69) (Fig. 9) Yet, traveling inside the space, Wang realized a more complex experience. First, there was a constant change in direction as one passing through. Blocking as well as leading by the furniture layout, the visitors followed a zig-zag path, often ended up with a frontal view of one side of the building. While the winding route and the frontal views portrayed the visit as a series of segments with sudden transitions, there was a visual continuity in the diagonal view. The patterned paneling construction wrapped along the enclosure walls, therefore, a visual continuity was formed when looking at the diagonal connection. (Fig. 10) This oblique view, as the architect pointed out, collapsed the spatial structure into a continuous surface; meanwhile, the uninterrupted traveling of the eyes also dissolved the established segmented movement on foot. (Wang 2009, 69)

Essentially, the Elegant Bamboo House was transformed into an architectural type in Wang's analysis. Reading this description closely, we begin to see how the two key aspects in the concept of type are realized in a specific application. The comparison between the spatial layout on the plan and the traveling experience inside the structure reflects directly to the distinction between the external form and the inner structure in Wang's summary of type. On the other hand, the demonstrated inconsistency in the visit, that is, the contradiction between segmented bodily movement and the visual continuity, becomes one of the subtle and joyful plays that the architect suggested. In the same article, Wang further referred the spatial type of The Elegant Bamboo House as a transfigured Great Lake rock, and demonstrated its continuously applications in his architectural practice. (Wang 2009, 74) Nonetheless, this typological interpretation of Suzhou gardens was not a singular case for Wang. Furthering the notion of experience, Wang claimed the fundamental intention of building an architectural type: Assimilating to garden making, for Wang, architectural design was another spatial construction to foster a *specific type of life experience*. (Wang and Fang 2012, 69)

2.2 The type of internal Viewing in Wenzheng Library

Wang's earlier work of the Library of Wenzheng Collage (1999-2000) can be considered an almost exclusive experiment on translating a garden type into architecture. The type was developed from another Suzhou garden, The Garden of Cultivation (*Yi Pu*).

This small garden, originally built in Ming dynasty (the 16th century), exhibits a relatively clear layout with the typical landscape composition of rocks, plantations, and water, enclosed by building structures. Looking beyond these representative features, Wang found a surprising relationship established by the spatial elements. The major building, the Longevity Hall (*Yanguang Ge*), dominates the entire garden. The structure spans across the garden in the east-west direction, cutting through the central pond. On the southeast corner of the water pond stands a small structure, The Fry Pavilion (*Ruyu Ting*). (Fig. 11) Wang's own experience of this place was described as follows:

The large scale the Longevity Hall was disproportional compared to the scale of the garden. The simple rectangular box cut a water pond in a straight line, it was almost too rigid (compared to the typical garden construction). Yet, people seemed not even notice its existence. (...) I final realized that the hall disappeared through its emptiness. The space was experienced through occupancy; it was not to be looked at. The enclosure was a panel construction that can be completely removed, (in other words), the building had no façade. Contrarily, there was a pavilion at the other side of the water pond. This space had no function, yet it was to be looked at. (...) This garden made me realize how to make a large-scale functional building disappear within a confined site; it essentially required an internal experience. (Wang 2002, 170)



Fig. 11: (left) Overview of the Garden of Cultivation. Source: (Zhou, Yi 2016)

Fig. 12: (middle) Overview of the Library of Wenzheng College, Suzhou. Source: (Wang, Shu, 2002)

Fig. 13: (right) The "incomplete" view of the main building from the meditation room. Source: (Author 2016)

This garden became the spatial prototype of the Wenzheng Library. With the first floor largely buried underground, the visible building structure was realized as a large rectangular box extended into the water pond, with a small meditation room (a room with no function) standing separately from the main building. The

mediation room, like the pavilion in the garden, situates at the oblique angle of the main building, floating on the water, facing towards the south curtainwall façade. In this project, Wang simply “copied” the spatial layout of the garden. Furthermore, the building was stripped down to the modern architectural language of concrete construction, highlighting the “formal” integrity of the structure. (Fig. 12) This formal interpretation, however, cannot be further contrary to the architect’s own intention of the design. Tracing the architect’s description of this garden, not only did Wang emphasize the internal experience, he also identified another complementary relationship established in this spatial type, that is, the exchange between using and look through the interaction of the two spatial structures. In fact, this typological construction should be the key to understand his architectural translation.

Pavilion in Suzhou gardens, as the architect summarized, is a structure to be looked at. More precisely, it has been understood as the structure of identifying the scenery [*dian jing*], that is to say, pavilion leads the eye to the extended landscape that it is encircled by. (Zhang 1991, 246-75) The formally articulated meditation room performs exactly as a pavilion. Not only does this independent room establish a visual focus from the main building – a structure to be looked at – more importantly, through this identified structure, the eyes are then led towards the open landscape to the south of the building. Meanwhile, the pedestrian bridge connecting the meditation room and the main building physically enhances the viewing orientation with its well-defined form and a clear orientation. The bridge also functions as the passage that people can walk on in order to reach the meditation room. Yet, the 6-meter-span of the bridge is extremely short to be able to develop a walking experience assimilating to the winding paths in the gardens. Rather, being cul-de-sac, it seems to encourage people to turn around after being “lured” to the dead end. However, when people turn around, they immediately face several “incomplete” views of the main building. (Fig. 13) Regardless of viewing directions, the visitors only see into a section of the main building, primarily into the curtain wall. These views realize an “incomprehensible” scale of the building, or rather, the viewing experience has made the large volume “disappeared.” Therefore, the real intention of the bridge is not to be walked on, but to create an “appropriate” viewing experience of the main building, forming a similar interaction that Wang observed in the garden. This subtle play reveals Wang’s major intention of the project. Assimilating the garden experience, the main library cannot be seen but to be occupied, whereas the mediation room is to be looked at. Moreover, the connecting bridge provides a proper way to experience the whole spatial structure from within.

This garden type has been continuously employed and refined in Wang’s subsequent projects. The enriched materiality as well as the more confined site construction in the later designs collectively reinforced the type of internal experience articulated through this type. Relevant design strategies are too complex to expand in this essay; in sum, they all contribute to Wang’s persistent pursuit of foster life experience through the means of architecture. From Suzhou garden, Wang found a method to concretize his concept of architectural type, as the architect claimed, “I find the method in garden, that is, not to treat architecture as an analyzable artifact, but rather as an embodiment of consciousness and experience that invites people to engage the built world.” (Wang 2002, 169)

3. The exchange in analysis

Through these two projects, I have demonstrated two distinct methods of translating traditional gardens into contemporary architectural design. The analyses focused on the more pronounced aspects in the processes of translation in order to highlight the differences in Pei and Wang’s approaches respectively. Yet, the emphasized aspects cannot be considered as the only gains that the two architects obtained from Suzhou gardens. This brief parallel in the final section aims to suggest a more comprehensive reading of these translation.

3.1 Garden as a spatial type in Pei’s design

When insisting on building a water pond that covering over 1/5 of the total site area in Suzhou Museum, Pei did not only stress on the cultural significance of water in China. The architect further looked at water as a crucial element in spatial experience. In discussion, Pei related water to a particular experience – meandering – contrasting the lawn feature in western garden designs. (Jodidio and Strong 2008, 317) Situated at the center of the garden, the central pond ties different landscape elements altogether. Along the irregular outline, we find a tea pavilion at southwest corner, a bamboo grove at west, a small terrace facing towards the main hall, and a rockery landscape against the north wall. All the features are loosely connected by a zig-zag passage way across the pond in an east-west direction. (Fig. 14) Indeed, the formation of the passage way already begins to induce a type meandering movement; moreover, the sense of meandering is further enhanced by the viewing experience of the landscape. There are specific viewing directions and designated views designed contradict to the moving direction along the path, such as pictorial rockery landscape at north, the pavilion, and the extended terrace at south. Furthermore, this open and immense landscape enhances an expanded vision in experience that allows the flexibility in movement. Therefore, the meandering experience, largely defined by individual visitors, invites halting and lingering following one’s own pace during the visit.



Fig. 14: (left) Overview of the garden of Suzhou Museum. Source: (Pei Partnership Architects 2006)

Fig. 15: (middle) View of the Atrium of the East Building of National Gallery. Source (Wikipedia: https://en.wikipedia.org/wiki/National_Gallery_of_Art)

Fig. 16: (right) Fuyang Cultural Complex, (2012-16), Fuyang. Source: (Iwan Baan: <http://iwan.com/portfolio/fuyang-cultural-complex-fuyang-china-wang-shu/>)

In fact, the emphasis of moving experience is an often-overlooked aspect in Pei's design concept. Pei's description of space has reflected this particular concern from early on in his career.⁶ The spatial organization, summarized by the architect as an "intriguing moving experience," was a recurring theme throughout his career, particularly exemplified in the design of the East Building of National Gallery. (Jodidio and Strong 2008, 183) More interestingly, the central pond in a garden found a parallel in the design of the atrium. (Fig. 15) In configuration, the open space, situated at the center, loosely bounded the surrounding individual galleries. Assimilating the experience of a Suzhou garden, Pei wrote,

I was intrigued by movement as important part of the experience. We tried very hard to develop the possibilities (of the movements) fully (in the East Building), but [were careful] to ensure there was no loss of clarity. This [was] important because without discipline spatial richness would simply lead to confusion. Instead, through control we created interest. (Jodidio and Strong 2008, 136)

The large space, as a result, remains open while displaying a limited number of large sculptures. In this atrium, visitors can still be connected to different galleries via visual clues of crossing passages on different floor levels. Yet, there is a change of rhythm in movement. The expanded vision with "open views" seems to foster a similar "meandering experience" through the atrium, allowing the visitors to flexibly arrange their visit without the "loss of clarity." In this sense, the atrium becomes the "central pond" inside the building, not only for its open spatial configuration, but for the opportunities it provides to halt and redirect visitors, through their own meandering experience. While not explicit in description, the type of meandering was translated in Pei's atrium.

3.2 The garden element in Wang's design

Wang Shu's later projects exhibited richness in materiality, compared to the Wenzheng Library. There is also a sense of persistence in his material applications (i.e. layered tiles, bamboo-molded concrete, ramped earth), which has visualized the typical "images" of Wang's designs, alluding to the consistent narrative that the architect has been developing. In fact, among many of the recurring materials/elements in Wang's design, some are inspired by Suzhou gardens. The most evident one, not surprising, is water.

Pei's interpretation of water, while originated as a typical landscape image of a garden, became a means to induce a specific spatial experience. Wang, on the other hand, continued with his emphasis of "life experience" through the element of water. In his recent lecture at Cornell University, Wang described a variety of forms of water realized in a scholar's garden of Qing dynasty. (Wang, 2017) Interestingly, in many constructions, water was only represented rather than directly used in the designs. As Wang summarized, this garden realized the "architectural responses to water" rather than the literal application of it. (Wang, 2017)

In the lecture, Wang demonstrated how these responses were translated into his architectural practice. In the case of the Wenzheng Library, the building formed a direct and intimate contact with water. This architectural response used water to expand the landscape view, at the same time, to restrict the bodily movement. In a sense, Wang considered a similar contradictory visual/body experience through the water element. Furthermore, Wang also discussed one of his most "symbolic" forms – the curved roof – and its specific response to water. The formal integrity exhibited in the curved roof often resulted in interpretations of symbolic expression of the flying roof, an iconic image of Chinese traditional building. (Lai, 2013) Regardless of the simplified or even misinterpretation, this form has been continuously employed in Wang's practice. (Fig. 16) Similar to the design of Wenzheng Library, there was a profound concern beyond formal articulation of the curved roof. Through this complex form, Wang developed a system of directing and collecting rain so that the water can be seen, heard, and eventually "sensed" through this particular architectural response. (Wang, 2017) Reminded by the architect own claim, "architecture is not to be looked at but experienced," we may be able to discern a more profound intention behind this formal invention.

CONCLUSION: Architectural discipline through the lens of Suzhou garden

Connecting traditional garden with modern space is not a novel topic in the 20th century architectural studies. However, most previous discussions have constructed through the ideological frameworks of modernity, Chinese-ness, and more recently, regionalism. As Andong Lu suggested, “Chinese garden was established as both an historical prototype and a national epitome of modern space.” (Lu, 2011, 499) Garden, situated in the intersection of regionalism in architecture and cultural continuity in modern design, inevitably, is ingrained with complexity in interpretation. Certainly, these narratives were and still are important in its architectural translations, including the discussed projects of I. M. Pei and Wang Shu. However, I have downplayed these implications in the analyses of these two architects’ works in order to emphasize another significant aspect of garden in architectural discipline. My study examines how this spatial art has been re-defined within a design discipline, and how the extracted concepts and techniques further shape contemporary design.

Since the beginning of this century, we have witnessed many more Chinese architects whose designs anchor on the art of garden making. These collective and diverse effort deserves further scrutinizing beyond the ideological framework of regionalism. Suggested in my essay, garden as a generative means in architectural design proposes another possibility of interpretation, that is, architecture continues the mission of garden to foster diverse experiences, thus inspiring more meaningful comprehensions of culture and human life. This profound yet undertheorized notion, learned from traditional gardens, invites further investigations to inform and guide the development of architecture.

REFERENCES

- Cannell, Michael. *I. M. Pei: Mandarin of Modernism*. New York: Carol Southern Books, 1995.
- Dong, Yugan. “Prophesy and Allegory: Ieoh Ming Pei’s Modern Chinese Architecture,” *Time + Architecture*, No. 5 (2007): 60-65.
- Lai, Delin. “The Architecture of Wang Shu in the Discourse of the Picturesque,” *Architectural Journal*, 04, (2013): 87.
- Lu, Andong. “Lost in Translation: Modernist Interpretation of the Chinese Garden as Experiential Space and Its Assumptions.” *Journal of Architecture* 16.4 (2011): 499–527.
- Jodidio, Philip, and Janet Adams Strong. I.M. Pei: Complete Works. New York: Rizzoli, 2008.
- Pei, I. M. and Bin Lin. “Appendix: The Chinese Sentiment of I. M. Pei,” in Pei, I. M., and Gero von Boehm. *Conversations with I. M. Pei: Light Is the Key*, translated by Lin Bin. 183-85. Taipei: Lian Jing Press, 2003.
- Pei, I. M. “Side Note of I. M. Pei’s Talk on Architectural Creation,” edited by Ming Shi. *Architectural Journal*, No. 4 (1980): 20.
- Wang, Shu. “On Construction.” *The Architectural Journal*, No. 7 (2008): 58-61.
- Wang, Shu. “The Narration and Geometry of Natural Form: Notes on the Design of Ningbo Museum.” *Time and Architecture*, No.3 (2009): 66-79.
- Wang, Shu, and Zhenning Fang. “The Outline of the Hills,” edited by Maria Giulia Zunino. *Abitare*, Vol. 495 (2009): 64-73.
- Wang, Shu. *The Beginning of Design*. Beijing: China Architecture & Building Press, 2002.
- Wang, Shu. “Dialogue to Water – construct with the natural way.” *Public lecture*, Connell University. March 22, 2017.
- Xu, Ning, and Ni, Xiaoying. *I. M. Pei and Suzhou Museum*, edited by Gao Fumin. Suzhou: Gu Wu Xian Press, 2007.
- Zhang, Jiayi. “Infinite landscape in a small pavilion (Jiangshan Wuxian Jing, Quan Ju Yi Ting Zhong).” *On Building Traditional Chinese Garden (Zhongguo Zao Yuan Lun)*, 3rd edition, 246-275. Taiyuan: Shanxi People Press, c1991.

ENDNOTES

- ¹ The summary of the scholarship on garden study within architectural discipline refer to Andong Lu’s article in the reference.
- ² The Lion Grove garden (*Shizi Lin*), originally built in the 14th century as a part of monastery and since then transformed into a private residence, became Pei’s family garden during his teenage years in Shanghai. Pei lived in the garden for a few summers during his upbringing.
- ³ A detailed analysis of the rockery landscape design in Fragrant Hill Hotel see Liu, Linfan. “Rethinking Pei: A Pictorial Vision of Space,” Speech at *Rethinking Pei: A Centenary Symposium*, Hong Kong University, December 14, 2017.
- ⁴ Pei misrecognized Mi Fu, the father of the Mi Youren, as the painter and used him as the reference in his own description. Therefore, all the writings about this project also used the father and some other related painting examples to suggest the connection. This painting was discovered in the project’s archive at Pei Partnership Architects. Beside the formal resemblance between the painting and the rockery, it was the only painting example in the project’s folder. Therefore, I think it is safe to assume this is the correct reference.
- ⁵ In an article published in 1987, Wang discussed several key ideas without articulating the summarizing term of type. See Wang Shu, “Analysis of the inner structure of the valleys in Wannan Villages, (*Wanan cunzhen xiangdao de neijiegou jixi*),” *The Architect*, No. 28, (October 1987): 62-66.
- ⁶ Conversation with Janet Adam Strong, *Interview*, March 03, 2016.

Extending Skin: Architecture theory and conceptual metaphors

Philip D. Plowright

¹Lawrence Technological University, Southfield, Michigan

ABSTRACT: Architects use metaphor constantly in their writing, speech and project development. It is engaged for its ability to transfer meaning and as an aid in orientating design positions (Collins 1971; Seligmann and Seligmann 1977; Alberti 1988; Forty 2000; Hearn 2003; Muller 2009; Libeskind 2012). While architects have acknowledged the general presence of metaphor as part of design theory, there is little understanding of metaphor's deeper role in architectural cognition and its effect on architectural values (Lakoff and Johnson 1980; Caballero 2006). This paper examines a small aspect of metaphor use in architecture in order to follow a thread from historically grounded applications of metaphorical terms to contemporary and highly conventionalized conceptualization of spatial design. The focus is on the HUMAN BODY as a source domain and, in particular, the concept of *skin*. Through the discussion, skin (and thus the human body) is shown to be present in architectural discussions not only knowingly used metaphorical expressions but also in highly conventionalized and normalized occurrences. These unrecognized examples of conceptual metaphors allow skin move well beyond simply being an analogue for a building enclosure. Rather, concepts related to skin are extended into interpretations of actions as a projection of human capacity into deep disciplinary examples of architectural concepts and abstractions.

KEYWORDS: conceptual metaphor theory, architectural theory, cognitive linguistics, building as body, conventionalization, cognitive semantics

INTRODUCTION

Architects use metaphor constantly in their writing, speech and project development. It is engaged for its ability to transfer meaning and as an aid in orientating design positions through the recognized, and historical, source domains of the HUMAN BODY, LINGUISTICS, GEOLOGY, ORGANISMS, BIOLOGY, and MECHANICS (Collins 1971; Seligmann and Seligmann 1977; Alberti 1988; Forty 2000; Hearn 2003; Muller 2009; Libeskind 2012). While architects have acknowledged the general presence of metaphor as part of design theory, there is little understanding of metaphor's deeper role in architectural cognition and its effect on architectural values (Lakoff and Johnson 1980; Caballero 2006).

Architecture, as a member of a larger group of design disciplines, stresses a value on tacit information transfer and outcomes over clear process, suppressing cause and effect relationships of design outcomes as communication vectors (Logan 2007). In the application of explicit non-disciplinary information based in either visual or textual form, metaphor is valued as a generator or an orientation tool for a design starting point which will 'inspire' a reaction (Goldschmidt and Sever 2011). Some theorists have made the claim that it "is a none-too-commonly-known fact that in Western culture the understanding of architecture is metaphoric in that it is rarely known for itself" (Johnson 1994, 429), raising the importance of understanding metaphorical operations in architecture. Yet, this is combined with ambiguity to how metaphorical statements and expressions are considered in architecture, with the possibility of metaphorical concepts interpreted as literal by the designer but analogical by the audience; or symbolic rather than metaphorical. What is clear, however, is that metaphor has been connected with issues of method and meaning in architecture for many centuries, whether acknowledged or latent in the texts of architectural theory. Clearly, metaphor matters to architecture.

This paper examines a small aspect of metaphor use in architecture in order to follow a thread from historically grounded applications of metaphorical terms to contemporary and highly conventionalized conceptualization of spatial design. The topic considers the application of the metaphor BUILDING IS A BODY (Forty 2000). This major metaphor involves highly conventionalized terms in architectural jargon such as *ribs* as an expression of structure, *bowels* to refer to deeply situated interior spaces, or *spine* to address a linear type of circulation that connects many spaces (Caballero 2006). While some of these topics are covered, the more detailed discussion is focused on *skin* to mean the surface of a building.

1.0 THE NORMALIZATION OF THE HUMAN BODY AS AN ARCHITECTURAL METAPHOR

The mapping between the human body and buildings is a metaphor found in historical texts of architecture as well as current discussions. The metaphor has been present in architectural theory since the earliest recorded text, Vitruvius' *de Architectura* (first century, AD), and codified by the Renaissance writing of Alberti's *On the Art of Building in Ten Books* ([1452] 1988). The body terms used in these metaphorical expressions have been normalized and become polysemic within the discipline, causing no incongruence to the reader, speaker or listener.

Vitruvius established symmetry as a principle of good architecture as part of a mapping that transferred the quality from the human body onto buildings (Vitruvius 1914). He also considered the building *to be literally* a body, addressing the same issues of health and protection (from heat, sun, wind, temperature) as any biological entity would need (1914, 19). The body metaphor applied a value system to buildings that included wholeness and coherence, which made architecture analogous with closed system based on homogeneity, centrality and symmetry (Till 2007).

Alberti extended aspects of the human body as a source of meaning, directly connecting body references to building elements. He considered features of roofs to be "bones, muscles, infill panelling, skin, and crust" (Alberti 1988, 79) and used the same biological terms for vaults, stating that "with every type of vault, we should imitate Nature throughout, that is, bind together the bones and interweave flesh with nerves running along every possible section" (1988, 86). Beyond the human body, there are other organic references including those to shells, flesh, carcass, spine, bowels and so on (Caballero 2006, 18). In fact, the body and its containing category, the organic, is considered to be the most prevalent metaphors in the history of architecture, connecting building design to nature and, thus, giving buildings both meaning and authority (Hvattum 2006).

The body was a dominant reference into the Enlightenment combining with the concept of BIOLOGY by the Industrial Revolution (Moloney 2011). The use of anatomical terminology before the Industrial Revolution tended towards equating buildings to body elements and body schemas (*arms, legs, head, heart, feet on ground, heart as central* etc.) and this included a parallel view of CITY AS BODY. The metaphor could go so far, as McClung (1981, 283) illustrates through a literary reference, that a building's "medieval arrangement of apartments (hall with kitchens to one end and private quarters to the other) is imposed upon a point-by-point correspondence of the castle to the human body." However, once the pursuit of scientific knowledge became rooted in Western society through the Enlightenment, understanding of the body shifted from "a sole description of bodily organs in terms of their physical appearance and position in the body, to focus on the functions performed by those organs within the whole." (Caballero 2006: 18).

The growth in biological knowledge, especially knowledge of evolution and cellular growth, also changed the type of information expressed through the metaphor. The dominant understanding shifted from the body as an anthropomorphic mapping between the environment and human physicality to instead focus on the body as a biological organism which stressed systems and natural laws (De Palma 2006). The organic metaphor was used in this way as part of early architectural Modernism, which projected completeness and solidity through biological principles in order to present a building as a final expression of natural, dynamic forces with a form that emerges from its context, and therefore cannot be questioned for its meaning (McClung 1981: 281; Hvattum 2006: 497). It also stressed issues of health and illness found in formal representation that ranged from early Modernist concepts of purity, hygiene, cleanliness (Till 2007; Muller 2009) to late 20th-century fixations on scars, scabs and parasites (Caballero 2006; Kanekar 2010), using these to associate redemptive qualities with design when applied to the environment.

2.0 RESEARCH METHODS AND KNOWLEDGE BOUNDARIES

This paper reports from a research project based in Cognitive Linguistics (CL) using Conceptual Metaphor Theory (CMT) but studying architecture as a discourse community and a discipline of knowledge. The purpose of the overall project was to examine central texts representing deep disciplinary discussions in architecture to address what patterns of metaphors are present and how they support the construction of meaning in the built environment. Understanding metaphorical language as an expression of ways of thinking and, therefore, systematic to human cognition rather than simply as a stylistic flourish positions CMT as an important tool in

understanding the world. CMT is a contribution to Cognitive Linguistics that understands the organization of language as a direct reflection of how thoughts are organized. As such, it allows access to thinking structures of the human mind by understanding conceptual metaphor as a central operation in human thinking rather than simply a linguistic embellishment.

A conceptual metaphor is the “understanding one conceptual domain in terms of another conceptual domain” (Kövecses 2010: 4). While some scholars might take issue with the term “understanding”, it is an important concept that places the conceptual metaphor as a major operation in meaning and human value structures. Lakoff and Johnson (1980) theorize that there is a pattern of concrete-to-abstract mapping that is fundamental to conceptual metaphor, considering that we use metaphors to map physical knowledge as a way of understanding abstract concepts. The generation of a conceptual metaphor is considered to operate through similarity (whether real or created by the metaphor itself), which creates a dependence between source and target domains (Lakoff and Johnson 1980, 147), is a systematic correspondence (Kövecses 2010, 7) and includes inferential structure (Grady 1997, 7). The similarity theory of metaphor comes from an Aristotelian position that metaphor connects two dissimilar concepts by some key shared feature and has been challenged recently as not being empirically consistent. If we follow the theory of embodied cognition, then it is more probable that the association between domains and concepts is predicated on physical human experience structured through the engagement of the body in the world (Grady 1997, 5).

Conceptual metaphors are recognized in this study through the presence of a term in a sentence or sentence fragment which produces incongruence between the literal meaning of that term and the context in which it is used. The overall focus remains on the expression rather than breaking a sentence into lexical units and testing each unit for its basic meaning as isolated elements (Pragglejaz Group 2007). As such, it is the intention of the sentence or sentence fragment in a discourse context which drives the identification of metaphor through the presence of incongruence. (Cameron and Maslen 2010). as the identified metaphors are understood to be discourse examples of metaphorical expressions which are the basis of analysing the presence of conceptual metaphors through decomposition.

3.0 DISCUSSION

The metaphors using the human body can be coherently organized under the megametaphor OBJECTS/BUILDINGS ARE HUMAN BODIES. The underlying correlation between objects in the environment and humans supports the coherence of several conceptual metaphors as well as the extension of basic mappings into associated concepts. Metaphors referencing the human body are common when discussing the physical understanding of architecture (i.e. as building) but the corpus also contains examples of when the same body concepts using the same salient features are used in abstract discussions as well. For example, *spines* and *backbones* refer to the physical space of a linear, organizing corridor, an abstract concept about the organization of circulation and also an idea that gives structure and is built upon by other ideas.

Not all aspects of the human body are used as part of metaphors even though the body is an important source reference for understanding parts of our world and experience. The most common metaphorical source terms and concepts are *skin*, *face*, *heart*, *spine (backbone)*, *ribs* and *arms*. Common references use relational information - *arms* are physical extensions of a main building, the *body* of a building is the central massing of that structure, and a *face* is a reference to the front of an object. Less common in architecture is attribute or shape references using the human body. One that does occur is *ribs*, a concept used to refer to visible and repeated structural elements which usually involves a curved form.

3.1. Building enclosure as skin or clothing

The most common mapping between the human body and architecture is *skin* as a term used to understand the outer surface of an enclosure (physical) or container (conceptual). In this regard, historical instances of metaphor in architecture as architectural terminology, such as Alberti's reference to *bones*, *muscles*, and *skin* to refer to structure and cladding in *De re aedificatoria* (1443-52), is consistent with terms found in a corpus dedicated to late 20th and early 21st century architectural theory. The mapping of *skin* uses relational information as the outer surface of a building is considered to operate through similarity as the outer surface of a human body. As a normalized term in architecture, *skin* as a source domain does not include any operational complexity such as mappings between pores, temperature and pressure sensing, nor notions of elasticity. The conventionalized use of the metaphor enclosure is skin can be found in example below:

- (1) “The *skin* is defined in places by concrete, and in places by glass” (Allen 2000, 1)

In (1), the mapping between skin and building enclosure is an analogy that uses knowledge of the skin as a thin outer layer acting as an interface coherence with the image schema CONTAINER or as boundary between interior complexity and the exterior environment. There is the inherent understanding that buildings are human bodies as internal systematicity suggests that *skin* is part of a coherent system that also links the building to *organs, limbs, faces* and *backbones*. The larger mapping relates buildings to being human and having a human body as the outer surface does not generally have *fur, scales* or *chitin* in the normalized version. While (1) is an example of the basic use of the conceptual metaphor, other concepts can be involved in the mapping. The next example (2) uses the same conceptual metaphor of enclosure is skin but the context involves more complex social engagement.

- (2) “we witnessed during the 1990s an attempt to use the *skin* of the residential building to represent diversity and multiculturalism” (Zaera Polo 2008, 93)

In this example, the metaphor involves the outer surface of the buildings as presenting socio-cultural information rather than skin as the physical outer surface of a container and aligned with the normalized understanding of BUILDINGS ARE (HUMAN) BODIES. The skin is representing a set of values and beliefs as part of cultural expression and does this because it is the surface which is visible to the public. The visible surface maintains social interactions and is connected to primary metaphors such as visibility is attention and perceptible is out but also, and more importantly, surface is identity. In (2), skin is a vehicle for a much more complex social situation than is considered in the previous example while using the same conceptual metaphor ENCLOSURE IS SKIN.

The outer enclosure of the building could be considered as clothing at the same time it is normalized as skin because cognition through domain association allows for multiple inferences without invalidation. The mapping of ENCLOSURE IS SKIN and ENCLOSURE IS CLOTHING co-exist in the same way that MORE IS UP does not contradict GOOD IS UP in discussions of cultural coherence (Lakoff and Johnson 1980: 23). While UP can be both MORE and GOOD, the building surface can be both skin and clothing without conflict but depending on context. One of the differences between skin and clothing is how knowledge of them is acquired and how they are classified. Skin is a biological term which is highly embodied as part of human body schema while clothing is a cultural reference that infers social content such as fashion, social norms (nudity) and social standing.

In the corpus, metaphoric expressions portraying building surfaces as clothing differ from those of skin. While both refer to the terminal surface between an object/organism and the environment, skin is understood as integral to the human body while clothes are an additional element to be overlaid on that body. As seen in the examples above, metaphors mapping skin to buildings and abstractions consider that outer layer as an integral surface. As a metaphor in architecture, the source domain of clothes is used when the enclosure of the building and the rest of the building to be considered as conceptually separate from each other. This attitude can be exemplified by the following example:

- (3) “The ‘*clothes*’ have become so removed from the *body* that they require structural support independent of it.” (Colomina 1992, 93)

In this example, there are two metaphorical expressions. The first uses the metaphor is ENCLOSURE IS CLOTHING (“*clothes*’ have become so removed”) and the second uses CORE IS TORSO (“from the *body* [of the building]”). Both metaphors are coherent with the underlying megametaphor BUILDINGS ARE HUMAN BODIES. The source domain is clothing because the purpose of the sentence is a conceptual separation between the enclosure of the building and what is considered the essence of the building (often equated to structure and enclosed program). Referring to the enclosure as skin would not easily allow for understanding the enclosure and building as separate and independent elements as one is part of the other. However, the source domain of clothing replaces the source domain of skin if the speaker wishes to stress a conceptual isolation between the outer surface of the building and the idea of the building itself. As such, a building can be considered finished and functional in terms of its physical construction yet “undressed” (Cadwell 2007: 23) or even “nude” (Lavin 2011: 72). Clothes are a modification on the conceptualization of building enclosure as skin, coherent with understanding it as a terminal layer between a body and the environment.

As noted above, skin is used in a second way as well – as a representational surface that manages social interactions and expressions of identity. When ENCLOSURE IS CLOTHING replaces ENCLOSURE IS SKIN as a metaphor for the outer surface of an object, the purpose of the metaphor shifts from conceptual separation of object and surface to the role of clothing in socio-cultural systems, especially as part of a system of fashion. In the next example, the Disney Concert Hall in Los Angeles designed by Frank Gehry is considered as a body with clothing rather than simply a body.

- (4) “The Concert Hall project is *fashionably dressed up* to designate a volumetric mass that denies any coherent and hierarchical order” (Hartoonian 2006, 123)

The concert hall in the example above expresses a clear separation between the façade and the building. The architect is known for curving building enclosures that are physically and conceptually isolated from the environmental and programmatic aspects of the project (i.e. the core of the building). However, the metaphor ENCLOSURE IS CLOTHING activates cultural values of being fashionable which requires social structures that pertain to status, rank, and timeliness. The discourse context of the expression discusses the building in how it is viewed from the surrounding streets, stressing its elegance and appropriateness to the urban context. The enclosure is operating as a surface that projects cultural identity as part of human social interpretation. This use of clothing is coherent with the second way that enclosure is skin is interpreted – as the visible surface that engages in relationships with other people. The difference between metaphors based on skin and clothing is that clothing can be changed, used to mask identity or be a disguise as the object and the surface is considered as non-integrated.

3.2. Extending body metaphors through external systematicity

As an underlying source domain for discussions of architectural concepts, the mapping to the human body allows for more innovative expressions which are still coherent through external systematicity. In these examples, the metaphor is BUILDINGS ARE HUMAN BODIES rather than BUILDINGS HAVE HUMAN BODIES. The latter expression involves considering ideas and objects as using the body in situations that extend human capacities to non-human, non-animate and non-physical constructs.

Once a building is understood as being a human body, the metaphor can be extended into many different expressions. The extension of metaphorical mappings in architectural discourse can be illustrated using the discussion of skin as a metaphor for both enclosure and social engagement above. The conventionalization and normalization of a metaphor allows for the possibility of elaborating on the basic metaphor to create richer and more subtle inferences. For example, once the surface of an object (or objectified abstraction) is normalized as skin, that surface can then be acted upon or modified in the same way as skin with the assumption that the underlying mapping is just accepted. This includes ornamentation such as piercings and tattoos, physical disfigurement such as when the discipline of architecture “has gained a *scar*” (Lavin 2011: 75) or when the conceptualization of urban and natural ecologies “are *sutured* together,” (Lerup 2001: 52). Biological and physical actions can also extend from the understanding of enclosure as skin. One author states it through considering the air above a city as being “*like our skin*, an immense enveloping organ, to be constantly attended to, chilled, channeled, and cleaned.” (Larup 2001: 58). Other actions present in the corpus make actions using skin including *flaying, piecing, cutting, slicing* and *exfoliation*. The next examples expand on these points.

The ENCLOSURE IS SKIN metaphor can be extended into novel expressions using non-normalized concepts while still being coherent with the BUILDINGS ARE HUMAN BODIES metaphor. In the example below, (5), the skin is considered to be marked through the cultural practice of tattooing, what seems to be a metaphor using similarity based on image.

- (5) “It is a *tattooed surface* which does not refer to the interior, it neither conceals nor reveals it” (Colomina 1992, 98)

The “tattooed surface” in the example above refers to a physical interpretation of a building enclosure, a façade of alternating black and white horizontal stripes with very few windows. While the outer surface of a building is normalized as skin in architecture, this expression maps the human cultural artefact of tattooing ink into flesh to create images to that surface. Tattoos are used as part of social identity in human societies and change the role of human skin from biological enclosure to a surface on which other actions occur. In the expression, the stress on the surface of the enclosure changes the relationship between the enclosure of the building and the spaces it contains. While this novel expression builds on the underlying conceptual metaphor of ENCLOSURE IS SKIN and the megametaphor is BUILDINGS ARE HUMAN BODIES, there is no direct reference to either of these concepts.

The tattoo metaphor is being used to bring attention to the outer surface of the building but not as a way to explain an image or shape. When skin is tattooed, it fulfils a double role on the human body – it is the surface that mediates with the environment but it is also a drawing surface that changes the hierarchy and content of that interaction. Rather than being sensory surface of an organism, a tattooed surface uses the metaphor SKIN IS CANVAS to turn the body into a background for artwork or graphics. As a canvas, the skin’s primary role is not to contain the complexity of the body as a surface of a container but to mask the presence and operation of the body through focusing attention solely on the surface. In this example, the building enclosure is being

claimed to work in the same way through the metaphor. The architectural critic is using the metaphor to claim that this particular enclosure exists in and for itself rather than its traditional role of protection from the elements, creation of privacy and allowing views from inside to outside and vice versa. As such, the novel expression both uses and modifies the underlying metaphors as the intention is that the building is all skin and no body as while the house has a *physical* interior, it does not have a *conceptual* interior. This is obviously not literal as the house has rooms, a roof, doors and windows but the conceptual understanding of space is overlying and overpowering the physical experience of space.

Metaphors building in novel ways on SKIN IS ENCLOSURE are more conceptually focused, addressing abstract concepts that are theoretically subtle and use deep disciplinary knowledge. While the tattooed surface in (5) could be understood as a basic attribute mapping creating an image metaphor, the purpose of the metaphor is to consider the conceptual understanding of the building rather than its physical presence. The next example also uses ENCLOSURE IS SKIN as part of BUILDINGS ARE HUMAN BODIES.

- (6) “This *flayed* modulation of interior and exterior produces the effect of loose and sometimes surprising correlations between program and space or room.” (Somol 1999, 69)

In this example, enclosure is skin is being used not as an object but as the basis of an action performed on the surface. The action is *flaying*, referring to the stripping away the outer layer of skin to expose the flesh below. As a physical action mapped to a building, one might expect to find the metaphor present to describe how layers of a building façade are removed to allow views of interior space. The example (6) above, the “*flayed* modulation” is not directly addressing physical aspects of the building but instead brings attention to the conceptual relationship between building typology, conceptual occupation through the use of spaces (program), and the physical space of the building. These are complex ideas that are understood implicitly by members of the architecture discipline. In the expression, the metaphorical expression “flayed” is used to bring to the attention that the building under discussion (a community centre) purposefully reverses the traditional understanding of inside and outside as well as public and private as a critical aspect of the design proposal. The resulting physical building is conceived to deny the traditional edge/centre hierarchy (public is edge, private is centre) and presents the building as a body without skin . . . or more exactly, a building with skin on the inside and exposed flesh on the outside. There are, however, no physical clues to this interpretation in the building enclosure. In the extension of ENCLOSURE IS SKIN and BUILDINGS ARE HUMAN BODIES, skin is being equated to publicness and flesh (interior tissue) to privateness. The mapping includes correlational mapping of visible aspects of the environment as public elements, supported by the second normalized interpretation of skin as a social element. In this case, the ability to understand skin as a public expression is possible through the metaphors visibility is attention and visible is accessible. To consider flayed to be simply a condition of peeling back outer layers of the wall would be to completely misinterpret the expression as no physical comparison is possible.

The next example, (7), does not involve a physical object such as a building but is still uses the metaphor ENCLOSURE IS SKIN. In the same way as shown in the last example, architects consistently map their conceptual understanding of disciplinary knowledge into physical situations. The human body is often used as the basis of these mappings.

- (7) “Was the *exfoliation* of the private/public threshold to the inside of the unit a politically advanced decision,” (Zaera Polo 2008, 94)

In the example, “exfoliation” is applied to the abstract idea of “the private/public threshold” rather than the outer surface of a building. The threshold found in (7) is where the space between the conceptual ideas of public and private is considered a threshold. For this to be possible, the qualities of publicness and privateness need to be understood as physical analogues through the metaphor (bounded) abstractions are containers, a corollary of (bounded) abstractions are objects. The surface of the container is then considered to be skin through understanding the surface of a container as an enclosure and enclosure is skin. The final association is conceiving of the skin as a type of threshold rather than just a surface between outside and inside.

The surfaces in the expression considered to be part of a threshold are the conceptual relationship between the abstract ideas of publicness and privateness. In this example, the normative public-to-private relationship expected by architectural and urban designers is the domestic residence relationship to urban context. However, the author is discussing a second more innovative public-to-private relationship which is found within the domestic residence through the use of screened rooms. The normative understanding of urban public-to-private relationships is considered be transferred to explain the non-normative understanding of domestic residence public-to-private relationships. Exfoliation then refers to the action of transferring an urban idea to

an architectural situation even though they exist at very different scales. As a conceptual and experiential idea, the flaking of part of the conceptual urban environment to embed itself within the domestic interior then affects the physical organization of the building and the former is used through similarity to understand the latter. The metaphor is needed because the way that space is being conceived is non-normative and does not match a standardized typological pattern. The importance of the public-to-private relationship is not immediately understandable through the form of the building and the metaphor brings attention and focus to this abstract content.

CONCLUSION

The human body has a clear importance for the discourse of architecture. Conventionalized terms are used for their resemblance values to aspects of buildings mapping relational aspects of the human body to their counterparts in the built environment. The stress is on structure, enclosure, thresholds, circulation and centrality (i.e. importance). The body is also activated through correlational mapping of perceived actions into nonhuman things.

The application of actions to the object of the human body can be seen to be structurally and conceptually more complex than expressions than using the body as an object, like *spine*, *heart* or *face*. The other aspect to note about the examples above is that for while the immediate subject is a physical building, the sense of action places the focus not on the building itself but the content found in conceptual act of design that formed the physical building. These actions cannot be interpreted from the immediate physical context without knowledge of the architectural intentions. The actions are not interpretations of the environment through spatial motion or force dynamic image schema found in *FORM IS MOTION*. The other point to consider is that while many of the expressions exploring the use of skin to architectural discourse build on complex content such as social identity and deep disciplinary abstract concepts. This creates a complex structure that spans embodied concepts and disciplinary conceptual constructions (i.e. how architects understand space, occupation and use) while implicitly maintaining, or building upon, the conceptual metaphors *BUILDING IS A BODY* and *ENCLOSURE IS SKIN*.

REFERENCES

- Alberti, Leon Battista. *On the Art of Building in Ten Books*. Cambridge, Mass: MIT Press, 1988.
- Allen, Stan. "Le Corbusier and Modernist Movement: The Carpenter Center for Visual Arts." In *Practice: Architecture, Technique and Representation*, 102-121. Amsterdam: G+B Arts, 2000.
- Architecture is a Language: Daniel Libeskind*. TEDxDublin. Dublin: 2012.
- Caballero, Rosario. *Cognition and Shared Cultural Models: The Role of Metaphor in the Discourse of Architects*. Berlin: Mouton de Gruyter, 2006.
- Cadwell, Michael. "Swimming at the Querini Stampalia Foundation." In *Strange Details*, 3-46. Cambridge: The MIT Press, 2007.
- Cameron, Lynne and Robert Maslen. "Identifying Metaphors in Discourse Data." In *Metaphor Analysis: Research Practice in Applied Linguistics, Social Sciences and the Humanities*, edited by Cameron, Lynne and Robert Maslen, 87-115. London: Equinox, 2010.
- Collins, Peter. *Changing Ideals in Modern Architecture 1750-1950*. 2nd ed. Montreal; Kingston; London; Ithaca: McGill-Queen's University Press, [1965] 2003.
- Colomina, Beatriz. "The Split Wall: Domestic Voyeurism." In *Sexuality & Space*, edited by Colomina, Beatriz, 73-128. New York: Princeton Architectural Press, 1992.
- Forty, Adrian. *Words and Buildings, A Vocabulary of Modern Architecture*. London: Thames & Hudson, 2000.
- Goldschmidt, Gabriela and Anat Litan Sever. "Inspiring Design Ideas with Texts." *Design Studies* 32, no. 2 (2011): 139-155. doi:10.1016/j.destud.2010.09.006. <http://dx.doi.org/10.1016/j.destud.2010.09.006>.
- Grady, Joseph E. "Foundations of Meaning: Primary Metaphors and Primary Stress." Department of Linguistics, UC Berkeley, 1997.

Hartoonian, Gevork. "Frank Gehry: roofing, Wrapping and Wrapping the Roof." In *Crisis of the Object: The Architecture of Theatricality*, 104-132. Oxon, New York: Routledge, 2006.

Hearn, M. F. *Ideas that Shaped Buildings*. Cambridge, Mass.: The MIT Press, 2003.

Hvattum, Mari. "'Unfolding from within': Modern Architecture and the Dream of Organic Totality." *The Journal of Architecture* 11, no. 4 (2006): 497-509.

Johnson, Paul-Alan. *The Theory of Architecture: Concepts, Themes & Practices*. New York: Van Nostrand Reinhold, 1994.

Kanekar, Aarati. "Between Drawing and Building." *The Journal of Architecture* 15, no. 6 (2010): 771-794. doi:10.1080/13602365.2011.533543.

Kövecses, Zoltan. *Metaphor: A Practical Introduction*. New York: Oxford University Press, 2010.

Lakoff, George and Mark Johnson. *Metaphors we Live by*. Chicago: University of Chicago Press, 1980.

Lavin, Sylvia. "Current Kisses." In *Kissing Architecture*, 65-113. Princeton: Princeton University Press, 2011.

Lerup, Lars. "Stim and Dross: Rethinking the Metropolis." In *After the City*, 47-63. Cambridge: The MIT Press, 2001.

Logan, Cheri. "Metaphor and Pedagogy in the Design Practicum." *International Journal of Technology and Design Education* 18, no. 1 (2007): 1-17. doi:10.1007/s10798-006-9009-x.

McClung, William Alexander. "The Matter of Metaphor: Literary Myths of Construction." *Journal of the Society of Architectural Historians* 40, no. 4 (1981): 279. <http://www.jstor.org/stable/989645>.

Muller, Brook. "Metaphor, Environmental Receptivity, and Architectural Design." In *Symbolic Landscapes*, edited by Backhaus, Gary and John Murungi, 185-199. New York: Springer, 2009.

Pragglejaz Group, Peter Crisp, Raymond Gibbs, Alice Deignan, Graham Low, Gerard Steen, Lynne Cameron, et al. "MIP: A Method for Identifying Metaphorically used Words in Discourse." *Metaphor and Symbol* 22, no. 1 (2007): 1-39. doi:10.1207/s15327868ms2201_1. <http://oro.open.ac.uk/15225/>.

Seligmann, Klaus and Claus Seligmann. "Architecture and Language: Notes on a Metaphor." *Journal of Architectural Education* 30, no. 4 (1977): 23-27.

Somol, R. E. "IntraCenter: The Seduction of the Similar." *Assemblage* 40, (Dec, 1999, 1999): 68-79.

Till, Jeremy. "The Selfless Plan." In *Pattern, Purpose, Place: The Work of Proctor and Matthews*, 209-217. London: Black Dog Publishing, 2009.

Vitruvius Pollio, Marcus. *Vitruvius, the Ten Books on Architecture*, edited by Morgan, M. H., Herbert Langford Warren. Cambridge: Harvard University Press, 1914.

Zaera Polo, Alejandro. "The Politics of the Envelope: A Political Critique of Materialism." *Volume* 17, (2008): 76-105.

The Good Governance of Mexico City's Zócalo: A Recent History of Spatial Use and Morphological Transformations

Benjamin A. Bross
University of Illinois, Urbana-Champaign, Illinois

Abstract:

The change in elected government of the Federal District (*Distrito Federal*), from the Institutional Revolutionary Party (*PRI*) to that of the center-left *PRD* party, was of utmost importance for the evolution of the Zócalo's *representative space*. Using Lefebvre's semiotic tools for the analyses of spatial production¹ through the prism of Cultural Geography and Social History, this article studies one of Mexico's most important *symbolic spaces*: The *Plaza de la Constitución*, colloquially known as the Zócalo. With the ascension of new local and federal governments, the plaza began a process of transformation from a space controlled by the State for the State's demonstrations of power, to an open, inclusive space for all users. As of 1997 diverse cultural, recreational, and mass movement events began to be promoted and experienced on the Plaza.² This article explains the process by which the Zócalo began to change through *spatial appropriation* of the *absolute space* by varied groups with diverse interests and organizational purposes. In the first part, the essay discusses the so-called "March of Dignity", which attracted the participation of people from all sectors: student and youth associations, peasant farmer and laborer communities, blue collar and low-income industrial workers, populist groups, civic organizations, to name a few. The article then describes the impact of Spencer Tunick's project titled "May 6, 2007: naked Zócalo." Tunick's spatial intervention was a massive scale human participation art/happening project. Finally, the article then turns its attention to the recent Ayotzinapa protests and the symbolic significance of the damage done to the Mariana Door of the National Palace which occurred because of the civil unrest of this period.

Introduction:

This article uses Habermas' "public sphere" theory, Althusser's State apparatus relationships and Lefebvre's "plan of the present work" *spatial practice* toolkit in order to analyze contemporary spatial use of the Zócalo, Mexico City's symbolic center. The article defines the key terms as follows: *spatial production*, exhibited socio-political and economic value systems used to produce spatial relationships; *representative space*: the projection of semiotic meaning to users through symbolism, and; *absolute space* as the physical manifestation of space, which includes all past and present morphological transformations³. The goal is to demonstrate how "good governance" is achieved by providing public realms for cultural production and a political structure that not only tolerate *spatial socio-political mobilization* but *encourage spatial production* as a venting mechanism for social discontent. This article was written utilizing a Cultural Geography (Sauer) and Social History prism. Research was undertaken via primary sources: first-hand observation, museum and university websites, newspaper reports, participant interviews, and government statements; secondary sources include: newspaper editorials and essays by social commentators.

At the end of the 1990's, Federal District (D.F.) residents gained the right to elect their local government for the first time since 1928. The elections resulted from the amendment of Article 73 of the Constitution, which originally stipulated that the Head of Government of the Federal District would be federally appointed. Once the Constitution was modified, elections took place on July 6, 1997, and the Democratic Revolution Party's (*PRD*) candidate, Cuauhtémoc Cárdenas Solórzano, was elected with 48.1% of the vote (vs. the then President's ruling *PRI* party's 25.6%⁴).

Since 1997 the stated purpose of local government (continuously controlled by the *PRD* to date)⁵ is to "guarantee the rights of the citizens and serve their needs (which are) the main and unwavering duties of a democratically elected government, while placing special emphasis on the most vulnerable."⁶ [*Translator's Note: All translations into English by the author*] As a clear example of good governance through civic participation, the new government of the D.F. would seek to "address the fragmentation of the social fabric"⁷ through diverse social programs; among them the use of the capital's Zócalo (formally the *Plaza de la Constitución*) as a place for civic interaction and social integration. By examining how Mexico's Zócalo is used for civic socio-political purposes, we can help construct an argument for a cogent urban policy of "good governance" throughout the world by promoting and maintaining spaces for civic discourse in the public sphere.

The Zócalo's *spatial production* changed at the end of the 20th Century, through use of its *absolute space*. This *absolute space* had been since its inception in México-Tenochtitlan period controlled by political and ecclesiastical powers and rarely occupied by social groups in demonstrating for and against State power⁸. Morphological changes dating back to 1958 (fig.1), such as the removal of the French styled gardens allowed the Zócalo to be a simple but flexible gathering space. Starting with the 1997 election, the space became a

tolerant *absolute space*, open to all groups, uses, and social trends. As of 1997 the Zócalo became a place for effective *spatial production* for individuals and groups of Mexican society, becoming a multi-purpose or multi-functional locus. Angélica Herrera argued that starting in the 21st Century, there are five forms of spatial appropriation of Mexico City's Zócalo: pre-Hispanic events; protests; national values; commerce, and cultural recreation. These are represented by the different activities that take place, on a daily basis, in the Zócalo. Since 1997, events staged that follow Herrera's categories include: Day of the Dead, Three Kings Day, Easter Holy Week, Mexican and international artists' concerts, dance performances, film screenings, book distributions, opera, exhibitions, museum and circus productions, gastronomical fairs, chess tournaments, ice rinks, and pre-Hispanic ceremonies.

Simultaneously, federal and city official ceremonies including civic parades have continued, as have planned and ad hoc protests by the citizenry, occurring almost weekly and encompassing all population sectors. Against the backdrop of these activities, this article examines *spatial practices* through three events in chronological order: The arrival of the Zapatista Army to the Zócalo "March of Dignity", a mass photographic installation by Spencer Tunick, and the Ayotzinapa Protests.

1.0 The March of Dignity

On March 11, 2001, the Zapatista National Liberation Army (EZLN) arrived in Mexico City as part of its "Color of the Earth March" which had marched throughout Mexico. The 37day tour and covered 6,000 kilometers, culminating at the Zócalo. Nearly one million people watched a caravan headed by 23 EZLN "commanders" and the *Subcomandante* Marcos. By making the Zócalo the destination, the EZLN appropriated historic triumphant entrances while transforming the Zócalo by occupying its *absolute space*. Carlos Monsiváis described the symbolism of the Zócalo EZNL entrance: "We continue to acknowledge the Zócalo as the heart of the Republic. Systole, diastole, devil bastard."⁹

The marchers were joined by individuals from various social groups: student and youth associations, peasants, laborers, citizen organizations, as well as civil associations.¹⁰ Monsiváis noted that marginalized groups such as the unemployed, homosexuals, punks and anarchists flocked to the Zócalo.¹¹ The indigenous leaders of the EZLN climbed onto the dais, their backs turned to the National Palace as a symbolic act. An interview published by *Reforma* the following day, noted that the dais' location was symbolic: "the pavilion where we're standing is where it is. It is no accident; since the beginning, the government has been harassing us."¹² The significance of the pavilion location is important in a political context. On December 1st, 2000, for the first time in 71 years, a new political party, the center-right National Action Party (PAN), and its candidate Vicente Fox, achieved the office of the Presidency.

Before the Zapatistas arrived, President Fox, as the embodiment of the federal government, noted the government's *spatial occupation* tolerance, "Our democracy is showing great flexibility by allowing in its very breast, discussion of ideas, fostering debate and reaching consensus [sic]."¹³ President Fox explained a larger concern:

We hope Congress takes the first big step forward in reestablishing an open dialogue with *Zapatismo*;

We will do everything that is in our power, oh! and we are not doing this for *Zapatismo*, but for the 10 million indigenous people in our country who cannot continue to be forgotten or discriminated against!¹⁴

Demonstrating a political will for dialogue, Fox invited *Subcomandante* Marcos to "talk about indigenous communities and the country's situation".¹⁵ For the first time in the history of the Zócalo, a president invited an armed group to discuss peace. Dissidents used the *absolute and symbolic space* of the Zócalo to debate the country's situation. The Zócalo occupation by the EZLN symbolized the arrival of a socio-political force, in conflict with prevailing Ideological State apparatuses. The occupation of the Zócalo's *absolute space*, was a first order symbolic statement that can be understood at three levels (Tamayo, Cruz, pg.126).¹⁶ First as geographic, as it "weaved symbolic and material network of cities connected by the path of the march and, at the same time, built a bridge between the jungle and the city".¹⁷ The second level was urban. Once the EZLN reached the Zócalo, it took symbolic control of the representative places: "public universities, civic plazas, archeological areas, towns and communities surrounded by the great city, and the legislative palace".¹⁸ The third level was local, the EZLN and followers took over the city's plazas. As a *symbolic* heart of the country, the Zócalo was simultaneously a local and a national *representational space*.

An EZLN leader implored: "Don't allow for new day to dawn where that flag does not have a dignified place for those of us who are the color of the earth".¹⁹ He referred to the flag located in the center of the Zócalo. It was historic irony that he spoke this sentiment precisely where Tenochtitlan once stood, conquered by the Spanish at its peak of power. The EZLN had traveled to the political center of the country to symbolically reclaim their historic spatial legacy. The Zócalo acted as a *representative space* to reestablish the social pact between government and Mexico's indigenous people.

In Marcos' speech (fig.2) he emphasized the importance of including not only Mexico's original inhabitants but all those alienated by the State. The Zócalo's *symbolic, representative and absolute space* acted as an integrational space. Beyond official State symbols, the Zócalo became the Mexican diversity space:

Native American, worker, farmer, teacher, student, neighbor, housewife, chauffeur, fisherman, taxi-driver, longshoreman, office worker, employee, street vendor, gang, the unemployed, communications worker,

professional, religious, homosexual, lesbian, transsexual, artist, intellectual, militant, activist, marine, soldier, athlete, legislator, bureaucrat, man, woman, child, youth, elder,²⁰ seek to reestablish the social contract not only with the country's government but amongst all those citizens who call themselves Mexicans. Ever since the Spanish Viceroyalty, sociocultural integration between indigenous groups with Mestizo and *Criollo* populations has not been achieved.²¹ While Mexico's indigenous past is represented in the country's national symbols and form part of the foundational and morphological narrative of the Mexican national identity, the indigenous population has been marginalized since the Spanish period. The March 11th, 2001 march is one of the most transformative symbolic events of the Zócalo's *absolute space* history; the gathered masses witnessed and supported a march that demanded the recognition and integration of those who had been marginalized by Mexican society.

2.0 May 6, 2007: Naked Zócalo

Another major symbolic Zócalo event was the collective human nudity photography project organized by American photographer Spencer Tunick. Tunick had photographed naked people in streets starting in 1992 in New York. Tunick stated that the purpose of these urban installation photographs was to "expose the tension between the concepts of the public and the private, the moral and the immoral, the accepted and the forbidden."²² In 1999, he began an international tour called "Nude Adrift", during which he photographed naked people in cities including London, Montreal, Vienna, Melbourne, Sao Paulo, Barcelona, and finally Mexico City.

The installation in the Zócalo was part of a global narrative and artistic exploration; while the *absolute space and representative space* was physically in Mexico City, photographic documentation of the installation formed part of an international narrative. José Gaspar and Begoña Sendino stated that for Tunick:

The results are poly-significant works that speak of the metamorphosis of the city's landscape, all of it with a twofold consequence: on the one hand, the account of his fantasy extends to place our knowledge about reality in doubt, shattering the limited and finite idea we have about the city with the purpose of *re-creating* it through the intervention of the naked body; and on the other hand, it shows us a new vision of the nude.²³

On April 30, 2007, Tunick announced that the Zócalo would be the stage for his massive nude photographic installation in Mexico.²⁴ The installation's objective was to transform the Zócalo into a stage set for the disconcerting presence of thousands of naked bodies. Tunick noted that permission was achieved because of the Mexican people and the freedom of expression in Mexico. The announcement and recruitment for the event was made on the web portal of the National Autonomous University of Mexico (UNAM) designed for the event.²⁵ In return for participating in the photographic project, each participant received an artist signed print of the installation.²⁶ Participants would experience posing nude in the fourth largest plaza in the world, but also receive an example of *spatial representation* of the Zócalo.

While the artist obtained permission to use the Zócalo's *absolute space*, the Federal government stipulated that the national flag would not be raised during the installation: The Plaza itself would be without its iconic national and international symbol. By removing the Mexican flag, the Zócalo as urban-scale backdrop was now integrated into the larger narrative of *spatial globalization*: only experienced eyes could determine where it was taking place.

Semiotic-based spatial analysis reveals poly-significant narratives. Meanings varied by groups: participants, the left-wing local government, conservative groups, and the Catholic Church. Controversy surrounded the installation from the beginning: the government argued that it was a cultural and artistic event that would give the Zócalo an international character and profile. The Catholic Archdiocese of Mexico spokesperson Hugo Valdemar opined on the project expressing that:

Spencer Tunick's naked projects are not immoral, they are artistic, thus there is no objection whatsoever from the Curia. Furthermore, Mexican society shows great openness and tolerance for this type of artistic activity [...].²⁷ In another sign of tolerance, The Archdiocese postponed the traditional 7am Cathedral Mass so the artist would be able to work without interruption.

The Archdiocese's statements and actions are relevant because the Catholic Church, from the Viceroyalty onward, had periodically occupied the Plaza's *absolute space* as a sacred space, carrying out processions, and religious ceremonies -including two *auto-da-fés*. Now, the Archdiocese signaled tolerance if not outright support for the different Zócalo activities. The Church's statement may be interpreted as support for the local government's cultural position. If briefly, Tunick's installation united Church, the DF government and the subject-participants through *spatial* relationships.

Conversely prominent business leaders, conservative *PAN* politicians condemned the event as indecent. Congressman Jacobo Bonilla (*PAN*) expressed disapproval and suggested that the event was a distraction by the then local head of government, Marcelo Ebrard: "there are more pressing issues the local administration should focus on, not an event that will be uncomfortable for all the *capitalinos*".²⁸ Conservative *PAN* officials voiced their disagreement and rejection, claiming that permission for the "pseudo-artistic" installation was an excuse by the *PRD* to justify populist acts and self-serving promotion.²⁹ These statements, many of which were made before the event, were part of a torrent of opinions unleashed in favor and against the event; reinforcing the significance of the Zócalo's *absolute space* as central to civic discourse.

On May 6, 2007, at 04:30 am, enrolled participants began arriving at the Plaza. According to one participant's account in the *El Universal* newspaper, the entrance was via 16 de Septiembre Street. Even at that early hour, the access lines were already endless. Those that had already entered the Plaza waited seated, standing up, or lying down, cheering and singing "Cielito Lindo."³⁰ As the Plaza reached capacity, would-be participants were turned away. Many of those who were turned away began heckling. Chants included "there are no limits to art and culture", "picture by picture, nude by nude"³¹, "all of us or none at all", and the crude jeers "puto" and "ulero", traditionally reserved for political demonstrations. were heard across the Plaza. The installation had become a politicized event, engendering in those who were left out animosity shown at political events. Many excluded said they had been robbed of the opportunity to be "a part of the country's history".³²

After thanking the participants, Tunick noted that Barcelona's record of 7,000 participants had been surpassed by Mexico City by 11,000. Next, Tunick instructed participants to take off their clothes. Once disrobed, they stood in pre-determined spots on the plaza, standing three or four people per module. The installation revealed Mexico's multi-culturalism and ethnic diversity enabled by the Zócalo's *absolute space*. There were men and women of all ages (over 18), skin colors, heights, with partners, friends and alone.

After the fourth photograph (fig.3), Tunick asked the men to leave, as he would photograph the women facing the National Palace. Now alone, many women began to chant "Abortion, yes! Abortion, yes! Abortion, yes!" politicizing the installation.³³ Fear spread among women when dressed men approached with their cell phones taking pictures. The women yelled: "Men Out!", "Men Out!", "Leave!" According to testimony from Ericka Montaña, it is then when "real nakedness and fear was felt."³⁴ The unity felt during the four poses required by the artist was broken when the men were asked to move away and get dressed. At that moment the women felt vulnerable and attacked, breaking the sense of gender equality that minutes before they had embraced in the Zócalo. After the men were removed, order was restored.

In a massive nude experience such as Tunick's installation, individual involvement becomes collective participation, sharing a common experience. Elías Canetti argued that people can shed the fear of touching another person when sharing experiences and situations, because the moment that the individual lets go into the mass, the fear of contact disappears, "the feeling of equality appears, and all are the same as one self".³⁵ Because of citizen participation, the artistic nature of the event, and *absolute space* morphology, the Zócalo became the "...meeting point in the city, but above all a place that reinforces the identity and social unity of the citizens".³⁶ One participant expressed: "being without clothes and seeing that we are all one community, defeats the fear of being naked in front of others. From the moment you start to take off your clothes, you defeat all!"³⁷

Media coverage included 256 certified reporters from 101 world news organizations. International media coverage thrust Mexico City into the logic of globalization as the Zócalo became an international center of attention. During the post-shoot press conference Tunick positioned Mexico City as an open, plural and cosmopolitan city challenging the stereotype of Mexico as a conservative nation. The 18,000 people that participated in the event were able to experience *spatial production* firsthand occurring in the most *symbolic, representative and absolute space* in the country.

Participants said posing for Tunick had been an "ode to the body", a way to free themselves from prejudices and accept the body as is, "beautiful by nature".³⁸ Many participants expressed that it had been an act of freedom staged in opposition to the conservatism of the ruling PAN party and their cadre of newcomers".³⁹ Younger people said that the mass nude was an "excellent way to present Mexico as a liberal country".⁴⁰

Denise Gutiérrez, interviewed for this article, expressed her motivation to attend the event and described her experience of standing naked on the Zócalo:

I got very excited....I just wanted to go and break free from all my limitations....I felt afraid, I felt shame when I got there, but it went away little by little [...] What really got me excited being there was taking part or forming part of an event that made history in Mexico, for me it was about participating in something that would mark the history of the country.⁴¹

Staging the work of art in the Zócalo's *representative* and *absolute space* triggered a multitude of significations. For some, it was an act of rebellion against the Church and conservative politicians. Although the Catholic Church had been supportive, many of those present recall when participants started shouting: "Norberto Rivera your people are getting naked!" a statement of protests against the Church⁴². Others politicized the event as an opportunity to manifest activism, shouting: "Abortion yes! Abortion yes!", or by invoking electoral fraud with, "vote by vote, poll by poll". Participants were motivated by freeing themselves of prejudices, and to transcend as part of a work of art as protagonists in the country's history. These personal motivations are closely related to the buildings that bound the Zócalo and give the Plaza de la Constitución its character; for those opposing the Church, their participation occurred directly in front of the Cathedral; for those who opposed the government, their participation occurred in front of the National Palace, symbolic seat of power of the executive branch of the Federal Government; still, for others, it was a moment of multi-cultural union amongst the entire population. The way each person *experienced* the space was a way of *identifying* and *appropriating* what it meant to them to be Mexican.

The event reaffirmed the *symbolic* power of the Plaza, and its *representational* nature for a national and international audience. The Zócalo's *symbolic* power to convene, exactly because it is the *symbolic* center of the nation, drew 18,000 participants. The installation would not have been the same to disrobe in any other plaza; the *Plaza de la Constitución* hosts the nation's political, cultural and religious *symbols*. Filling the plaza with people, in the words of Herrera (pg.88), meant:

[...] having the power to summon the public opinion in a space that imposes and demands that society take a stance before social issues. 'In other words: the symbol and, therefore, the culture, is not only a meaning to be deciphered as a "text", it is also an instrument to intervene in the world and a device for power'.

By being naked in this environment, those who participated or witnessed others in the *absolute space* itself were forced to reconsider their *spatial practice*. The Zócalo acted as a venue in which to observe and be observed, and in the process modifying the perception of the *Plaza's* morphology, from a passive *spatial production* into an active meaning generator.

3.0 The Ayotzinapa Demonstrations

In last five years, the Zócalo has been characterized by large-scale mobilizations arising from organized groups and from civil society. The story of the missing 43 students of Ayotzinapa stands out as a noteworthy event in contemporary Mexican history. Students of the Raúl Isidro Burgos Rural Teachers' College in Ayotzinapa, went missing in Iguala, Guerrero. The sudden and violent disappearance caused a visceral reaction from Mexican society including mass protests in the Zócalo. Communities from all socio-economic groups demanded that the State clarify and resolve the case. The tragedy caught the attention of national and international media, bringing to the forefront what had been a latent anger with the State: corruption, lack of legitimacy of the government, calls for justice, use of legitimate and illegitimate violence at the federal and state levels. Since the incident, the Zócalo has functioned as a central space for the government, the Mexican citizenry and the world to hear the grievances and demands of the students' parents and of society at large.

On September 26, 2014, students from Ayotzinapa's Rural Teachers' College headed for Iguala, Guerrero, intending to commandeer buses in order to first complete their required practicums, and then transport themselves to Mexico City where they would join protest marches planned on October 2nd.⁴³ They managed to hijack two buses, travelled a few kilometers, passed through the *Plaza de las Tres Garantías* toll booth, and were stopped by police gunfire. Eyewitness accounts stated that at least six students were killed at the site by local police, while another 43 students were taken away into custody, and never heard from again.

On September 30th, 22 police officers were detained for their participation in the alleged murder of 6 people in Iguala. The Attorney General of Guerrero, Iñaki Blanco stated that "the violent incident that took place in Iguala was due to an excess in the use of deadly force by 22 police officers".⁴⁴ News media from across the world covered the incident and questioned the role of the Mexican government, demanding that the 43 students be returned alive. The Inter-American Human Rights Commission (*CIDH*), The Organization of American States (*OEA*) and the UN's office in Mexico requested that the Mexican government perform an investigation and search for the missing students. Five days after the 43 students had gone missing, the U.N. condemned the Iguala events, calling the incident "one of the most terrible in recent times".⁴⁵

Intermittent small protests began in the Zócalo, while solidarity protests spread across Mexico and the world. Protests took place in public spaces outside of Mexican embassies, and in emblematic sites such as the Trocadero Plaza "Human Rights Esplanade" in Paris. The Zócalo became the *spatial representation* that connected the Mexican public sphere with global *representative spaces*.

Once again, the Zócalo was confirmed as the symbolic center of the Mexican public sphere. On October 8, a first mass protest took place in Mexico City, denominated the Day of National Action for Ayotzinapa. Protesters marched under the banner of "Not one more death!".⁴⁶ Concurrent to Mexico City's march, protests were carried out in New York, Río de Janeiro, Bogotá, Madrid, Buenos Aires, London and other cities in support of the parents of the missing students. In Mexico City, the protest began at the site of the Independence Angel monument and marched to the Zócalo. The parents led the march "to demand that the federal and state government bring back our children alive".⁴⁷ Families carried portraits of the children with their names while shouting, "they were taken alive, we want them back alive". Civil society organizations, university students, actors, singers, politicians, scholars and citizens in general joined in this first demonstration. The protesters joined together chanting: "You are not alone!".

On October 22, a second global protest called Day of Global Action for Ayotzinapa was convened. Once again, mass protests took place in Mexico and around the world. In Mexico City, the demonstration began at the Independence Angel at 18:00 with 50,000 people carrying lit candles and torches to the Zócalo. The march, dubbed the "Light for Ayotzinapa" saw parents, poets and actors speaking publicly. Actor Daniel Giménez read a text called "The strongest cry" at the Zócalo referring not only to the "missing 43" but also to Mexico's "Dirty War"⁴⁸ mass graves. The events in Iguala brought back into public discourse alleged 20th Century State murders and kidnappings. The Zócalo's *absolute space* became the public sphere from which justice was demanded for State violence. As the protest ended, lit candles and 43 desks with portraits of the students were installed throughout the Zocalo, creating a morphology of memory.⁴⁹

On October 25, the newly formed Inter-University Assembly with over 80 Mexican schools called for a third day of National and international action, to take place on November 5, 2014. That day 115 schools held a national strike to protest the Ayotzinapa incident; thousands marched from the presidential residence of *Los Pinos* to the *Zócalo*. Once there, the chanted: "Out with Peña!" "Justice, Justice!" while banners were seen with the statements "State Crime!" and "We want them alive!"⁵⁰ Concurrent international protests: In New York, 80 people occupied the street in front of the Mexican consulate and lifted painted red hands and banners while chanting "teacher, brother, New York gives you a hand".⁵¹

On November 7, the parents of the 43 missing students met with Attorney General Jesús Murillo, who informed them that human remains of what could be the missing students were found in the town of Cocula, Guerrero.⁵² *La Jornada* reported that the following day there was another peaceful demonstration in the *Zócalo* called "Ayotzinapa lives! The State is dead".⁵³ This time, protestors began their march from the Attorney General's Office and headed for the *Zocalo*. At 21:55, a group of hooded individuals, jumped the metal fences that surround the National Palace and began to spray paint the main or Mariana door of the building. Subsequently, they tried to break down the door with sections of the steel fencing. Reporters on site noted that demonstrators started yelling "no violence", while the group at the Palace doors replied, "This is not violence, violence is murdering students". León Ramírez, a protestor at the scene reported to the newspaper that at 22:20 the rioters tried to set fire to the National Palace main door. Ten minutes later they launched a large firecracker through a Palace window shouting "What pacifism? What non-violence? Direct action and resistance". The mass of protestors then began shouting "Out with the infiltrator!" and upon the explosion of a second rocket, began to withdraw via Madero Street. According to the *Excelsior*, there were an estimated 15 vandals at the Palace doors, however, their actions managed to eclipse the peaceful mass demonstration: "... it became an act of vandalism that lasted around an hour, during which three attempts were made to set fire to the main door of the National Palace."⁵⁴

The hooded individuals launched rocks and firework rockets at the large wooden door (fig.3), managing to make a hole through which they then hurled "Molotov cocktails". This attack lasted until presidential guards arrived, causing rioters to flee. Met by Federal riot police, the fleeing rioters threw rocks at the police, engaging in a violent clash that lasted several minutes. In the end, 10 rioters were placed under custody while five local police officers were wounded along with four presidential guard officers and three civilians.⁵⁵ The rioters understood their symbolic actions against the State by vandalizing the National Palace's *representational space*. Following the attack, photographs spread on-line depicting tolerant State apparatuses: Police and soldiers stood by passively without engaging rioters. One photograph seems to show the authorities protecting the rioter responsible for setting the door on fire. The images generated varied reactions: Protest leaders denied any responsibility for the violence, arguing their protests were peaceful. Other outlets interpreted the incident at the National Palace's main door as an alleged State conspiracy: infiltrators, hired by the government to discredit the mass movement through violence. As if prompted, President Enrique Peña declared that "the Ayotzinapa case is a call for justice, for peace, and for unity, not for violence or confrontation. Justice cannot be sought while acting with violence".⁵⁶

The Ayotzinapa case triggered Mexican society mobilization and activism, making apparent a broken political system with little credibility. The *Zócalo* served as the *public spatial sphere* where dissatisfaction and citizen demands could be publicly voiced. The *Zócalo* became a *spatial nexus* that connected discontent in Mexico with the world at large.

Conclusion

This article demonstrates how various representative events of the first decades of the 21st Century transformed the *Zócalo* into a *public sphere* space of "good governance". Following Herrera's categories, examples were chosen that illustrate the *Zócalo's* socio-cultural *spatial production*. Earlier morphological transformations, such as the removal of Plaza gardens, along with the scale and flexibility of the *absolute* space, in combination with a new political tolerance, enabled a renewed positive use by the public sphere. The "March for Dignity" symbolized State aperture to engagement with belligerent groups such as the EZLN. The March's entry to the *Zócalo*, demonstrated a welcoming Mexican State to political counterweights into the symbolic heart of the nation. The *Zócalo*, as an *absolute, representative and symbolic space* acted as a space where Mexicans openly acknowledged and discussed their differences. The *Zócalo* became a space where diverse Mexicans sought to reestablish a social pact both with the country's government as well as with those who call themselves Mexican. Tunick's art project used the *Zócalo* to unify, if briefly, participants, Church, State and the world. Naked civic participation changed *spatial* perception of a flagless *Zócalo* and its *spatial public sphere* by allowing participants to feel vulnerable, but together, while engaging in something larger than themselves. Finally, the Ayotzinapa protests can be read as transforming the *Zócalo* into a *symbolic space* for the demands and aspirations not only of the missing students' parents but of Mexican society, and once again, much of the world: discourse focused on State democracy, justice for victims, and the debate over the legitimate use of State sanctioned violence. While the attack on the Mariana Door of the National Palace symbolized a potential break in the social contract, State inaction signified tolerance. The *Zócalo's* spatial lesson is that governments everywhere can foster "good governance" environments by promoting and building

spaces where *public sphere* users can engage in large-scale community strengthening activities through *spatial production* and the opportunity to peacefully vent socio-political discontent.



Fig.1: Zócalo circa 1948 (Miguel Aguirre Botello)



Fig.2: Subcomandante Marcos in the Zócalo (Enclavesur)



Fig.3 : Spencer Tunick, "Mexico City 4" (MUCA/UNAM).



Fig.4: National Palace's Mariana Door, (Mediobson).

¹ Lefebvre, Henri. *The Production of Space*. p.38, Blackwell Publishing.2011

² Herrera, Angélica. *La Construcción Social del Zócalo de la Ciudad de México*, p.85, UNAM 2009

³ Lefebvre, p.48-4

⁴ María Eugenia Valdés Vega, "Una nueva legitimidad en el Distrito Federal. Las elecciones de 1997".

⁵ Cuauhtémoc Cárdenas 1997-2000; Andrés Manuel López 2000-2006; Marcelo Ebrard, 2006-2012. Miguel Ángel Mancera, 2012-18.

⁶ Ángel Mundo López, , "Política de desarrollo social del gobierno del Distrito Federal (1997-2010)" , p.2-3

⁷ *Idem*.

⁸ As early as 1629, riots in the Viceregal Plaza Mayor destroyed buildings abutting onto the main plaza.

⁹ Carlos Monsiváis. "2001: <Nosotros somos la puerta>. El EZLN en la Ciudad de México", *Los ídolos a Nando*. p.313, Debate, 2011.

¹⁰ Sergio Tamayo and Xochitl Cruz Guzmán, p.122. "Imaginarios urbanos e ideologías: las formas simbólicas del EZLN en la Ciudad de México", *Subjetividad y ciudad*, UACM 2012,

¹¹ Monsiváis, p.313.

¹² Tamayo and Cruz Guzmán, p.123.

¹³ *Op.Cit.* Pg.125

¹⁴ Juan Manuel Venegas, "Fox invita a Marcos a los Pinos", *La Jornada*, 10/03/2001.

¹⁵ *Idem*.

¹⁶ Tamayo and Cruz Guzmán, p.126.

¹⁷ *Idem*.

¹⁸ *Idem*.

¹⁹ Monsiváis, p. 313.

²⁰ "Marcha del Color de la Tierra: Palabras del EZLN en el Zócalo de la Ciudad de México" at:

<http://desinformemonos.org.mx/2013/12/marcha-del-color-de-la-tierra-palabras-del-ezln-en-el-zocalo-de-la-ciudad-de-mexico/print/>

²¹ Rosas-Vargas, Rocío. Exclusion, Marginalization and Development of Indigenous Villages. p.694, DOAJ, January 2007,

-
- ²² <http://spencertunick.com/>
- ²³ José Gaspar Birlanga Trigueros and Begoña Sendino Echeandia, pg. 1 "Spencer Tunick. La fotografía del Alma."
- ²⁴ Merry Macmasters, "Designa Tunick al Zócalo para su instalación en el DF", *La Jornada*, sección Cultura, 30 de abril de 2007.
- ²⁵ Spencer Tunick en México en: <http://spencertunickmexico.unam.mx>.
- ²⁶ *Idem*.
- ²⁷ Edgar González Ruiz, "Desnudo en el Zócalo Spencer Tunick: Desnudos ante Dios", <http://contra-la-derecha.blogspot.com/2007/05/desnudo-en-el-zcalo.html>, 7/5/2007.
- ²⁸ *Idem*.
- ²⁹ *Idem*.
- ³⁰ "Los ángulos del desnudo masivo en el DF", *El Universal TV*, 02/08/2007.
- ³¹ Picture by Picture (*foto por foto*) refers to the political chant "*voto por voto*", a demand by the PRD
- ³² *Idem*.
- ³³ *Idem*.
- ³⁴ <http://www.jornada.unam.mx/2007/05/07/index.php?section=cultura&article=a03n1cul>
- ³⁵ Herrera Loyo op. cit., p.135
- ³⁶ *Idem*.
- ³⁷ Rodríguez, Ana Monica and Palapa, Fabiola, "Foto por foto, desnudo por desnudo", *La Jornada*, 7/5/2007. art. cit
- ³⁸ *Idem*.
- ³⁹ *Idem*.
- ⁴⁰ *Idem*.
- ⁴¹ Denisse Gutiérrez, Psychologist (Ph.D.) Instituto Mexicano de la Pareja
- ⁴² Rivera is the Archbishop of Mexico; in Spanish this chant rhymes.
- ⁴³ Documental *Ayotzinapa. La historia de los 43*, at: https://www.youtube.com/watch?v=gA-ruJz_m0A.
- ⁴⁴ Redacción Animal Político, "Normalistas cumplen dos meses desaparecidos: cronología del caso Ayotzinapa", 26/11/2014 art. cit.
- ⁴⁵ *Idem*.
- ⁴⁶ *Idem*.
- ⁴⁷ Redacción regeneración, "Miles de manifestantes exigen la aparición de los 43 normalistas #AyotzinapaSomosTodos", en: regeneracion.mx/causas-justas/estudiantes-de-ayotzinapa
- ⁴⁸ Mariana González Saravia Peña, "Memoria de los normalistas rebeldes", *El Presente del Pasado*, en: <http://elpresentedelpasado.com/2014/11/05/memoria-de-los-normalistas-rebeldes>
- ⁴⁹ *Idem*.
- ⁵⁰ Por la Redacción, "Miles se unieron por Ayotzinapa en el dolor y también en la esperanza", *La Jornada*, Sección Política, 5/11/2014.
- ⁵¹ Red Política, "Acción Global por Ayotzinapa en NY termina en detenciones", en <http://www.redpolitica.mx/nacion/accion-global-por-ayotzinapa-en-ny-termina-en-detenciones>.
- ⁵² Redacción Animal Político, "Normalistas cumplen dos meses desaparecidos: cronología del caso Ayotzinapa", 26/11/2014, art. cit.
- ⁵³ Fernando Camacho, "Marcha por Ayotzinapa, manchada por disturbios frente a Palacio Nacional", *La Jornada*, Sección Política, 8/11/2014.
- ⁵⁴ Lilian Hernández, "Vándalos queman puerta de Palacio Nacional", *Excélsior*, 9/11/2014.
- ⁵⁵ Hernández, "Vándalos queman puerta de...", art. cit. *Excélsior*, 9/11/2014
- ⁵⁶ Arsitegui Noticias, <http://aristequinoticias.com/0911/lomasdestacado/violencia-y-vandalismo-inducidos/>

The Fragmentation of Monumental Buildings. From a Single Building to an Urban Fabric.

Pedro Vasco de Melo Martins¹

¹Faculty of Architecture of the Lisbon University, Lisbon, Portugal

ABSTRACT: The city is a living entity, dynamic, and in permanent construction. In the constantly changing human landscape dominated by the common fabric, prone to quick transformations, monumental buildings, given their high cultural value as well as robust construction, tend to show a greater resistance, remaining relatively stable through hundreds or even thousands of years. Yet, in periods of crisis or quick cultural change, even the resilient monumental buildings can suddenly lose their function or collective cultural value, undergoing a complete transformation of their unique nature as they are appropriated and transformed by the common urban fabric, in a process identified as fragmentation.

From the ancient monumental Roman structures occupied in the Middle Ages to the transformation of the Kowloon Fort in Hong Kong in the second half of the 20th century, the communication proposes, through an analysis of several case studies, a reflection of how the subversive, ad-hoc and informal nature of fragmentation makes it one of the richest processes of urban fabric formation. In this sense, the knowledge of this process can be an important architectural design tool, contributing to the enrichment of the erudite architectural discourse, as well as, helping to understand the shape of the contemporary city as a result of a sequence of events that can be identified, interpreted, classified and explained.

KEYWORDS: Fragmentation, Monumental Buildings, Urban Fabric, Plot Structure, Transformation.

INTRODUCTION

The urban fabric is composed by a great diversity of spaces, as well as built structures. These, in turn, are characterized by a great diversity of forms and functions. This heterogeneous built landscape is mostly populated by two fundamental groups of buildings: the common buildings and the singular or monumental buildings. The common buildings, usually of residential nature, constitute the great majority of the urban fabric. Generally anonymous, built on more fragile materials and following vernacular designs, these buildings in the "long time" of urban evolution are constantly altered, augmented, destroyed and rebuilt, sometimes in short time and most often without leaving memory or traces. Monumental or singular buildings, on the other hand, are those whose form or function makes them stand out of the common urban fabric. These buildings tend to leave a lasting presence in the urban fabric, sometimes remaining virtually unaltered through hundreds of years. We can associate this concept with buildings of a public nature and collective value, however for the purposes of our argument, we should consider as monumental buildings architectural objects with an erudite form, critically thought and projected. Buildings whose genesis originated from the formalization of a concept or an idea, and which materialize in its form the paradigms or utopias of the cultures responsible for their construction, such as palaces, temples, convents, theaters, parliamentary halls, municipal chambers, hospitals, etc. These buildings are the result of richer and more complex construction programs, both their design and in the quality of their constructive structure, as well as in their symbolic and cultural value.

1.0 THE FRAGMENTATION OF MONUMENTAL BUILDINGS

1.1. The process of "fragmentation"

The constructive and spatial quality as well as the symbolic value given to monumental buildings usually leads to them being preserved, successively reinterpreted and reused by different cultures over time, in deep contrast to the anonymous common buildings whose continuous construction and destruction is a part of the daily urban rhythm. However monumental buildings can also undergo a rapid process of erosion and transformation, particularly when they lose their main function or cultural meaning resulting in an abandonment and ruin of the building, that is subsequently appropriated and transformed by the common urban fabric through the overlapping of new structures and the adaptation to different forms and new uses. This type of transformations, and their relevance in the production of urban fabric were particularly explored by Italian authors such as Caniggia (Pozo 1997, 49) or Gian Luigi Maffei and Mattia Maffei (Mattei Maffei Luigi Maffei 2011, 51) as they sought to understand the formation of medieval fabric over pre-existing Roman structures. One of the fundamental consequences of this transformation is the fragmentation of the monumental building, dividing what was once a single, cohesive unit into several smaller entities that from then on will follow their own independent evolutions and transformations. The design of these new smaller entities is not only conditioned by the spatial traces left by the monumental buildings they now occupy, but often takes advantage of these features to construct new compositions created essentially from the surviving architectural remains. One of the most important components of these initial occupations is the plot structure as, once settled, plot

structures are particularly resistant to transformation, and being defined at first directly by the remains of the monumental building the plots will tend to preserve in their morphology traces from the layout of the primitive building. In contrast, architectural fragments or structural remains, that although initially preserved and reused by the first occupations, as these are successively replaced by newer buildings, these traces will be gradually erased. In this process, the old monumental building tends to gradually dissolve into the various small occupations of its space, becoming an integral part of the common fabric. Thus, the original shape of the monumental building is in part preserved by the buildings initially built over its structures, even through the successive changes that characterize the urban evolution. All types of remains persist from small disperse architectural pieces to large spaces, complete or retransmitted by the street alignments and by the plots boundaries. Often the old interior circulation corridors turn into streets, the courtyards or cloisters in squares, and the interior divisions in separate buildings with an autonomous nature.

2.0 CASE STUDIES

2.1. The fragmentation of ancient roman monumental buildings

Known as the eternal city, Rome is the paradigmatic historic city. In it we can find some of the most notable examples of monumental architecture, both past and present, forming an eclectic mixture of current and past buildings. Underneath all this diversity we can also find significant traces of the ancient city past, as the city medieval core was initially set over the remains of several ancient roman monumental buildings. The well documented evolution of the city of Rome (with cartography as old as the roman *Forma Urbis*), and the available knowledge of roman architectural typologies makes these examples of fragmentation particularly relevant for their good documentation and formal clarity. Rome was probably formed in the beginning of the iron age after several villages existing in the surrounding hills coalesced in to a single civil entity. This merger was later materialized through the construction of the Servian wall in the IV century BC, securing the ancient city core roughly centered on the Colosseum valley. The city avoided the lower plains around the Tiber that were at the time occupied by marshes and frequently subjected to flooding. The construction of drainage infrastructures in the largest of these lower plains (similar the construction of the Cloaca Maxima in the roman forum) significantly improved its usability, allowing it to be more consistently occupied, at first as the main staging field for the roman army, thus giving it the name of *Campus Martialis* (Field of Mars) after the god of war.

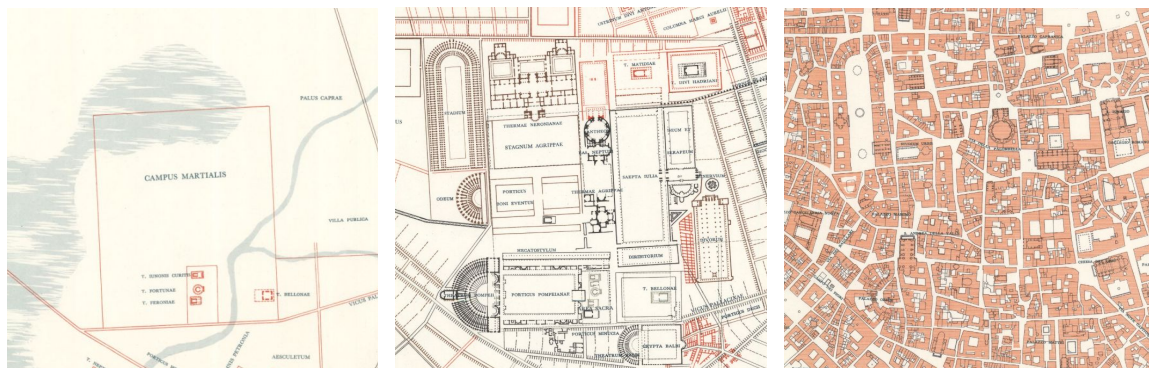


Figure 1: Evolution of Rome and the Campus Martialis. From left to right: 1th century B.C., 4th century A.D., 16th century A.D. (Muratori, 1963)

In the period between the end of the roman republic and the beginning of the roman empire as the city became the economic and military center of the Mediterranean world, rulers or even wealthy private citizens sought change Rome and transform it a cultural and architectonic reference that would rival cities like Athens or Alexandria. However, the high density of occupation made any large-scale interventions particularly difficult even for the first absolute rulers such as Caesar or Augustus, making the relatively free and open space of the *Campus Martialis* an ideal place to materialize monumental architectural visions. Thus, the area was soon occupied with large public buildings, such as the Theater and Porticus of Pompey, the Pantheon and the Baths of Agrippa, the Baths of Nero, the Stadium and Odeon of Domitian, the Theater of Balbus, and the Temple of the Divine Hadrian among many others. With the collapse of the empire in the early 5th century the city contracted from more than one million inhabitants to only a few thousand. From the biggest city in the western world Rome became during the late antiquity a collection of rural buildings dispersed in the once monumental landscape. The urban decay led to the abandonment and ruin of the numerous aqueducts, with only the Aqua Virgo subsiding, probably as its path was mostly underground. This aqueduct, built during the reign of Augustus by Agrippa to supply his baths in the *Campus Martialis*, became one of the only secure sources of potable water for the population of Rome, conditioning new growth of the city during the late middle ages and renaissance to the area around the *Campus Martialis*. Thus, the inhabitants of the city concentrated themselves on an area that was fully occupied by the remains of the abandoned monumental buildings. (Fig 1).

Given the lack of resources to adequately clear the area, the new constructions used the ruins as much as possible for support. New houses occupied the spaces between the standing columns of ancient temples, under ruined arches, over the seating areas of theaters or even inside the vaults and domes of bathhouses (Fig. 2). These initial occupations contributed to the preservation of the roman structures, and only at much later dates were many of these completely demolished, mostly from the 16th century on. Some examples of this can be found in the Arch of Portogallo, demolished in the 1662 by Pope Alexander VII, the Septizodium demolished in late 16th century, the remains of temple of Nerva demolished in early 17th century, the remains of the Temple of Serapis on the Quirinal hill also demolished in the 17th century, among many others.

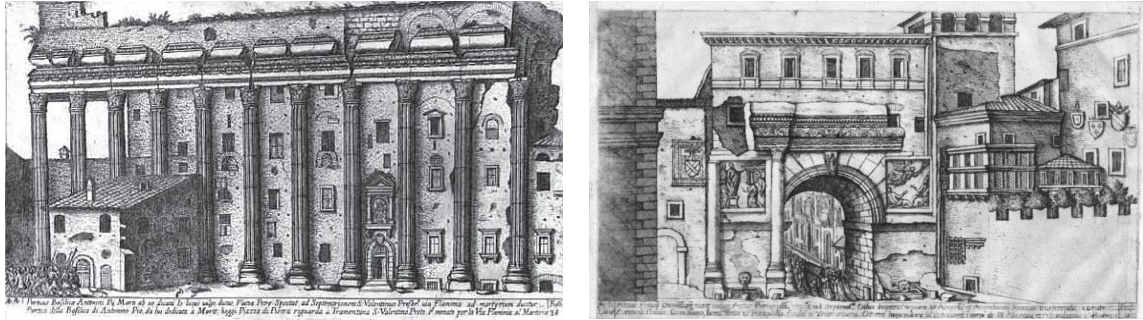


Figure 2: Remains of the Temple of the Divine Hadrian, the Arch of Portogallo (Aloisio Giovannoli, 1615) and the Baths of Agrippa (unknown author).

Although most of the visible roman remains in the area of the *Campus Martialis* have been all but erased, the plot structure and the urban fabric have preserved to a significant degree traces of the original roman buildings, transmitted over the walls of countless iterations of common buildings. Rome thus stands out as perfect example of not only how this process has the potential to influence large areas of the city, but also how traces of ancient buildings can sometimes survive through hundreds or thousands of years. This is particularly clear in the cases of roman theaters and amphitheaters as these buildings, with large support structures for the seating areas, are more resilient the destruction of time as well as the circular nature of their designs making them more evident in the urban layout, while in contrast ancient monumental buildings with an orthogonal configuration tend to be more easily hidden by the common urban fabric.

In this sense the remains of the theater of Pompey and the stadium Domitiani (now the Piazza Navona) prove a some of the most compelling examples on the resilience of the monumental buildings traces after the process of fragmentation, as the design of the ancient buildings is preserved in an exceptional manner in the contemporary urban fabric (Fig. 3).

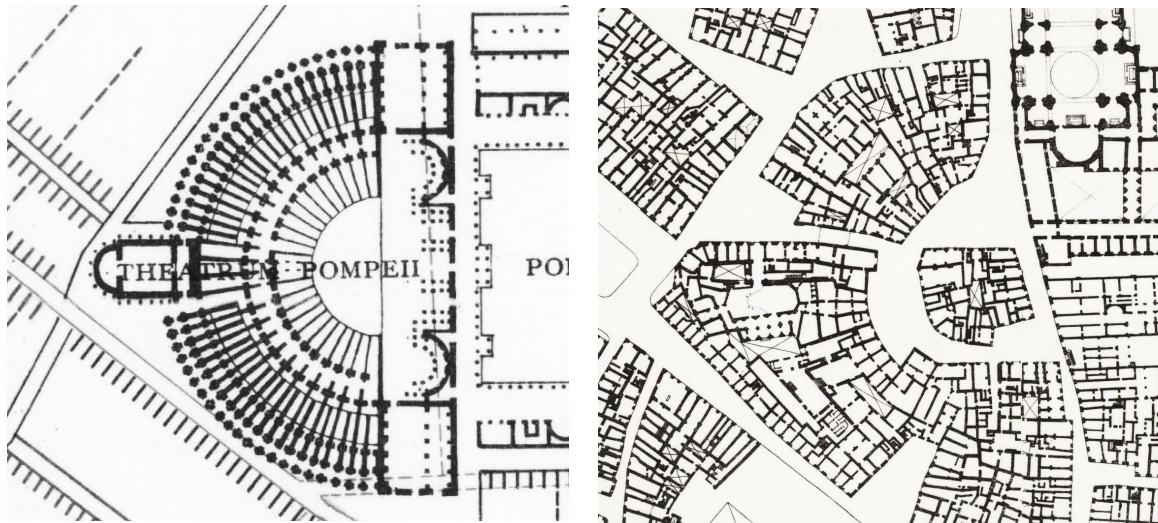


Figure 3: Comparison between the Theater of Pompey and the Stadium Domitiani and the contemporary urban fabric. (Muratori, 1963)

2.2. The fragmentation of Lisbon's palaces and convents

Often associated with roman buildings, the fragmentation of monumental buildings can occur in any city or any period in history. A good example of the frequency with which this process can happen can be found in the city of Lisbon and the transformation suffered by some of the city's palaces and monasteries. After the constant territorial expansion of the Reconquista during the middle ages, Portugal, with its mainland territory landlocked by the kingdom of Castile and Leon turned its attention to the creation of an overseas empire. Thus, the Lisbon became one of the largest world cities, head of an empire that stretched from north Africa to Brazil, Angola, Mozambique, Ormuz, India, Indonesia, and Japan. With the pretension of making a "new Rome" an ambitious construction program was initiated to reflect this new position of power. This process, focused mainly in the construction of monasteries, churches and palaces, was carried out inconsistently in the following centuries by different kings, with moments of stagnation or of fast construction, giving it an haphazard and uncoordinated nature.

The process would however abruptly stop after the long period of instability that started with the earthquake of 1755, followed by the French invasions of 1807 and 1811 and the civil war from 1828 to 1834. The colonial world that had supplied the wealth behind the construction program suddenly collapsed and the city dramatically shifted from the past colonial world to the new industrial paradigm. Instead of receiving expensive commodities like spices and gold from the overseas, exporting them to Europe, Lisbon became an industrial powerhouse that supplied the country and the colonies with manufactured goods. As the aristocracy and clergy lost their traditional revenue sources, some palaces and monasteries built and maintained in the previous centuries were either adapted to other functions by the emerging republican state, sold to the increasingly powerful bourgeoisie factory owners or simply abandoned to ruin and taken by influx of working class squatters that flooded the city in search of work. While some buildings are transformed in hospitals, military barracks or factories, others, like the Val dos Reis palace or the Bernardas convent (Fig. 4) are converted in to lower working-class residences.



Figure 4: Courtyard of the Bernardas Convent transformed into lower class residences (Almeida, 2000)

These working-class residences adapt the old buildings by dividing the built areas in to autonomous units while at the same time preserving the open areas virtually unchanged, namely courtyards in palaces and cloisters in convents or monasteries. These will function as the main circulation and socialization spaces, generating a small enclave, a semi-private collective courtyard accessible only through a single passage almost always the original main entrance of the monumental building, giving these adaptations the common toponymical designation of "patios" (courtyards). As for the built areas, the once spacious halls are separated from each other and transformed in to individual residential spaces, adding smaller rooms that subdivide the space. These will, with time, have autonomous evolutions, eventually demolishing the original walls and replacing them with fully autonomous buildings.



Figure 5: Remains of the Coculim palace in the early XX century (Unknown Author)

One of the most significant cases of fragmentation in Lisbon can be found in the various palaces built along the old Islamic Wall. Of these the ancient Counts of Coculim palace, destroyed by the 1755 earthquake and tsunami, stands out, for its size and for the fragments that still survive, such as the large stone masonry corner bearing the coat of arms of the Mascarenhas family, as well as the large 17th century portal. The lack of detailed building plans prevents us from understanding impacted the interior spaces, however a 16th century painting as well as a photography from the 20th century allow us to reconstruct the impact of the fragmentation process on the building façade. Sometimes overlooked, the façade is a fundamental part of any building, and in the case of urban palaces this element is used as a statement of power, with a rigorous geometric composition frequently more elaborate than the building plan, that is usually conditioned by irregular pre-existing plots. In these cases, the process of building fragmentation is particularly evident in the study of the façade, where the former geometric order is contrasted by the irregularity of the newer constructions.

The Coculim palace facade presents a rigorous geometric composition characteristic of the period, with 15 large identical balconies in the first two floors, this composition was only interrupted in the centre by the large and portal in rusticated stonework. In the beginning of the 20th century, as a result of the earthquake, the top floor has disappeared as well as large part of the central façade area, replaced by small buildings (Fig. 5). The palace fragmentation assumes a more expressive character in its facade; being particularly evident the contrast between the erudite geometric order that existed before the earthquake and the irregularity caused by its fragmentation (Fig. 6). This building not only clearly illustrates how the original building is divided and slowly transformed piece by piece, but also how the most iconic elements tend to survive longer (In this case the entrance portal and the stone masonry corner bearing the coat of arms). This example also demonstrates how this process should not be considered only in the context of roman or medieval buildings, occurring in much more diverse, and sometimes unexpected settings.



Figure 6: Evolution of the Coculim palace from the 16th century to the 20th century (Pedro Vasco Martins)

2.3 The fragmentation of Kowloon fort

Although this process is often associated with ancient buildings, transforming gradually over long periods of time we can find fragmentation examples occurring in recent periods, of which the Kowloon walled city in Hong Kong is one of the most emblematic, having occurred as soon as the second half of the twentieth century. Kowloon began as a small military outpost built in the early Sung Dynasty (960 – 1297) to house imperial soldiers controlling the salt fields in the surrounding area. After losing the First Opium War (1839-1842), the Qing government signed the Treaty of Nanjing, in which Hong Kong Island was ceded to Britain. With the British occupation of Hong Kong island, the once small military outpost just across the harbour became a strategic military station. Therefore, the Qing Dynasty decided to fortify the small outpost adding a formidable granite stone wall (Fig. 7) that formed an irregular rectangle with 130x230m. The wall enclosed an area of approximately 14.125 m² (6 1/2 acres), with 4 gateways, 6 watchtowers and several interior support buildings, from offices to housings and warehouses. Construction was completed in 1847, serving both as an administrative hub to govern the surrounding areas and also as a centre for coastal defence. By 1898 the garrison numbered 500 soldiers and officials, as well as 200 civilians, generating a bustling market town along the road that connected the fort to the waterfront. The ceding of the Kowloon peninsula to the British in 1860, as well as the instability in mainland China during the last years of the 19th century gradually created an environment of general lawlessness filling the area with brothels, opium parlours and gambling dens.

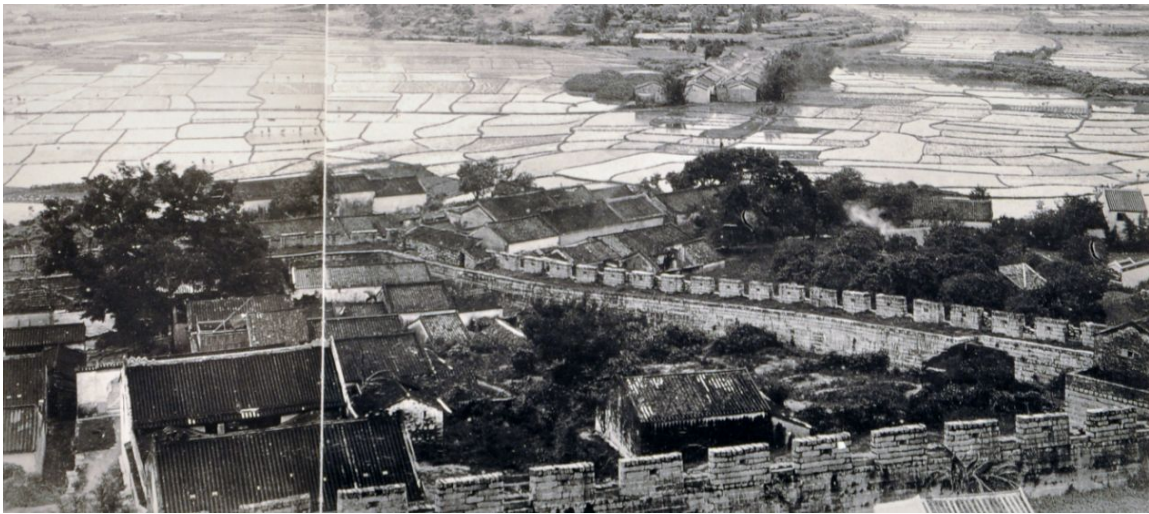


Figure 7: The northern corner of the Kowloon Fort, and surrounding landscape in 1856 (Girard, Lambot, 1993)

In 1898 the British began negotiations to secure more territory in the mainland north of Hong Kong. Chinese Qing Dynasty authorities however were particularly reluctant in abandoning the Kowloon fort. Thus, to overcome this stalemate, British and Chinese officials agreed on the lease of all the territory in the Kowloon peninsula to British jurisdiction except for the Fort, that remained under the sovereignty of the Qing Dynasty. The unusual agreement would not last long as British troops took the fort in 1899, finding it had been hastily abandoned by the local garrison. Seeking to avoid provocations to the Chinese officials, the British refrained from enforcing their control, the Chinese on the other hand also didn't make any attempts to reinstate their control, leaving the Fort in an ambiguous apparent state of anarchy, out of British jurisdiction, and out of reach of Chinese authorities. Over time most of the buildings inside the fort fell in to a state of ruin while the surrounding fields were gradually occupied by squatters. In the 1933 plans were drawn to demolish the houses and turn the area in a tourist attraction under protests from Chinese authorities. By 1940 almost every building inside the fort had been demolished with the exception of the *yamen*. The planned tourist attraction would however never materialize as the Japanese occupation of Hong Kong interrupted the process, demolishing the remains of the granite wall and using the stone to extend the Kai Tak airport. By 1947 the area was flooded with 2000 refugees, while at the same time China flexed its authority announcing the intention to reclaim its rights and establish civil courts in the fort area. After the British tried to evict the squatters riots broke spreading as far as Canton and Shanghai, leaving the local Government with no options but to adopt a "hands-off" approach in an effort to prevent the further deterioration of Anglo-Chinese relations. The fort thus quickly fell again during the 1950's and 1950's in to a state of general lawlessness filled with brothels, gambling parlours and drug dens dominated by Triad societies. During the second half of the 20th century the initial improvised houses were gradually replaced by multi-storied buildings creating the most densely populated place ever to exist on earth. According to the 1971 census there were 10.004 inhabitants in 2185 dwellings, although the unofficial number was probably much higher, as in the late 1980's there were about 35.000 residents. Finally, in 1987 British and Chinese authorities agreed in the need to demolish the site in the interest of the local population. Demolition began in 1993 after a hard eviction process, and in 1995 the Kowloon Walled City Park opened its gates.

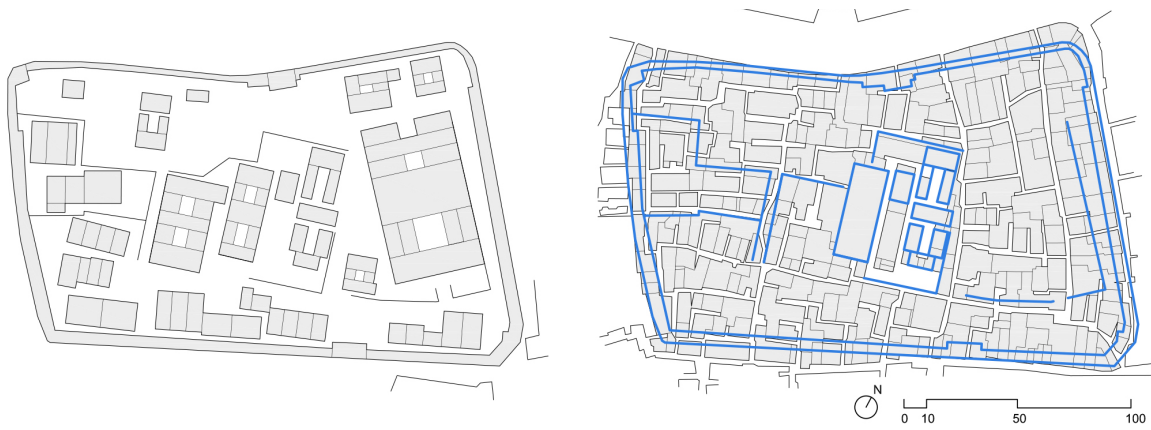


Figure 8: Comparison between the plan of the fort at the end of the 19th century and at the end of the 20th century, highlighting the common persisting traces (adapted from Lai, 2016 and Girard, Lambot, 1993)

Although we might argue that from its inception the Kowloon fort, with its diverse ensemble of buildings lacked the formal unity that characterizes most monumental structures, the evolution of this site follows many of the main principles highlighted in the previous examples. The comparison between the plan of the fort at the end of the 18th century with the site plan in the late 1980s rather than a complete destruction clearly shows how the urban fabric inside Kowloon not only respected the original walled precinct but also flowed the general orientations set by the ancient buildings. The inner retaining walls also continued to serve their purpose and were thus preserved helping to define the new urban fabric. These structures helped to initially condition the construction of the first improvised squatter houses, that would latter give way to multi-storied concrete buildings. Similarly, the *Yamen* building originally saved from destruction in the 1940s acquired a particular cultural or symbolic value as it was the last remain of the original construction, being continuously preserved even under the high demographic pressure to use every available space for the construction of new houses (Fig. 8). The example of Kowloon is also particularly relevant as it clearly shows the contrast between the resistance of the plot structure and the relative volatility of the individual buildings. The initial shanty town plot structure was constituted by small plots and small wooden buildings, that with the gradual densification of the area were quickly replaced by high rise concrete buildings. The plot structure however remained the same, creating an unusual group of needle like buildings, some as high as 14 floors in very small areas (Fig 9), that in virtue of their height and small base leaned heavily on each other, to such a degree that in one were to crumble the whole complex could collapse.



Figure 9: Aerial view of Kowloon highlighting the almost monolithic nature that urban fabric had. (Girard, Lambot, 1993)

CONCLUSION

The city is a living entity, dynamic, and in permanent construction. In the constantly changing human landscape dominated by the common fabric, prone to quick transformations, monumental buildings, given their high cultural value as well as robust construction, tend to show a greater resistance, remaining relatively stable through out hundreds or even thousands of years. Yet, in the process of fragmentation, that tends to occur in periods of crisis or quick cultural change, even the resilient monumental buildings can suddenly lose their function or their collective and cultural value, undergoing a complete transformation of their unique nature, losing unity and breaking up into a sum of units that, from that moment will have their own independent evolutions. What was once a monumental building will transform in to a part of the common urban fabric. This new urban fabric will respect some aspects of the previous monumental buildings, namely structural elements such as exterior walls or functional and symbolic elements, such as entrances or temples. These fragments of the monumental buildings, absorbed by the common fabric, will be constantly recycled and reused, and in this way preserved, retransmitted through countless iterations of buildings. Thus, rather than consisting in the apparent complete destruction of the monumental buildings, this process implies to a significant degree their preservation, the resulting new urban fabric shows a great richness, as it encapsulates both the new and the old, the past and the present, serving as a window in to the memory and the identity of the city. The fragmentation of monumental buildings is thus one of the richest and most complex processes of urban fabric formation, although it appears to occur almost naturally in particular circumstances of neglect or ruin, being often associated with the transformation of roman monumental buildings, the process of fragmentation is more widespread and common, occurring in some instances in the 20th century. In its genesis the process of fragmentation has a subversive, ad-hoc and informal nature of deconstructing the established order and reinterpreting it, however the knowledge of this type of processes can be an important architectural design tool, contributing for the enrichment of the contemporary erudite architectural discourse, as well as, assuming a role in the preservation of an urban memory and identity. Finally, the comprehension of these processes can also prove useful in helping to understand the shape of the contemporary city as a result of sequence of events that can be identified, interpreted, classified and explained.

ACKNOWLEDGEMENTS

The author would like to gratefully acknowledge the assistance provided by the FormaUrbisLab research group as well as the support given by the Research Centre for Architecture, Urbanism and Design (CIAUD), the Lisbon University and the Foundation of Science and Technology (FCT).

REFERENCES

- Almeida, J. 2000. *Convento das Bernardas – Um projecto de Reabilitação/Reconversão* in architecti, Lisboa.
- Aymonino, C. 1977. *Lo Studio dei fenomeni urbani*. Roma: Officina.
- Bacon, E. 1974. *Design of Cities: Revised Edition*. New York: Penguin Books.
- Borie, A., Micheloni, P., Pinon, Pierre. 1978. *Forme et Déformation des objets architecturaux et urbains*. Éditions Parenthèses: Paris.
- Caniggia, G., Maffei, G.L. 1979. *Composizione architettonica e tipologia edilizia*, 1. Lettura dell'edilizia di base. Venezia.
- Dias Coelho, C. (coord). 2013. *Os Elementos Urbanos. Cadernos de Morfologia Urbana, Estudos da Cidade Portuguesa n.º 1*. Lisboa: Argumentum.
- Dias Coelho, C. (coord). 2014. *O Tempo e a Forma. Cadernos de Morfologia Urbana, Estudos da Cidade Portuguesa n.º 2*. Lisboa: Argumentum.
- Panerai, P., Depaule, J. C., Demorgon, M. 1999 *Analyse Urbaine*. Paris: Éditions Parenthèses.
- Aymonino, C. 1977. *Lo Studio dei fenomeni urbani*. Roma: Officina.
- Girard, G., Lambot, I. 1993. *City of Darknes: Life In Kowloon Walled City*. Hong Kong: Watermark Publications.
- Kostof, S. (1999) *The City Assembled: The Elements of Urban Form Through History*. London: Thames and Hudson
- Kostof, S. (1999) *The City Shaped: Urban Patterns and Meanings Through History*. London: Thames and Hudson
- Mattei Maffei, G. Luigi Maffei. 2011. *Lettura dell'edilizia speciale*. Firenze: Alinea.
- Muratori, S. 1960. *Studi per una operante storia urbana di Venezia*. Roma: IPS.
- Muratori, S. 1963. *Studi per una operante storia urbana di Roma*. Roma: Consiglio nazionale delle ricerche,
- Pozo, A. (ed.) 1997. *Análisis Urbano. Textos: Gianfranco Caniggia, Carlo Aymonino, Massimo Scolari*. Sevilha: IUCC, Escuela Técnica Superior de Arquitectura, Universidad de Sevilha.
- Conzen, M. R. G. 1960. *Alnwick, Northumberland: a study in Town-plan Analysis*. London: Institute of British Geographers.
- Lavedan, P. 1926. *Qu'est-ce que l'urbanisme? Introduction à l'histoire de l'urbanisme*. Paris: Laurens.
- Lai, Lawrence W. C. 2016. *Un-forgetting walls by lines on maps: A case study on property rights, cadastral mapping, and the landscape of the Kowloon Walled City* in Land Use Policy 57:94-102.
- Rogers, E. N. 1981. *Gli elementi del fenomeno architettonico*. Napoli: Guida editori.