Alvar Aalto and Humanizing of Architecture

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Abstract
The purpose of this paper is to review Aalto's design conception on the basis of his critique of technology-oriented rationalism. Arguably, his critical attitude was best illustrated in his article 'The Humanizing of Architecture' (1940), which anticipates Adorno and Horkheimer's criticism against instrumentalized rationality (1944). For Aalto, true rationalism should be synthetic in order to cover all fields of human activities. However, man is not only a rational being but also a player. Aalto's argument for the relevance of play in architecture corresponds to Johan Huizingha's theory of Homo Ludens or 'Man the Player'. Play elements in Aalto's design complements the unbalanced formula between form and function in architecture by covering humanitarian and psychological aspects. These elements are often proved to be astonishingly rational as he maintained, and symbolically functional in many cases. Nonetheless, all the discourses concerning Aalto's architecture eventually converge on original matters concerning architecture, man and nature – architecture mediates man and nature. This relationship is reflected in Aalto's design, directly and indirectly as well as practically and metaphorically, which is more fundamental than any other superlative theories. Therefore, this paper maintains that his architecture has a timeless value and that he demonstrated an example of humanizing architecture.

Keywords: Alvar Aalto; modern architecture; rationalism; play; humanizing of architecture

1. Introduction
Alvar Aalto's influence on his contemporaries and on the next generation of architects has been remarkable. As Kenneth Frampton (1998) expounded, his legacy was inherited in diversified ways: first by Finnish architects such as Aarne Ervi of the 'constructivist line' as well as Reima Pietilä of the 'organic' one; and then by foreign architects worldwide from Jørn Utzon to Alvaro Siza, both directly and indirectly. Charles Jencks (1977) perceived a 'Post-Modern space' in Aalto's work and Robert Venturi (1977) confesses his debt to the Finnish master.1 However, although critics like Manfredo Tafuri and Francesco Dal Co (1980) appeared to be rather suspicious of Aalto's vital contribution to contemporary architecture,2 from the present point of view, he is undoubtedly one of the most significant modern architects and his influential power seems to be continually growing.

The validity of Alvar Aalto's design in current architecture could be generally explained in two ways. The one is its implication of postmodern 'complexity and contradiction' in Venturi's term (1966). It could also be seen as that of 'heterotopia', if borrowing from Demetri Porphyrios (1980) (who originally quoted the term from Foucault), which discards the homotopic integrity of the modern ideal, and instead pursues "an unstable unity" of heterogeneous elements (pp.2-4). The other is the increasing contemporary interest in the phenomenological sense of place, nature and man that Aalto's design retains. The association of Aalto with the Finnish context is fundamental in relation to this standpoint. Nevertheless, in both cases, his work provides us with something that cannot be grasped by the notion of orthodox modernism. In other words, we can say that Alvar Aalto served as a critic of rationalism in architecture, which had become increasingly more instrumentalized – especially since the proclamation of the International Style in 1932. European rationalist tradition was now vulnerable in the hands of Aalto.

The crisis of rationalist modernism had already been detected in events such as the Weissenhof Siedlung Exhibition in 1927 and the foundation of the CIAM in 1928.3 Moreover, Sigfried Giedion's insertion of the Alvar Aalto chapter in the 2nd edition of Space, Time and Architecture (1949) ironically signifies the limits of rationalism. Despite the controversial dichotomy

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in the historiography, his complimentary description of Aalto's ability to "dare the leap from the rational-functional to the irrational-organic" illustrates a new possibility in modern architecture.

The purpose of this research is to reconsider Aalto's design conception starting from the examination of his attitude towards rationalism. However, as is well-known, he did not declare any manifestoes nor formulate a principle for his architecture. It is reported that whenever asked about his architectural theory, Aalto responded: "I answer with my buildings." In reality, however, he was given a number of opportunities to state his architectural idea even though this was generally not in the logical form of a 'theory'. Arguably, the best statement that shows his critical stance towards rationalism is in an article entitled 'The humanizing of architecture', which was published in The Technology Review in 1940. As the titles of the article and the journal already indicate, Aalto rejected a technical rationalization for a humanistic approach to architecture. The article is the stepping-stone to this research. Therefore, this paper will first investigate Aalto's critique of rationalism revealed in the article, and will then consider what could be the alternative breakthrough that his architecture implies.

2. Aalto's Critique of Rationalism

"The term 'rationalism' appears in connection with Modern architecture about as often as does 'functionalism'. Modern architecture has been rationalized mainly from the technical point of view. [...] It is not the rationalization itself which was wrong in the first and now past period of Modern architecture. The fault lies in the fact that the rationalization has not gone deep enough. The present phase of modern architecture is doubtless a new one, with the special aim of solving problems in the humanitarian and psychological fields. [...] Technical functionalism is correct only if enlarged to cover even the psychophysical field. That is the only way to humanize architecture." (Alvar Aalto, 'The Humanizing of Architecture', 1940)

Rationalism was one of the most important aspects of modern architecture. According to the German modernist critic Adolf Behne (1923), the rationalists pursue "what is most fitting for general need, the norm," in contrast with the functionalists who favor unique solutions for specific requirements. Owing to the search for a universal solution, it is true that modern rationalism produced its own aesthetics as well as various positive effects in the building economy. However, its emphasis on standardization and mass production often resulted in a fallacy of scientific determinism and the obsession with efficiency in planning, design and construction inevitably brought about a dry and uniform built environment. When Le Corbusier suggested sweeping away "the pack-donkey's way" to build a new utopian city (Urbanisme, 1925), he was being extremely 'rational' rather than 'reasonable'. Walter Gropius's mathematical calculation in the Zeilenbau diagram proved not to guarantee psychological satisfaction, even though the physical "conditions as to air, sun, view and distance from neighbour blocks are improved." Form followed efficiency rather than function.

From Behne's approach, the representative modern
Aalto's expression of the immature modern condition reminds us of Jürgen Habermas's argument that modernity is "an incomplete project". In his acceptance speech of the Theodor Adorno Prize in 1980, Habermas maintains that "instead of giving up modernity and its project as a lost cause, we should learn from the mistakes." This statement was exactly along the lines of Adorno, whose idea was anticipated by Aalto's critique of rationalism. In *Dialektik der Aufklärung* (1944), Adorno and Max Horkheimer accused the Enlightenment of resulting in "a new kind of barbarism" and rationalism of its "tendency to self-destruction". However, their critique was not purely pessimistic but "intended to prepare the way for a positive notion of enlightenment." They argue that "the Enlightenment must examine itself," as Aalto examined the first period of modern architecture. As Hilde Heynen (1999) pointed out, Adorno and Horkheimer made "an implicit distinction between critical rationality – reason, that is, in its most authentic and unqualified guise – and instrumental rationality, which is thinking reduced to purposes of utility or to mere calculation" (p.180). Therefore, we can consider that the two philosophers argued for a recovery of "critical rationality" as the basic motive of the Enlightenment and rationalism. Aalto's claim for a deeper rationalization is after all the revitalization of the lost critical rationality in modern architecture. Despite the unwanted effect, we cannot abandon the original liberating intention of the Enlightenment project. He suggests that it is possible only when architecture, as a "synthetic phenomenon", covers all fields of human activity: a psychological field as well as a technical one.

Yet, at a practical level, how can architecture satisfy a psychological need? Aalto illustrated his idea in the above article with the examples of the Paimio Tuberculosis Sanatorium (1928-32) and the Viipuri Municipal Library (1927-35). In terms of the former, Aalto's first monumental achievement in his career, the obliquely aligned white hospital wings and the rooftop sundock are probably the most impressive images. With regard to the theme in the article, however, he focuses on the relationship between one single patient and his/her room, that is, the patient's behavioral and psychological aspects within the existential space. The situation of the patient, as "a horizontal human being" who lies on a bed most of his/her time "in the weakest possible condition", should be considered carefully, even in terms of color, lighting, heating, noise, etc. Aalto proposed and executed concrete devices for the room as follows: "The ceiling should be darker, with an especially selected color suitable to be the only view of the reclining patient for weeks and weeks. The artificial light cannot come from an ordinary ceiling fixture, but the principal center of light should be beyond the angle of vision of the patient. For the heating system in the experimental room, ceiling radiators were used but in a way which threw the heat mainly at the foot of the bed so that the head of the patient was outside the direct rays. The location of the windows and doors likewise took into account the patient's position. To avoid noise, one wall in the room was sound absorbing, and wash basins (each patient in the two-patient rooms had his own) were especially designed so that the flow of water from the faucet hit the porcelain basin always at a very small angle and worked noiselessly." While rationalists would consider this detailed plan for one single room to be excessive, it was crucial to Aalto, who wanted to think truly reasonably. He ensured that the technical strategies would sensitively serve the patients' emotional requirements. In a similar way, lighting was the main concern in the Viipuri Library owing to the activity of reading. In order to reduce the fatiguing phenomena to the human eye, indirect daylight was preferred and Aalto devised round skylights. The system, he argued, is not only "technically rational because of the monopiece glass system employed" but also "humanly rational because it provides a kind of light

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Fig.3. Paimio Sanatorium, Site Plan, 1928-32.

Fig.4. Paimio Sanatorium, Rooftop Sundock.

Fig.5. Paimio Sanatorium, Patient Room.

Fig.6. Paimio Sanatorium, Sketches for Overhead Heating in a Patient Room.

Fig.7. Viipuri Library, Sketch for Skylights, 1927-35.
suitable for reading, blended and softened by being reflected from the conical surfaces of the skylights."

From Aalto's point of view, the serious consideration for the seemingly meticulous human behavior is critically and humanly rational.

3. Aalto the Homo Ludens

"In the midst of our laboring, calculating, utilitarian age, we must continue to believe in the crucial significance of play when building a society for human beings, those grown-up children. [...] Thus we must combine serious laboratory work with the mentality of play, or vice versa. Only when the constructive parts of a building, the forms derived from them logically, and our empirical knowledge is colored with what we might seriously call the art of play; only then are we on the right path. Technology and economics must always be combined with a life-enhancing charm." (Alvar Aalto, 'Experimental House at Muuratsalo', 1953)"

One notable point in 'The Humanizing of Architecture' is that Aalto recognized the transition of modern architecture – "the first and now past period" and "the present phase". In fact, around the mid 1930s, he himself showed a modification in his architectural tendencies from the trend influenced by rationalist modernism to a more romantic approach. His biographer Göran Schildt (1986) also confirms this: "He half consciously moved farther and farther away from Rationalism, driven by his artistic daemon and by his feeling for the human and natural" (p.18). Nevertheless, Aalto's designs even in the rationalist period were significantly different from other continental modernists' work. Though the two examples in Paimio and Viipuri belong to the rationalist period, they are "humanly rational" as shown above. This is why he could use them as a model for the new phase architecture.

The uniqueness of Aalto's design derives to a large extent from his reliance on 'instinct' and 'intuition'. These terms might be associated with 'whimsicality', 'randomness', or 'irrational', descriptions which "the first historians" of modern architecture generally disregarded. However, Aalto had confessed the importance of such ideas in his architecture: "Always there will be more of instinct" (1940); and "Intuition can sometimes be astonishingly rational" (1972). Looking back, intuition was actually the foundation of the Western philosophical edifice since Descartes, the father of continental rationalism, adopted intuition in his famous reasoning process. In the first of the four rules in his Discourse on Method, he recognized 'intuitively' indubitable truths such as the fact that 'he thinks.' While he argued for his different usage of the term "intuition" from its general conception related to the senses or the imagination, this new usage does overlap the conventional one to a considerable degree. And it is not always true that the undoubted proposition is purely the result of his "intellectual intuition". The probable gap could be bridged by a leap of intuition – in the general conception. Actually, it seems that Aalto's intuition does not show a considerable discrepancy with the Cartesian "unclouded and attentive mind". In his design, it can and should complement as an indispensable element the reasoning process of analysis, synthesis and deduction, which are the remaining three rules in Descartes' method. Architectural design involves not only a rational program but also an intuitive decision and Kunstwollen. Aalto admitted this without reserve. Just as "myth is already enlightenment; and enlightenment reverts to mythology" (Adorno and Horkheimer), so rationality is basically rooted in intuition, and intuition is often rational.

We now need to review the nature of the human being. As Johan Huizingha (1872-1945) pointed out in Homo Ludens (1938), we cannot wholly rely on the 18th century's optimistic concept of Homo Sapiens or 'Man the Thinker'. Instead, he emphasizes the significance of play as a "cultural phenomenon" in all activities of human civilization and refers to our species as Homo Ludens or 'Man the Player'. According to him, "we must be more than merely rational beings" since "we play and know that we play." He maintains that this concept of play is also an important element in the area of plastic arts, including architecture, and suggests that it could be located in the category of aesthetics. Aalto shared this idea through his friend Yrjö Hirn (1870-1952), an influential Finnish litterateur, who, in his book Barnleik (Child's Play; 1916), investigated the area of child's play and concluded that play is an innate human quality. In the text 'Experimental House at Muuratsalo', Aalto argues for the necessity for play in every architect's work. Nonetheless, he perceived that "a one-sided concentration on play" is only a "jest". His thesis was that the rational and logical approach to design should be accompanied by "the art of play", which can promote "a life-enhancing charm" in architecture.

Huizingha's idea that play "has its place in a sphere superior to the strictly biological process of nutrition, reproduction and self-preservation" can be applied to the relationship between form and function in architecture. Frank Lloyd Wright and Hugo Häring, the advocates of organic architecture in America and Europe respectively, asserted an indivisible connection of form and function in their designs. As Wright (1939) was loyal to the concept that "Form Follows Function" and even argued that "Form and Function..."
are One” (p.4), so Häring's organic functionalist theory of Leitsungform or content-driven form emphasizes the pure relationship between the two. This functional determinism, originated from the biological analogy, cannot but make a fallacy in reality as Philip Steadmann (1979) depicted, or at least, there is a gap between the principle and the actual building. Not all aspects of an architectural outcome can be explained by function only. In cultural and architectural phenomena, in contrast to biological ones, there is always an aspect that function cannot include. Huizinga argued that 'play' is one of these aspects, and Aalto's work expressed this concept. Though Aalto is often regarded as belonging to the 'organic circle' along with Wright and Häring, his room for play beyond function in form led him to diverge from them.

In most cases, however, Aalto's play does not remain as the architect's own vagary. Intuitive play elements in his design are quite often "astonishingly rational" and also symbolically functional. Moreover, various possibilities of interpretation that the metaphorical usage of the play element permits make the architectural experience more rich and abundant. This can be seen in the Paimio Sanatorium and the Viipuri Library. The free-formed entrance canopy of the sanatorium appears to be arbitrary and clearly playful. However, it is still practical because the shape generally follows the circulation route of cars around the entrance. Nevertheless, the shapes of the two ends – a straight line and a semi-circle – are inexplicable from the functionalist's standpoint. Yet the canopy, often called "Aalto's lung" by the nurses, can also be interpreted metaphorically as the architect's consideration for the patients who crave for recovery from lung disease. It accords with Aalto's claim for psychological reflection. In the Viipuri Library, the undulating ceiling of the auditorium had been regarded as an outcome of a scientific experiment, but the real acoustic effect is not as successful as expected according to recent research. Arguably, it illustrates a symbolic function rather than a practical one. As for Aalto's own house at Muuratsalo (1952-53), for which the cited text was written, the most playful element is the mixture of various bricks and tiles on the walls that surround the central courtyard.

4. Reviving Original Matters

The use of definitions for man, such as 'Homo Sapiens' or 'Homo Ludens', could be seen as our attempt to illuminate human nature deep-seated in our primitive mind. In a similar way, all of the discussions concerning a rational or functional matter as well as intuition or play are involved in architecture's primary concern. But it is beyond the dimension like the often-mentioned tripartite constituents in architecture of firmitas, utilitas and venustas from Vitruvius. Rather, it is more related to an original matter in architecture, that is, the basic motive of human dwelling. From this sense, the significance of Alvar Aalto is that his architecture ceaselessly reminds us of the fundamental relationship between architecture and man, which eventually becomes associated with nature. As Viollet-le-Duc illustrated, the beginning of architecture was possibly a "primitive hut" woven from branches, grasses and mud. This shelter is a dwelling space, in which man can escape from the driving rain.

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Fig.9. Paimio Sanatorium, Entrance Canopy.

Fig.10. Viipuri Library, Sketch Showing Acoustic Effect of the Undulating Ceiling.

Fig.11. Viipuri Library, Undulating Ceiling of an Auditorium.

Fig.12. Muuratsalo Experimental House, 1952-53: Collage on a Wall with Different Bricks and Tiles.

Fig.13. Primitive Hut, Viollet-le-Duc (1875).
and the threat of wild animals. He is protected there and feels safe. However, nature is not only a threat to man but is also an endless source of life. We take the breath of life from the earth, and nature nourishes us everyday. Architecture is a mediator between man and nature. That is to say, while architecture protects man from a fierce natural environment, it also leads him to the bosom of Mother Nature. This is the basic relationship between architecture and man. For Aalto, to reflect upon this relationship both consciously and unconsciously was more essential than merely adhering to a certain theory.

Aalto's Muuratsalo house is appealing not only because of his gesture of play or the experimental attempt, but also because of the profundity assumed by the enclosed courtyard. This enclosed outdoor space is the archetype of all human habitation. It gives us both physical and psychological comfort. The spatial inwardness expresses a man's basic instinct for a sense of security, which might originate from the forgotten memory of a mother's womb. Nevertheless, the Muuratsalo courtyard actually opens towards nature. Through a large opening in one side and a vertical trellis on the other; it is fused with the surrounding forest. As an intermediary space, it guides our transition from inside out to outside in. Wild nature is softened here and the carefree indoor mind prepares for the tough reality of the outside. And, the exact square form of the court does not become a stuffy geometry. Rather, it suggests the timeless value of the primary gestalt. Moreover, the fireplace at the heart of the court alludes to the primitive gathering around the fire. The glaring flame heats up the body and soul, and the shimmering light illuminates a spiritual aspect of the first community. This elemental image is touching at the level of deep human consciousness.

Behind these characteristics of Aalto's architecture, there is the unique natural environment of Finland. Located in the extreme north of Europe, the country fights against severe coldness every winter, and so nature was always an object of both awe and adoration. The natural wonder of the aurora borealis appearing in the night sky of the arctic region inspires man, while forests and lakes that cover most of the country allow Finns to adhere to the motherly soil. The alluding image of a forest and nature in the Finnish national epic *Kalevala* reveals the rapport with nature that is alive in their history and flesh. For Aalto, who grew up in "communion with nature" from his childhood onwards, it was obviously natural and fundamental to attempt to illustrate the Finnish natural environment through architecture. Arguably, one of the best examples that show a full association with nature is the forest image of the Villa Mairea (1937-39). Not only is it sited amid a pine forest, but the building itself also discloses several layers of forests. Arriving at the house after passing through woods, we come to face under the entrance canopy a screen of unbarked saplings, a sensitive intermediary between the real forest of the outer world and the microcosmic forest inside the house. In the entrance hall, sleekly finished poles appear to allude to trees in a wood. The main staircase is a miniature forest. Its poles stand in line, densely but randomly. When the sun sets, the evening glow that comes through the large window splits into many fractions in the screen of the poles, as though amidst a thick forest. Richard Weston (1992) regards the "forest space" as a decisive concept with which to appreciate the house, and describes: "Wandering around the living room, one experiences [...] something very much akin to the feeling of wandering through a forest in which spaces seem to form and re-form around us: in a forest, the individual feels himself to be the moving centre of its spaces." Finns, the children of a forest who were born in and educated by it, are awakened to the source of their...
existence by the forest experience in the Villa Mairea.

However, Aalto’s communion with nature does not mean that he remained in nostalgic naturalism. While natural elements are omnipresent in his design, the more significant quality of the design is its allusion to an origin concerning architecture and man. As Porphyrios (1980) argued, Aalto retrieved an “aura” that architecture had lost for a long time (pp.113-115). For Aalto, in modern architecture it became possible to keep the primitive and the modern side by side and to reconcile the two. Therefore, his design deserves to be regarded as an exemplary answer in architecture to Paul Ricoeur’s question: "how to become modern and to return to sources."n32

5. Conclusion

This research began with the premise that Aalto’s architecture is no less influential now, after modernism, than it was during modernism. However, this does not undermine his position as a modern architect. Without doubt, Alvar Aalto is a modernist. Even though his design illustrates some complexities and ambiguities, he always tried to resolve the contradictions – an attitude which differed from that of many postmodernists who do not hesitate to demonstrate the conflicts. No less than any other utopian modernists, he dreamed and tried to construct a harmonious society. Even when his optimism was repressed by the experience of reality, he would not abandon his last hope and stated: "You can't save the world, but you can set it an example."n33

Nevertheless, it is remarkable that Aalto’s design retains something that cannot be understood by the modern rationalist idea. This paper focused on this notion and attempted to investigate his architectural conception revealed by his own words. To sum up, this paper argues that the article ‘The Humanizing of Architecture’ best shows his critical stance towards the two. Therefore, his design deserves to be regarded as an exemplary answer in architecture to Paul Ricoeur’s question: "how to become modern and to return to sources."n32

relationship is reflected in Aalto’s design, directly and indirectly as well as practically and metaphorically, which is more fundamental in architecture than any other superlative theories. Therefore, this paper can conclude that Aalto’s architecture has a timeless value and that he demonstrated an example of humanizing architecture.

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Notes

1 "Alvar Aalto’s work has meant the most to me of all the work of the Modern masters. It is for me the most moving, the most relevant, the richest source to learn from in terms of its art and technique.” Venturi, R. (1977) ‘Learning from Aalto’, Progressive Architecture, 4:77, p.54.
2 "His historical significance has perhaps been rather exaggerated; with Aalto we are outside of the great themes that have made the course of contemporary architecture so dramatic. The qualities of his works have a meaning only as masterful distractions, not subject to reproduction outside the remote reality in which they have their roots.” Tafuri, M. and Dal Co, F. (1980) Modern Architecture, Academy Edition, London, p.365.
3 Concerning the events, see Blundell Jones, P. (2002) Modern Architecture Through Case Studies, Architectural Press, Oxford, pp.10-46.
4 Schildt, G. (1986) Alvar Aalto: The Decisive Years, Rizzoli, New York, p.227, and Zevi, B. (1956) Towards an Organic Architecture, Faber & Faber, London, p.57.
5 Aalto, A. (1940) ‘The Humanizing of Architecture’, The Technology Review, November 1940. Republished in: Schildt, G. (ed.) (1997) Alvar Aalto in His Own Words, Otava, Helsinki, pp.102-107.
6 Behne, A. (1996) The Modern Functional Building, trans. M. Robinson from Der moderne Zweckbau, Getty Research Institute, Santa Monica, p.138.
7 Gropius, W. (1956) ‘Houses, Walk-ups or High-rise Apartment Blocks?’ Scope of Total Architecture, George Allen & Unwin Ltd. London, p.125.
8 Blundell Jones, P. (1999) Hugo Häring: The Organic versus the Geometric, Axel Menges, Stuttgart, pp.36-39.
9 Colquhoun, A. (1976) ‘Alvar Aalto: Type versus Function’, Essays in Architectural Criticism: Modern Architecture and Historical Change, MIT Press, Cambridge MA, pp.75-82.
10 Concerning “Rationalism” in the early modern architecture, see Collins, P. (1967) Changing Ideals in Modern Architecture, McGill University Press, Montreal, pp.198-217.
11 Habermas, J. (1983) ‘Modernity – An Incomplete Project’. In: Foster, H. (ed.) The Anti-Aesthetics: Essays on Post-Modern Culture, Bay Press, Port Townsend WA, pp.3-15.
12 Adorno, T. and Horkheimer, M. (1997) Dialectic of Enlightenment, Verso, London, pp.xi-xvii.
13 Aalto, A. (1940) op. cit.
14 Ibid.
15 Ibid.
16 Aalto, A. (1953) ‘Experimental House at Muuratsalo’, Arkitehti, no. 9-10. Republished in: Schildt, G. (ed.) (1997) Alvar Aalto in His Own Words, Otava, Helsinki, pp.234-235.
17 This transition is best illustrated in his collective housing design. See Kim, H. S. (2006) ‘Another Tradition of Modern Collective Housing Design: A Study on Alvar Aalto’s Collective Housing’, Journal of Architectural Institute of Korea, 22(7), pp.147-154.
18 Peter Blundell Jones used the term to indicate Nikolaus Pevsner, Sigfried Giedion and Henry Russell Hitchcock, who were unsuccessful to embrace other traditions of modern architecture. Blundell Jones, P. (2002) op. cit., p.5.
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Le Corbusier (1925): 1/ Gropius (1956): 2/ Pearson (1978): 3, 8/ Reed (1998): 4, 5, 11, 12, 14, 15/ Weston (1995): 6, 7, 10/ Author: 9, 16, 17, 18/ Hearn (1990): 13.