

ATINER CONFERENCE PAPER SERIES No: ARC2013-0688

**Athens Institute for Education and Research**

**ATINER**



**ATINER's Conference Paper Series**

**ARC2013-0688**

**Le Corbusier:  
Of the Plasticity of Excess**

**Alessandro Rossi  
Design / History Tutor  
University of Canberra  
Australia**

**Nugroho Utomo  
PhD Candidate  
University of Canberra  
Australia**

Athens Institute for Education and Research  
8 Valaoritou Street, Kolonaki, 10671 Athens, Greece  
Tel: + 30 210 3634210 Fax: + 30 210 3634209  
Email: [info@atiner.gr](mailto:info@atiner.gr) URL: [www.atiner.gr](http://www.atiner.gr)  
URL Conference Papers Series: [www.atiner.gr/papers.htm](http://www.atiner.gr/papers.htm)

Printed in Athens, Greece by the Athens Institute for Education and Research.  
All rights reserved. Reproduction is allowed for non-commercial purposes if the  
source is fully acknowledged.

**ISSN 2241-2891**

4/11/2013

## An Introduction to ATINER's Conference Paper Series

ATINER started to publish this conference papers series in 2012. It includes only the papers submitted for publication after they were presented at one of the conferences organized by our Institute every year. The papers published in the series have not been refereed and are published as they were submitted by the author. The series serves two purposes. First, we want to disseminate the information as fast as possible. Second, by doing so, the authors can receive comments useful to revise their papers before they are considered for publication in one of ATINER's books, following our standard procedures of a blind review.

Dr. Gregory T. Papanikos  
President  
Athens Institute for Education and Research

This paper should be cited as follows:

**Rossi, A. and Utomo, N. (2013) "Le Corbusier: Of the Plasticity of Excess"**  
Athens: ATINER'S Conference Paper Series, No: ARC2013-0688.

**Le Corbusier:  
Of the Plasticity of Excess**

**Alessandro Rossi  
Design / History Tutor  
University of Canberra  
Australia**

**Nugroho Utomo  
PhD Candidate  
University of Canberra  
Australia**

**Abstract**

Why is it that Le Corbusier's buildings are so evocative, and what quality of his work is able to provoke such a powerful response in the beholder? Perhaps an answer can be found partly in Le Corbusier's theorization of architecture as a 'plastic creation' in his seminal written work *Towards a New Architecture*. Throughout Le Corbusier's discourse, a clear definition of the term 'plastic' remains elusive. Cryptically, however, he remarks, "I mean by 'plastic' what is seen and measured by the eye." The only direction he provides is that the 'plastic' in architecture resides somewhere between the silo and the Parthenon. What is certain, however, is that Le Corbusier frequently used the term in reference to the imaginative nature of architecture. This alludes to the notion that a work of architecture is composed partly of functional elements and partly by the aforementioned imaginative quality, unnecessary from a utilitarian perspective, but which has a transformative quality capable of elevating an object to the level of 'art'.

Contrary to most literature, which emphasises the formal connotations of the term, the paper argues that the word 'plastic' is in fact multivalent. Focussing on the often overlooked a-formal dimension of the term, the essay begins with a critical examination of Le Corbusier's musings on 'plastic creation' presented in the early chapters of *Towards an Architecture*. It will be argued that a 'plastic creation' is one that is rendered primarily in light and shade, highlighting its three dimensional nature, which is not necessarily about shape or form. Le Corbusier often used the term in unison with 'contour', 'profile', 'system' and 'unity', none of which have specific formal implications that tie the term plastic to a particular geometry. For instance, a brick and a billiard ball both have a contour and profile yet they have polarised geometries. For him, ultimately, the 'plastic' was about a perceived unity of system, both at the level of part and whole. The paper proposes that the notion of 'plastic' plays the role in Le Corbusier's a-tectonic architecture that 'excess' plays in

Gottfried Semper's theorisation of 'theatricality' in architecture; that dimension which elevates an edifice from mere building to the heightened realm of architecture.

**Keywords:**

**Corresponding Author:**

*The business of Architecture is to establish emotional relationships  
by means of raw materials.  
Architecture goes beyond utilitarian needs.  
Architecture is a plastic thing.  
The spirit of order, a unity of intention.  
The sense of relationships; architecture deals with quantities.  
Passion can create drama out of inert stone.<sup>1</sup>*

## **Le Corbusier**

What this paper is not is an attempt to distil the essence of Le Corbusier's early architecture, nor to provide a comprehensive analysis of *Towards a New Architecture* in all its seemingly haphazard complexity, nor even to attempt to provide a definitive interpretation of the term 'plastic' contained within, with all its nuance that may or may not have survived the work's translation to English. Instead it is an attempt to provide a reading of the term that is inclusive not only of the obvious formal connotations of the word relating to curve, contour and profile, but one that is also able to accommodate Le Corbusier's use of the term in sometimes seemingly contradictory contexts, or at the very least in modes of usage that allude to a far wider meaning. Why is this important one might ask? Or let alone important, why is this even necessary or relevant today? Far from attempting to posit the investigation of the 'plastic' as an important reinterpretation of key points of the text, the authors simply wished to try to answer some of their own questions on the subject, a question also shared in discussion with students in a number of sessions on the history of Modern architecture. If these questions are shared even amongst members of such a localised community, it stands to reason that there might be a wider interest in the subject.

## **The Plastic Surface**

One of the greatest attributes of Le Corbusier as an architect undoubtedly lies in his ability as a sculptor, to create and arrange forms in the most sophisticated and subtle ways.<sup>2</sup> Perhaps it explains why is it that his buildings are so evocative, producing such emotional, or even ineffable responses?<sup>3</sup> For although good planning and organisation speaks to the expert, what is the universal quality of his work that speaks to all? Perhaps an answer can partly be found in a reading of his 1923 book *Towards a New Architecture*, and more

---

<sup>1</sup>Le Corbusier. (2008). *Towards a New Architecture*. Milton Keynes: BN Publishing, p. 151.

<sup>2</sup>Gargiani, R. & A. Rosellini (2011). *Le Corbusier: Béton Brut and Ineffable Space, 1940-1965*. Oxford: Routledge, p.63. In this volume the authors mention how, like an athlete who commits to physical conditioning and training on a regular basis, Le Corbusier practiced the 'plastic arts' virtually every morning.

<sup>3</sup>ibid. See also: Turner, P. (1977) 'Romanticism, Rationalist and the Domino System.' In: R. Walden (ed.), *The Open Hand: Essays of Le Corbusier*. Cambridge: The MIT Press, p.15.

specifically, Le Corbusier's idea of the 'plastic' in architecture. This thread of thought is one of the major concerns of Le Corbusier in the volume, investigating and theorising architecture as a 'plastic creation'. This investigation is continually made in regards to a 'plastic system', or architecture as a 'plastic work'. What is meant by these compound terms is hard to define, and remains obscure throughout the book. Conventional usages of the term 'plastic' are typically in reference to curvilinear geometries. However, if one returns to Le Corbusier's musings in *Towards a New Architecture*, it is possible to interpret the term 'plastic' as having connotations beyond form.

Le Corbusier states that a plastic work is derived from its contour and profile, and adds that it is when dealing with these contours that an architect is able to express himself most fully.<sup>1</sup> This description is in accord with the definition of the term 'plastic', from the Greek *plastikos*; capable of being moulded or shaped. It is important to note at this point that these definitions refer to the process rather than the final form, which in itself implies that the term 'plastic' does not necessarily dictate a curvilinear geometry but is rather the enabler of it. Furthermore, it suggests that a 'plastic creation' or 'plastic work' can manifest in any form; its permutations are limitless. It could be argued that a 'plastic creation', as stated by Le Corbusier, is one that is rendered primarily in light and shade, alluding to its three dimensional and even sculptural nature, presupposing the historic shift from the 'painterly' to the 'sculptural' which occurred in post-war Modern architecture.<sup>2</sup> For Le Corbusier, the 'plastic artist' – one who is able to produce 'plastic creations' – is able to elevate their thinking beyond the pragmatism of engineers and imbue the work with qualities that elevate architecture from mere building. An analysis of any 'plastic work', such as Phidias' Parthenon, reveals that behind the creation there is a system at work.<sup>3</sup> It is a system which visually presents a unified whole by virtue of its surface as well as its form. This idea of the 'plastic system' demonstrates that the concept of the 'plastic' operates at the level of both individual object and as a system of interrelating parts, unified by a mysterious universal order concerned with the presentation of a greater whole. This so called 'wholeness' reveals the underlying Classical interrelationship of parts that permeates not only Le Corbusier's understanding of architecture, but that which is at the heart of the early Modern Movement.<sup>4</sup>

---

<sup>1</sup>Le Corbusier, op. cit., p. 218.

<sup>2</sup>Le Corbusier also discusses the concept of a 'plastic creation' in relation to the 'universals' or 'constants', a subject close to his heart.

<sup>3</sup>It is interesting to note that Le Corbusier refers to Phidias, a sculptor, as being responsible for the genius of the Parthenon, rather than attributing it to any architect.

<sup>4</sup>Drew, P. (1980). 'Postmodernism: the renewal of style in architecture.' *Transition*, March, pp. 9-16.



## The Modelled Surface

According to André Wogenscky, his long time assistant,

*He loved concrete that could take on any shape. He studied the moulding forms so that the surface, the skin, did not come out in any old way but animated by the imprint of the mould, which it had kept in the solidified form.<sup>1</sup>*

Le Corbusier also comments on the similar aesthetic of the carved marble columns and entablature of the Parthenon and sleek modern machines. “*All this plastic machinery is realised in marble with the rigour we have learned to apply in the machine. The impression is of naked polished metal.*”<sup>2</sup> The contour and profile, in both plan and section, of these two historically distinct objects are a fundamental factor that allows a comparison of the two. It is the plasticity of the two that is universal. One possible reading of this is that it is the rigour of the unembellished ‘plastic form’, whether that takes the shape of a cylinder, pyramid, cube or sphere, as discussed in the chapter THE LESSONS OF ROME, that renders the object true and universal. So if it is not merely the contour of a form that renders it plastic, there must be other considerations discussed in *Towards a New Architecture* that point towards a broader definition of the term in Le Corbusier’s thinking, one, that whether explicitly stated or not, is not limited to a building’s use of contours or curves to give it a plastic quality. A clue to this is the statement made in relation to the rendering of contours in light and shadow. In the earlier chapter of THREE REMINDERS TO ARCHITECTS, I, MASS, Le Corbusier defines architecture as “... *the masterly, correct and magnificent play of masses brought together in light.*” He then reiterates this statement in ARCHITECTURE, PURE CREATIONS OF THE MIND with some subtle variations, as well as expanding upon it in relation to contours.

*Architecture is the skilful, accurate and magnificent play of masses seen in light; and contours are also and exclusively the skilful, accurate and magnificent play of volumes seen in light. Contours go beyond the scope of the practical man, the daring man, the ingenious man; they call for the plastic artist.<sup>3</sup>*

The qualities of light and shadow at play on a surface are therefore shown to be integral to a ‘plastic creation’, or at least in how it is perceived. Interestingly, Le Corbusier considered plasticity as a visual phenomenon, further confirming the link between ‘plastic’ and light. When he does qualify the term, he does so in the following cryptic line, “*I mean by ‘plastic’ what is*

---

<sup>1</sup>Wogenscky, A. (2006). *Le Corbusier's Hands*. Cambridge: The MIT Press, p.60.

<sup>2</sup>Le Corbusier, loc. cit.

<sup>3</sup>Le Corbusier, op. cit., p. 218.

*seen and measured by the eye.*"<sup>1</sup> It is well known that for Le Corbusier, architecture is experienced in motion from eye level. In this sense the experience of space is very much visual in that the beholder experiences the space topologically, appreciating the qualities of enclosure, separation, proximity, continuity and most importantly unity, prior to their observation of the empirical facts of the building.<sup>2</sup> On the other hand, if one considers that the 'plastic creations' that Le Corbusier speaks of are those masses brought together in light it is important to consider which forms he considers to be 'plastic', which leads us to the 'great primary forms'. These are the forms, which in his words, "... *light reveals to advantage; the image is distinct and tangible within us and without ambiguity.*"<sup>3</sup> These forms are the cube, the cone, the sphere, the cylinder and the pyramid, reinforcing the idea that the 'plastic' is not restricted to curvilinear forms.<sup>4</sup> It is these primary forms that for Le Corbusier, create the fundamental basis of an architectural work, and also a 'plastic work'. For in a Gothic cathedral he sees nothing of this play of light on primary, plastic forms. "*The cathedral is not a plastic work; it is a drama; a fight against the force of gravity, which is the sensation of a sentimental nature.*"<sup>5</sup> For Le Corbusier, a work that is not a 'plastic work' is a subjective work, since it is unable to be measured as a work of architecture against the universal qualities of great 'plastic works' throughout history. In this sense, Le Corbusier's use of the term 'plastic' is strongly associated with form. This fact is undisputable. However, it is fair to argue that given the variety of forms capable of being elevated into the realms of 'plastic creation' – depending on the artist of course – he did not advocate for a specific formal language as such. In addition, it is reasonable to assume that the term relates to issues, despite being related, beyond form, with the most notable being 'surface'. If the 'plastic' is concerned with the visual, as evinced by Le Corbusier, with what is seen and measured by the eye, and the surface is key in the perception of an object, than surely the surface plays a significant role in the 'plastic creation'. In this sense, the term 'plastic' can be understood as relating to both form and surface. It is important, however, to distinguish the type of surface that operates within the realms of the 'plastic'.

The characteristic of a 'plastic surface' that is so integral to the aforementioned play of light and shadow is its sculptural, or monolithic nature, in that it is seemingly carved or moulded from one material. It is a three-dimensional 'modelled surface', which is a contrast to the 'painterly' surfaces so popular in the early period of Modernism. The structure and surface are as one. They are free to create any form. Whether concrete is left bare, or covered in white stucco, the effect is that of a visually unified sense of materiality. The unification of the surfaces denies the reading of the articulation of the structural

---

<sup>1</sup>ibid. p. 215.

<sup>2</sup>Pearson, M. (2012). 'Editorial.' *October* 136: 35-36.

<sup>3</sup>Le Corbusier, op. cit., p. 29.

<sup>4</sup>ibid.

<sup>5</sup>ibid. In this sense, the Gothic Cathedral is tectonic.

members, and also escapes the celebration of the joint. This denial imbues the work with a sculptural quality. Critically it renders the work a-tectonic.

This unified effect was created through the white stucco render that Le Corbusier was so fond of during his Purist period, coinciding with the publication of *Towards a New Architecture*, and suggests the centrality of the unified surface in any 'plastic work'. Thus arguably it is not about the material itself but the surface characteristics that it presents. Le Corbusier's use of stucco is often interpreted as a method of creating an aesthetic link between his own architecture and the machine, otherwise known as the 'machine aesthetic'. Further abetting this interpretation is the widespread publication and misinterpretation of his statement that "...a house is a machine for living in."<sup>1</sup> However, there is another reading of this statement made possible in light of the hypothesis proposed earlier in the paper, that it is the plasticity of the machine's appearance that Le Corbusier is alluding to, rather than a direct reference to the machine in a conventional sense.

One of the factors that contributed to a change in material finishes of his architecture was, to an extent, a purely practical one. A lack of resources and the poor quality of materials and workmanship, and in particular the fact that the technology for the acclimatisation and protection of exterior surfaces was not yet adequate to achieve the almost total dematerialisation of the envelope that post-Cubist aesthetics demanded, helped Le Corbusier's transition to the use of exposed concrete from a white stucco finish from 1930 onwards.<sup>2</sup> It is not being proposed that the white stucco finish of the Purist period is synonymous with Le Corbusier's later works in off form concrete, rather that the conceptualisation of architecture as a 'plastic' phenomenon is reliant on a unified sense of materiality, remained constant throughout his career, and it was the articulation of this concept that changed. The underlying themes of Le Corbusier's architecture remained constant throughout his life, such as those of the liberty of plan and envelope, it was merely the plastic manifestation of these that changed, largely as a consequence of, rather than an opposition to, these themes.<sup>3</sup> It was also largely the introduction of the *brise-soleil*, or sun-break, from 1933 onwards, to the work of Le Corbusier that contributed to the change in articulation of his projects. The envelope of the facade was reconsidered, evolving from abstract white planes pierced by ribbon windows to a wrapping of concrete slabs perpendicular to the surface of the building. This was introduced largely to protect the interior from the sun, as the name suggests, but in turn became the new surface, or skin, of the building. Critically, it was a modelled surface. Although this surface had a vastly different character, being more porous, as Maurice Besset states "... it thus regains, albeit in a very different plastic guise, the mobility and transparency of the earlier purist membrane."<sup>4</sup>

---

<sup>1</sup>ibid. p.107.

<sup>2</sup>Besset, M. (1987). *Le Corbusier: To live with the light*. London: The Architectural Press Limited, p. 113.

<sup>3</sup>ibid, p. 141.

<sup>4</sup>ibid, p. 133.

## **The Image of the Plastic Surface**

Another consequence of the consideration of architecture as a ‘plastic’ phenomenon is that it implies the ability to perceive the building from multiple viewpoints. It is a three dimensional object where all the surfaces are equal. Even considering Le Corbusier's conviction that architecture is always seen from a human viewpoint in motion, it is obvious that this plastic connotation has implications for the conceptualisation of space in and surrounding a building. Cubism had already accomplished a liberation of space on the two dimensional canvas which then opened up the field of architecture to explore the mobilisation of space, transparencies of structure and the geometricisation of formal elements.<sup>1</sup> Purism was Le Corbusier and Amede Ozenfant's translation of this, primarily as a two dimensional art form, but having clear ramifications for Le Corbusier's architecture. Returning to the sculptural nature of a plastic creation, Le Corbusier further expands upon this idea with his discussion of a ‘plastic system’, which is linked with a classical interpretation of architecture to do with the relationship of parts and whole. As a system it heavily relies on a unified sense of materiality. This theme of unity, suggests that the treatment of the material with a single clear idea produces a harmonious result. When discussing the Doric architecture of the Parthenon, and the Propylea specifically, Le Corbusier makes the following statement, *“From a plastic system that spreads its effects over every part of the composition. From a unity of idea that reaches from the unity of the materials used to the unity of the general contour.”*<sup>2</sup> From this one could postulate that to Le Corbusier, the ‘plastic’ means not only a unified sense of materiality, but is indeed an overarching theme that pervades all levels of his architecture. It is a concept that draws together the qualities of ‘plastic’ at all levels to create a united and harmonious image.

## **The Surface of Imagination**

If one were to select a single aspect of Le Corbusier's architecture, that, to borrow his own phrase, ‘touches the heart’<sup>3</sup> of an onlooker, or produces an emotional response, it would have to be the elements of ‘plastic creation’ in his buildings. These are the elements that are not necessarily functional, and not prescribed by the generator of the plan, but are truly pure creations of the mind. In the chapter ARCHITECTURE, PURE CREATIONS OF THE MIND, Le Corbusier explicitly states that the *“...plan of the house, its cubic mass and its surfaces have been dictated partly by the utilitarian demands of the problem, and partly by imagination, i.e., plastic creation.”*<sup>4</sup> From this we can infer that

---

<sup>1</sup>ibid, p. 44.

<sup>2</sup>Le Corbusier, op. cit., p.205.

<sup>3</sup>ibid. p. 203.

<sup>4</sup>ibid.

in Le Corbusier's thinking, not only does the term 'plastic' have connotations of contour and profile, but also that the plastic is the imaginative, or creative part of architecture. Continuing on from his previous quote, he goes on to state that "...the architect has worked plastically; he has restrained utilitarian demands in deference to the plastic aim he was pursuing; he has made a composition."<sup>1</sup> This quote speaks of an excess in Le Corbusier's work that is directly linked to his ideas of imagination and beauty in architecture. He speaks often of beauty, but never prescribes a method of achieving it, or even what characterises this beauty. However, the presence of the 'plastic' in architecture, the product of genius, is an extra aspect present in a building that allows it to 'touch one's heart'. It is this excess that differentiates a work as Architecture rather than purely construction. Le Corbusier articulates this thought in the following statement, "*Profile and contour have entered in, and they are free of all constraints; they are a pure invention which makes the outward aspect radiant or dulls it.*"<sup>2</sup> It is proposed that the 'plastic' is to Le Corbusier's concept of architecture, at the time of *Towards a New Architecture's* publication, what excess is to Gottfried Semper's theory of theatricality in architecture. That is to say, that the function of the idea of 'plasticity' to an a-tectonic architecture is similar to that of an excess in the articulation of the art-form versus the core-form in a tectonic approach, as discussed by Semper in his theory of dressing (*Bekleidung*).<sup>3</sup> In his work on theatricality in architecture, *Crisis of the Object*, Gevork Hartoonian states that for Semper "...the tectonic is a cosmic art in which the art-form relates to the core-form in a structural-symbolic rather than structural-technical sense."<sup>4</sup> It is then the excess, or symbolism, in the articulation of the art-form versus the core-form of a building that creates a sense of theatricality in a tectonic approach. Perhaps it is this theatricality that produces an emotional response in the onlooker. According to Eduard Sekler, the tectonic is "... a certain expressivity arising from the statical resistance of constructional form in such a way that the resultant expression could not be accounted for in terms of structure and construction alone."<sup>5</sup> He then later conceptualised the a-tectonic as the way in which the interaction of load and support in architecture is not visually articulated.<sup>6</sup> This point corroborates the argument that the 'plastic surface' is one that presents a unified sense of materiality that denies an exaggerated visual communication of load and support. Furthermore, Kenneth Frampton characterises Le Corbusier's Villa Savoye (1928-1929) as a-tectonic. He argues that it is the monolithic appearance of the reinforced concrete structure,

---

<sup>1</sup>ibid.

<sup>2</sup>ibid. p .218.

<sup>3</sup>Semper, G. (2004). *Style in the Technical and Tectonic Arts; or Practical Aesthetics*. Trans. Mallgrave, H. F. & M. Robinson. Santa Monica: The Getty Centre.

<sup>4</sup>Hartoonian, G. (2006). *Crisis of the Object: the architecture of theatricality*. New York: Routledge, p. 9.

<sup>5</sup>Kepes, G (ed.). (1965). *Structure in Art and in Science*. New York: Braziller, pp. 89-95.

<sup>6</sup>Sekler, E. F. (1967). 'The Stoclet house by Josef Hoffman.' In: *Essays in the History of Architecture Presented to Rudolf Wittkower*. London: Phaidon, pp. 230-231.

and the fact that the entire construction is both plastered and painted throughout that characterises the Villa Savoye as a-tectonic rather than tectonic – it is ‘plastic’ – and in particular draws attention to the non-differentiated relationship of column and soffit.<sup>1</sup>

So, to return to the earlier question of which aspect of architecture, for Le Corbusier, works to evoke such an emotional response in the beholder, it has been shown that it is the ‘plastic’ quality of the work. This is not just the plasticity of contour and profile, nor its rendering in light and shade, or its relationship to space, but the imaginative and creative aspect of architecture that elevates it to an art form. Without this ‘plasticity’, the a-tectonic architecture of Le Corbusier's early works would be unable to reach the heights of artistic creation that they did, and unable to inspire the ineffable response in the onlooker that they do. It is the creative genius of the man himself who was able to take *brut* materials and create such intriguing buildings and to establish himself as a ‘plastic artist’.

## Bibliography

- Beset, M. (1987). *Le Corbusier: To live with the light*. London: The Architectural Press Limited.
- Drew, P. (1980). ‘Postmodernism: the renewal of style in architecture.’ *Transition*, March, pp. 9-16.
- Frampton, K. (2001). *Le Corbusier*. London: Thames & Hudson.
- Frampton, K. (2002). *Le Corbusier, Architect of the Twentieth Century*. New York: Harry N. Abrams.
- Frampton, K. (1995). *Studies in Tectonic Culture: The poetics of Construction in Nineteenth and Twentieth Century Architecture*. Cambridge: The MIT Press.
- Gargiani, R. & A. Rosellini (2011). *Le Corbusier: Béton Brut and Ineffable Space, 1940-1965*. Oxford: Routledge.
- Hartoonian, G. (2006). *Crisis of the Object: the architecture of theatricality*. New York: Routledge.
- Kepes, G (ed.). (1965). *Structure in Art and in Science*. New York: Braziller.
- Le Corbusier. (2008). *Towards a New Architecture*. Milton Keynes: BN Publishing.
- Payne, A. (2012). *From Ornament to Object, Genealogies of Architectural Modernism*. New Haven & London: Yale University Press.
- Pearson, M. (2012). ‘Editorial.’ *October* 136: 35-36.
- Sekler, E. F. (1967). ‘The Stoclet house by Josef Hoffman.’ In: *Essays in the History of Architecture Presented to Rudolf Wittkower*. London: Phaidon.
- Semper, G. (2004). *Style in the Technical and Tectonic Arts; or Practical Aesthetics*. Trans. Mallgrave, H. F. & M. Robinson. Santa Monica: The Getty Centre.
- Turner, P. (1977) ‘Romanticism, Rationalist and the Domino System.’ In: R. Walden (ed.), *The Open Hand: Essays of Le Corbusier*. Cambridge: The MIT Press.
- Wogenscky, A. (2006). *Le Corbusier's Hands*. Cambridge: The MIT Press.

---

<sup>1</sup>Frampton, K. (1995). *Studies in Tectonic Culture: The poetics of Construction in Nineteenth and Twentieth Century Architecture*. Cambridge: The MIT Press, p. 177.