

## 6 Learning architecture by drawing a building: The study trip and the travel dossier

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### Introduction

Le Corbusier's Journey to the East in 1911 marked a crucial period during which the Swiss architect learned how to look at Architecture. Throughout his trip, he wrote insightful letters to describe what he saw, annotated with the most beautiful, more or less detailed but always analytical drawings. In the digital age, books and screens are often the frame within which images of the buildings we admire are presented. Architecture is camouflaged by the traditional conventions of the architectural representation and, often, photographs of architecture become architecture itself. To mitigate such perversion the Architecture Study Trip becomes necessary –visiting the architectural spaces has the power to bring us back to the incontestable fact of their importance. To maximise opportunities and embed experiences, a Study Trip should comprise three stages:

- 1) Preparation of the Travel Dossier and generation of expectations, during which buildings to be visited are identified and relevant documents compiled.
- 2) Confrontation of architectural conventions with the constructed work, permitting the corroboration –or not- of our expectations.
- 3) Subsequent analysis of the buildings visited during the Study Trip, using the Travel Dossier as a support for personal thinking, or to review our perceptions of the architects studied.

The constructed building becomes an essential reference point to understand its architecture; while the preparation of the Travel Dossier becomes the ideal pretext to contemplate and clarify the architectural aspirations of the authors, to be eventually verified in their real dimension. Together with our photographs, drawings and annotations, the Travel Dossier forms an archive of spatial experiences and a source of inspiration, developing our capacity to envisage how the space we are designing will eventually appear, how to foresee the transcendence of our architectural gestures and our decisions in the creation of the space –a mental archive to refer during the design process.

### Le Corbusier and the study trip par excellence

At age 17, Le Corbusier started to travel as a student. His book *Journey to the East* includes very beautiful drawings<sup>1</sup> of the Swiss architect's journey from Berlin to Constantinople –current Istanbul- in 1911, when he was only 24 years old. It was a foundational journey when Charles-Édouard Jeanneret learned how to look at

Architecture. During his trip, he wrote the most descriptive letters to explain –mostly to his family and lecturers- what he saw, and illustrated those letters with more or less detailed but always analytical drawings.

His stay in Berlin was funded by a scholarship that his teacher, Charles L'Eplattenier, helped him to obtain on the condition that he prepares a report on the teaching of Applied Arts in that country.<sup>2</sup> At this time, incidentally, Le Corbusier was working at Peter Behrens' office as a draftsman. After completing his assignment, on May 21 1911, the young Jeanneret left Germany with his good friend August Klipstein for his trip to Prague, Vienna, the Danube, the Balkans, Turkey, Greece and Italy, returning to his hometown, La Chaux-de-Fonds, later that year on November 1.

This was a crucial moment in Le Corbusier's long and largely self-taught formation period. It was decisive in his maturation as a person, to abandon a certainly medievalist education, to discover the values of classicism –first in Germany, later in Athens- and to establish a series of values and aesthetic preferences that later on Le Corbusier would incorporate to his idea of architecture and urbanism, as the use of the white and straight lines of marbles, the geometrical tracings of vertical columns and entablatures parallel to the horizon line of the sea, or the importance of light.<sup>3</sup>

The journey to the East had another crucial impact on Charles-Édouard Jeanneret: a gradual change to his way of drawing which culminated in the sketchy, quick and sometimes rather sloppy drawings that he produced in Italy towards the end of his trip and diverging from his earlier, purely figurative reproductions.<sup>4</sup>

From a purely graphic perspective, there is a great difference between Le Corbusier's way of drawing in 1907 and that which he develops in his 1911 trip.<sup>5</sup> This difference is glaring when comparing his meticulous drawings made in his first trip to Italy in 1907 and his famous drawing of the Acropolis. The drawings from Italy are consistent with those of many artists working at the beginning of the century who focussed on ornamental aspects of architecture. However, the sketches of his *Journey to the East* are representative of an architect who strives to capture the most permanent values of architecture.

This new way of drawing is usually attributed to his desire to capture the transience of the moment, imposed by the brevity of the long itinerary, and also the ease offered by his new camera as an alternative means of capturing the details of the buildings that interested him. This can also be ascribed to the fact that drawing in his small pocket notebooks resulted in schematic, almost stenographic, sketches of what he was narrating in writing –a true revolution in the context of architectural drawing. Very few architects at the beginning of the century achieved this capacity of synthesis.

Be that as it may, his drawings acquired a distinctive character, adapted to the requirements of what was meant to be captured. This is evident in the study of decorative details, reproducing faithfully the models—as would be the style of the drawings of his first trip to Italy, soon abandoned. On another hand, the search for architectural solutions applicable to his work, or the design of graphic schemes in order to internalize and memorize the buildings visited and their essential values, while avoiding a figurative mimesis—as in the sketches of his trip to the East.

### Architecture as the Representation of Construction

The German philosopher Schelling<sup>6</sup> said that "architecture is the representation of construction". Among all definitions of architecture, this is probably the most appropriate: architecture as the representation of construction in its two broad and elevated meanings.

Firstly, representation as the artistic discipline of drawing the different parts composing the architectural object, and the way those parts are related to each other. Given this, the representation of construction in order to embed this principle in the consciousness of the architect and then restore it in the built work through drawings.

Secondly, representation as the characterized dramatization — as in a theatre performance— where what is considered interesting is shown and the way it is presented and perceived is meticulously scrutinized and defined. Such representation is not an immediate translation, is not an expression, not an emphasis, but a filter.

In previous times, but especially now, in the digital age, books and screens are often the frame where images of the buildings we admire are presented. Architecture, therefore, is camouflaged by the traditional conventions of the architectural representation. Floor plans, sections, elevations and, especially, photographs of architecture become architecture itself.

Scale cannot be apprehended in photographs; light and its nuances cannot be learned but through the movement in the spaces under light and shade; proportions; textures. To compensate such perversion —because architecture is space, and the representation of architecture shown in books and screens is two-dimensional— the Architecture Study Trip becomes necessary.



Fig. 1 *The Taj Mahal, Agra, India, by the Author (2017).*

It comes to my mind the deep impression that produced on me the indescribable, intangible and impossible-to-photograph serene beauty of the Taj Mahal in India (**Fig. 1**); or the ultimate significance of the masterplan for the city of Chandigarh and, particularly, the scale of the thousand-timesstudied Assembly Palace in its Capitol. I did not understand what Le Corbusier planned in Chandigarh until I confronted the city. In photographs, the Assembly always generated in me the feeling of being a much more overwhelming and colonizing building. However, perhaps because of the immensity of the front esplanade, in reality the Assembly is much smaller than anticipated, especially its iconic inverted umbrella (**Figs. 2 and 3**).



Fig. 2 The Assembly Palace, Chandigarh, India, by the Author (2017).



Fig. 3 Underneath the inverted umbrella of the Assembly Palace, Chandigarh, India, by the Author (2017).

Upon re-reading Le Corbusier's chapter, in which he references his visit to the Acropolis and the Parthenon, I found a certain similarity between how he prepared himself to face that experience and how I did before visiting his Assembly Palace, delaying my trip to Chandigarh until my last days in India:

*"A fever shook my heart. We arrived in Athens at eleven o'clock in the morning, but I invented a thousand excuses not to go "up there" immediately. Eventually, I explained to my good friend Auguste that I would not go with him. That anxiety was oppressing, I was in extreme excitement and I wanted to be alone. I drank coffee all afternoon, and was absorbed while reading a voluminous correspondence collected in the post office and dated back to five weeks ago. Then I walked the streets waiting for the sun to go down, eager to finish the day "up there", and that, once back down, I would have no choice but to go to bed. (...) Seeing the Acropolis is a dream that is caressed and I never imagined myself doing it."*<sup>17</sup>

### The three stages of the architecture study trip

Nowadays, when our discipline seems to seek constant references outside itself –engineering, artificial intelligence, biology, philosophy, plus the traditional plastic arts-, visiting the spaces built by relevant architects, in order to directly experience their work, brings us back to the incontestable fact of their importance.

However, especially but not only for architecture students, an appropriate Architecture Study Trip should be based on three stages.<sup>8</sup>

#### Preparation of the travel dossier and generation of expectations

A Travel Dossier is a flashlight in the middle of a dark room. Through initial bibliographic research, buildings to be visited should be identified and all relevant documents, useful to analyze those buildings and to script the way how the traveller will get in contact with them, should be compiled.

This dossier will become the graphic and written support that will accompany the traveller during the trip, and it should include the following materials:

1. Floor plans, sections and elevations –the usual representations of architecture- trying to use the architects' original plans;
2. Original sketches that illustrate the design process that each building went through;
3. Photographs of the buildings under construction, ensuring, when possible, they were taken by their architects themselves;
4. Relevant write-ups that contextualize the relative importance of each building, ensuring, when possible, they were written by their architects themselves;
5. An essay condensing the relevance of each architect in the general historical context, for example, by a critic of recognized prestige and particularly identified with the studied architect;
6. A travel map with the location of the buildings to be visited;
7. Last: a notebook, a pencil;
8. And a camera.

#### Confrontation of the Architectural Conventions with the Constructed Work

Witnessing how the represented line becomes an edge, how the twodimensional understanding of the object is overcome by its plastic expression –colour, texture, even temperature-, as well as the more subjective and sensual interpretations arising from the relationship between the object and the subject, permits the corroboration or contradiction of our expectations over the visited architecture. Thus, only by travelling, and by travelling through the particular building, one becomes aware that architecture has to be perceived and understood through movement, whether physical or temporal. That is how we train our architect's eye.

Therefore, the personal analysis of the Travel Dossier confronts each building with the visitor, using it, when possible, as a support for our own thoughts, or to sketch the constructed building.

On another hand, when willing to sketch the building that we see, the importance of time is crucial in order to be able to adjust the amount of information to be captured according to the intention of the drawing and, especially, the time available.

During my architecture studies, one of the first year subjects was Architectural Graphic Analysis, where we learned how to unravel the essential values of the form without entertaining the superficial details –of the surface- of the style, which changes one time to another –but not the underlying architecture. The body of the architectural discipline, subjected for centuries to the same laws of physics and the same principles of the visual order –the module, the proportion, the harmony: the symmetry first and the balance afterwards- does not change, although is portrayed differently through history.

Some might try to capture ornamental details –a precise and meticulous drawing heir of the ways of drawing popularized in the nineteenth century- in order to reproduce the visual aspects of the model and, ultimately, to achieve greater sensitivity to the stylistic values of architecture. However, these drawings are not easy because of the time required.

Alternatively, there are schematic, frenetic sketches of crucial importance during these Architecture Study Trips. These are not necessarily attractive drawings; in fact, they are often an individual and almost private act that only has a meaning for their own author. However, they are always useful to analyze, understand and assimilate the concepts and constructive systems exposed and the evolution of the forms. These are sketches made to learn how to look, analyze and understand what one observes; to record in memory a fugacious impression or a scene that later we might want to evoke; or to archive in our minds some information that might be useful for our future work as architects.

In any case, accompanied or not by annotations, these intricate or frantic sketches serve to capture a sensation, to express what the space or the building “lived” have produced in the visitor.

It is no accident that the analysis prior to those sketches will have posed some questions: scrutinized the light, the orientation, the volumes and the proportion; set comparisons with other spaces visited before –then, the drawing will reflect a sensation that the viewer will never have again: the first time a building is visited, that first step inside, when it is measured mentally, seeing the way light slips in, will never be repeated.

Portuguese architect Alvaro Siza used to explain that, in order to catch a piece of city on paper it is necessary to repeat the same drawing several times –each new repetition supposes looking carefully again and again at the same objects and different people,

discovering what remains and what is in permanent movement.<sup>9</sup> In his book *Alvaro Siza. Travel Sketches* (1988), Siza talks about what travel notebooks mean to him:

*"No drawing gives me as much pleasure as these travel sketches. (...) A good friend of mine truly suffers because the world is big. He will never afford—he says—to repeat a visit; he leaves nervously, twitching, rolling his eyes. But I prefer to sacrifice many things, to see just what attracts me immediately, to wander without a map and with an absurd sensation of discoverer."<sup>10</sup>*

### Subsequent analysis of the buildings visited during the architecture study trip

Creating a transversal discourse through the work of an architect, condensing buildings separated by perhaps decades within a few days, allows us to determine the coherence in the architectural language of the studied architect, and even the need for such coherence.

After the trip, each distills their own conclusions, using the Travel Dossier to support their thinking or for reviewing personal understanding of the architects studied. It is at this stage where we tie our perceptive feedback to our capacity of imagining how the building that we are designing—in plan, in section, in elevation—will eventually look.

### A recurring archive of spatial experiences and a source of inspiration

For Le Corbusier, his Journey to the East underscored his appreciation of the ultimate significance of sketching.<sup>11</sup> Many years later, in his autobiography *The Patient Research Workshop* (1960), he would say:

*"When travelling, we see with the eyes and we draw with the pencil in order to internalize the impression that what we have seen has produced on us. Once that visual impression has been registered with the pencil, it remains, it is recorded inside. The camera is an instrument for lazy people, who use the machine to see instead of them. Drawing, tracing lines, composing volumes, organizing surfaces..., all this requires first seeing, then observing and eventually, perhaps, discovering. And that's when inspiration comes to us."<sup>12</sup>*

The initial Travel Dossier, which had allowed us a quick reading of the group of buildings to be visited and their general chronology, is complemented by the photographs taken during the Architecture Study Trip. Together with our analytical drawings and annotations, they form a recurrent archive of spatial experiences for the future, and a source of inspiration.

The simultaneous vision of floor plans, sections, elevations, photographs, sketches and annotations, propitiates the development of a certain spatial understanding that helps to increasingly perceive subtler nuances of the spaces we face. In addition, it

allows us to develop the feedback capacity of envisaging how the space we are designing will eventually appear.

Hence, it is not only about building memories, but also about learned experiences—conclusions to be taken into account, to apply to our own practice and thinking as architects. They are snapshots of greatly admired works that we anxiously awaited to visit, or perhaps small, anonymous buildings that we found on the way.

Therefore, it is fundamentally through the real experience of the volume and the analysis of the relationships between the built spaces and the traditional drawing conventions, how we learn how to foresee the transcendence of our architectural gestures and our decisions in the creation of the space.

### The perception as the most primitive form of knowledge

As no graphic or written document has as much interest for architects and architecture students as the constructed building, the Architecture Study Trip becomes a key form of research and development of the concepts previously studied—thus, the most effective and primitive form of knowledge: perception through senses.

However, neither the Travel Dossier by itself has more value than any monographic book, nor the trip alone makes tangible what has been previously studied. Only the combination of both allows testing the architect's tools against the built reality: to touch what has been read earlier.

The constructed building, therefore, becomes an essential reference for the real knowledge of its architecture. It has an even greater relevance at the academic stage, when the preparation of the Study Trip and its Travel Dossier becomes the ideal pretext to contemplate and clarify the spatial, volumetric and, ultimately, architectural aspirations of the authors studied, to be eventually verified—or not—in their real dimension.

Moreover, the Architecture Study Trip, accompanied by the Travel Dossier, intensifies the experience and results of learning, linking concepts barely glimpsed in the two-dimensional representation of architecture presented in books and screens.

In summary, the direct approach to the built space from its previous knowledge through its graphic representation—the Travel Dossier—transforms the site visit into a personal approach. This turns into a much more relevant and revealing experience, from a critical position and not a mere encyclopaedic acquisition, allowing the represented architectural decisions to be recorded while comparing them with their constructed expressions. The Travel Dossier stimulates the perception—as the basis of the most primitive form of knowledge—weaving a mental archive to invoke during the design process.

## REFERENCES

<sup>1</sup> The drawings of his trip were first published by Le Corbusier in *Towards a new architecture* (1923). Significantly, the first volume of his *Complete Works* (1930) starts with some fifty architecture drawings made during his Journey to the East, as if to indicate that everything came after –his architecture and urban projects- have had its origin in his studies of the past, whose essence he understood through his sketches and annotations.

<sup>2</sup> Montes Serrano, C., 2011. En el centenario del viaje a oriente: fotografías, cartas y dibujos (On the centenary of the journey to the east: photographs, letters and drawings). In: *RA: revista de arquitectura* .p.86.

<sup>3</sup> *Ibidem*, p. 86.

<sup>4</sup> *Ibidem*, p. 90.

<sup>5</sup> *Ibidem*, p. 90.

<sup>6</sup> Friedrich Wilhelm Joseph Schelling (January 27, 1775, Leonberg, Germany – August 20, 1854, Bad Ragaz, Switzerland) was a German philosopher, and one of the greatest exponents of idealism and the German romantic trend.

<sup>7</sup> *El viaje de oriente, Charles-Edouard Jeanneret (Le Corbusier) (Journey to the East)*. Comision de Cultura del Colegio Oficial de Aparejadores y Arquitectos Técnicos, Murcia (Spain), 1984.

<sup>8</sup> Based on the three stages of the Architecture Study Trip, from: VIII Jornadas Internacionales de Innovación Universitaria: retos y oportunidades del desarrollo de los nuevos títulos en educación superior (VIII International Conference on University Innovation: challenges and opportunities for the development of new degrees in university education). 2011. Luengo Angulo, M., Galindo, A. *El cuaderno del viaje de estudios como pretexto para la intensificación docente* (The notebook of the study trip as a pretext for the teaching intensification). In: *Revista Española de Documentación Científica*, Vol.34, No 4.

<sup>9</sup> Mansilla, L., Tuñón, E. *Conversaciones de viaje* (Travel conversations). Ediciones Asimétricas, Madrid (Spain), 2010.

<sup>10</sup> Siza, A., 1988. *Alvaro Siza. Esquissos de Viajem (Travel Sketches)* . Documentos de Arquitectura, Porto (Portugal), 1988.

<sup>11</sup> Montes Serrano, C. p. 94. 12 Le Corbusier, 1960. *L'Atelier de la recherche patiente* (The Patient Research Workshop). Vincent, Paris (France).

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## 7 The Future of Architectural Education in Malaysia: Introducing a New Theory of Studiogy using SOLE Module

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### Introduction

At the moment, the architecture profession in the construction industry is facing a rapid change relating to technology and knowledge information. New ways of thinking about education (and about architectural education in particular) have suggested new approaches which are in line with the rapid advances in technology. Researchers are concerned on the current architectural graduates who lack the collaboration and teamwork skills besides the computer skills as their essential abilities ((Becerik-Gerber, Gerber, & Ku, 2011; Johnson & Gunderson, 2010). Educators should be ready to integrate technology into their innovative teaching and learning to make their lesson more effective. The lack of adequate workforce equipped with the latest technology is hampering the industry to move forward (Becerik-Gerber et al., 2011). Furthermore, innovation and active learning are the near future especially towards the architecture field of study (Khalifa, 2017). Also, Nabih, (2010) argued that lecture-based education could lead to the disparity in understanding the practical problems in reality. In the twenty-first century, architectural graduates must have the skills to deal with everchanging technology that requires quick solutions skills.

While it is evident that architecture curricula have changed a little in the past twenty years, it is difficult to keep the studio syllabus in line with the needs of industry which requires a big transformation among the architecture educators. However, it is essential for the architecture curricula to embrace the change and explore the innovation to keep up with the industry. The architecture field must be able to change, accept changes, and not focus on a single field (Becerik-Gerber et al., 2011). Nevertheless, there is not much innovation found in the literature in the architecture studio subject (Zairul, 2018).

Although the issue of architecture education has been discussed in the literature, it has attracted more attention in the recent years (Hassanpour, Utaberta, Abdullah, Spalie, & Tahir, 2011); Khalifa, 2017); Pour-Rahimian, Arciszewski, & Goulding, 2014) and there is not much information about what will be the direction of the discipline in the future. This paper has attempted to examine the feedback on SOLE in the architectural studio teaching to facilitate the studio syllabus to formulate a new theory of studiogy. It also investigated the challenges of incorporating the new approach into the present studio teaching. Also, the paper has also discovered the reality of architectural education in