

Natural materials and basic construction techniques. Aspects of neo-brutalism in current architectural experience

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ABSTRACT

Contemporary research in architecture recognises the enduring influence of neo-brutalist poetry in the simplicity of construction and simple linguistics of many developments inspired by minimalist asceticism that are important in Europe and particularly significant in Switzerland. In fact, there is the same preference for using untransformed natural materials and adopting basic construction techniques that facilitate the reading of these experiences as a continuum notwithstanding the different approach to form choices.

Indeed, although the two trends differ in terms of form since this is fundamental in minimalist poetry but purely transcription of the construction project, being mere consistency in time and space, in the neo-brutalist experience, they are similarly interested in an architecture based on construction techniques and the full visibility of the materials and their characteristics, on the unfinished and the imperfect. Through a new way of reading and interpreting the ordinary and the banality of daily life, the continuity of the two experiences manifests itself in the adoption of a basic technology that exalts the joints between elements and materials.

What emerges from comparing the development of the construction technique expressed in the projects of authors such as Peter Zumthor, and especially Herzog & De Meuron in their initial projects and the imperfect austere experiments in the London suburbs by Alison and Peter Smithson in the 1950s is that arguments now crucial to sustainability can be evaluated, arguments such as the use of materials not meant for buildings, the recovery of disused space and urban contexts unused instead of building consuming the soil, and more generally with reference to an architecture lacking the spectacular, able to draw its extraordinary characteristics from the communal world.

Keywords: *Construction Simplicity, Raw Materials, Legible Construction Techniques, Minimalism, Neo-brutalism*

INTRODUCTION

The present communication compares the main inspirers of two architectural trends both of which are marked by a strong feeling of concreteness. The first is the neo-brutalism developed in England in the early 1950s and the second is the minimalist asceticism that still underlies important projects today especially in Switzerland. How strong the influence exerted by neo-brutalist artists on the best architects who have been working in Switzerland for generations, above all in the Canton of Graubünden, has remained up to the present will be examined, notwithstanding the deep division over form that neo-brutalism rejects a priori

while in contrast minimalist asceticism deliberately pursues it. It can be observed on this subject that the first expresses formal indiscipline while the second expresses formal rigour.

In addition, the influence of neo-brutalism on architecture is found in other places today especially Germany (the production of Christian Schaller among others), in England (David Chipperfield), or in Japan (for example, the projects of Kengo Kuma) but it is in Switzerland that there it is possible to recognize the strongest, most coherent and continuous connections through generations of architects.

The well-known Italian architect Franco Purini clearly expressed his opinion about the relationship between the neo-brutalist poetic theorized after the Second World War and the Swiss one of today. He affirmed, in particular, that “the neo-brutalist tendency essentially inspired not only the initial works of Jacques Herzog and Pierre De Meuron, but also many constructions designed by Swiss architects - how the earlier projects of Peter Zumthor and many other examples demonstrate” [1]. Both cultural contexts share the prevalence of communicating the process rather than the project so that the experience gained in the neo-brutalist season theorised by the English couple Alison and Peter Smithson in the 1950s and today’s architectural experimentation in Switzerland can be read in conjunction. Shared aspects include appreciation and enhancement of the untreated condition of the materials, that is to say, the materials are at least left untransformed, and in particular, the construction procedure and contempt for the superfluous are emphasised.

The harmonisation of space and structure that the architect Peter Zumthor achieves with apparent facility is suitable to express the necessity criterion that animates the projects considered in the following pages.

The material culture forming the starting point of the creative process is the salient feature of the similarities between the two seasons under consideration here, that of the neo-brutalism in post-war years and the current Swiss one concretised in its full perceptibility, its sincerity of the materials, its simplicity of the functional connections and the construction plan.

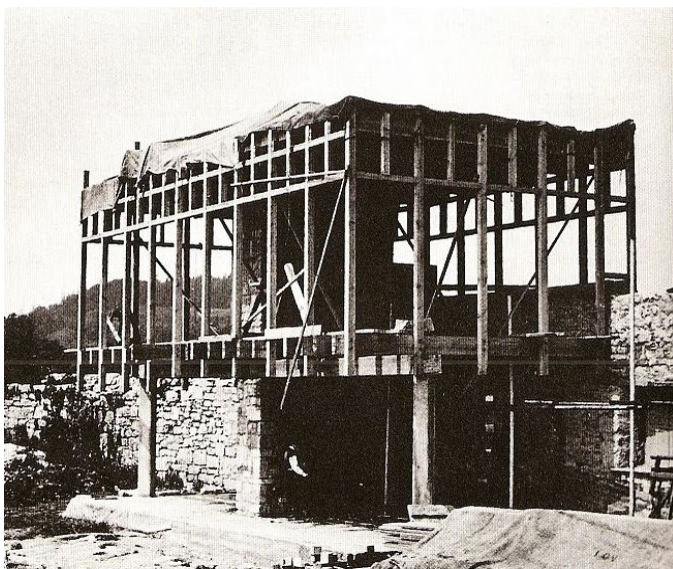


Figure 1 Alison e Peter Smithson, Upper Lawn Pavillon, Fonthill Abbey, Wiltshire (1959-62).

The small building belongs among the most celebrated developments representing neo-brutalist thought.

Figure 2 Jacques Herzog & Pierre De Meuron, Blue House, Oberwil, Basel (1979-80). The use of concrete blocks, painted blu in this case, relates this building to neo-brutalist theories for the frankness with which the materials are expressed and the clarity with which the methods of connection between the construction elements are exposed.

Fundamentally they both disregard the model of industrial development but rather emphasise artisan craftsmanship in the making of the product.

The neo-brutalist tendency concentrates almost exclusively on the materials and building process, rejects spectacular gestures and is indifferent to current fashion. The neo-brutalist experience is based on the undiluted exhibition of cement, brick, glass, steel, and wood. Thanks to neo-brutalist theories, the 1920s purism of rationalism was definitively superseded. In 1959 the eleventh and last CIAM (International Congress of Modern Architecture), held at the Kröller-Müller Museum in Otterlo in Holland, represented the passage to a new phase in the contemporary architecture history. Louis Kahn gave in that occasion a lecture significantly entitled *New Frontiers in Architecture*.

The Upper Lawn Pavillon built in Wiltshire in 1959-1962 (Figure 1, 3) and the Hunstanton Secondary School in Norfolk built in 1949-1954 (Figures 5, 7, 9) are two particularly representative architectures of neo-brutalism, significant testimonies of the work of the architects Alison and Peter Smithson.

For many critics architecture traceable to the minimalist asceticism in Switzerland constitutes one of the most interesting experiences in what now composes the heterogeneous panorama of the art of construction. Architects who follow the creative route of the London architects of the 1950s base their actions on a culture rooted in the material, including a heightened disregard of the superfluous. In addition to being poetic, every detail has to be a required part of the construction.

The two aspects even coincide. All that is not necessary in fact in the development and carrying out of the project is considered to be devoid of poetic value, that is to say, that to be rational, architecture must be natural.

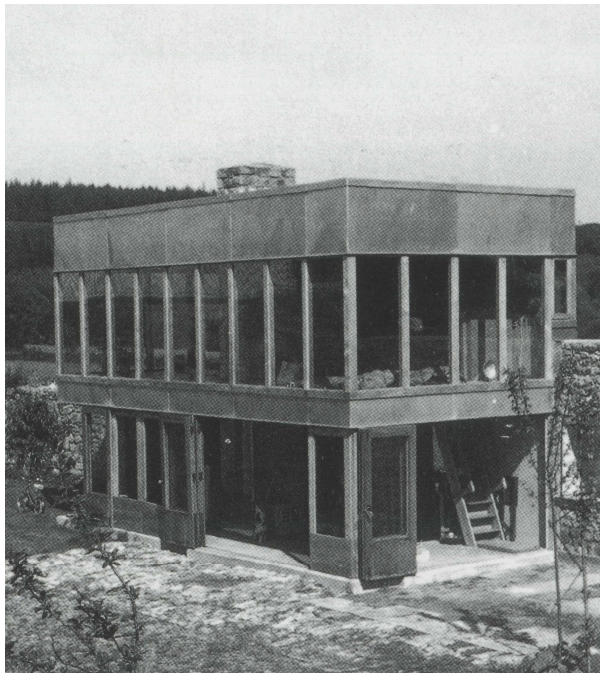


Figure 3 Alison e Peter Smithson, Upper Lawn Pavillon, Fonthill Abbey, Wiltshire (1959-62). View of the building after it was completed. Wood finishes are pine inside and teak outside. Designing this hybrid construction, the Smithsons aimed for a full simplicity and directness. Figure 4 Jacques Herzog & Pierre De Meuron, house for an art collector, Therwill (1985-86). Raw materials, including wooden frame and light concrete panels, clearly give shape to the building, as in the previous case of the architecture symbolizing the neo-brutalist tendency, the Upper Lawn Pavillon at Fonthill Abbey.

It is a question of conviction that refers to the concept of the *primitive hut* that, in contrast to the baroque, considerably influenced the culture of neoclassical architectural.

Indifference to the appearance of reality, rejection of the perfection, clear and essential expression of the construction procedure are characteristics shared by both the neo-brutalist movement and its strong ramification, the Swiss minimalist asceticism.

THE MATERIALS

The major distinguishing feature shared by these two trends is the use of untreated materials in constructions. The exact correspondence between materials and tectonic layout, the undiluted exhibition of steel, glass, wood, brick, and cement extends to the items of plant and equipment, to the electrical wiring, and to the plumbing so that everything to do with the building is clear in terms of both what it is and how it was built.

The workmanship excludes all forms of sophistication so that the opportunity to exploit the visual and tactile values of the materials used is not compromised and neither is comprehension of the way in which these participate in the construction dimension.

Nothing can ever be finished nor is. The materials are untreated, linked up in a frank relationship of hybridisation. These austere projects are characterised by imperfection, which coincides with the opportunity to modify the work. Indeed, they are imperfect to the point of seeming to be incomplete, as in post-war Britain.

The materials, the relationships and functional connections and the construction plan must be simple and easy to read in the knowledge that transition lines and passages - the in-between - are the most delicate nodes of the architectural production, and they have to be managed by measurement rather than spectacular gestures. The solution to the meeting of materials is formulated by expressing the function of the detail, by making the construction detail dismountable into its components. This is the classic characteristic of this architecture.

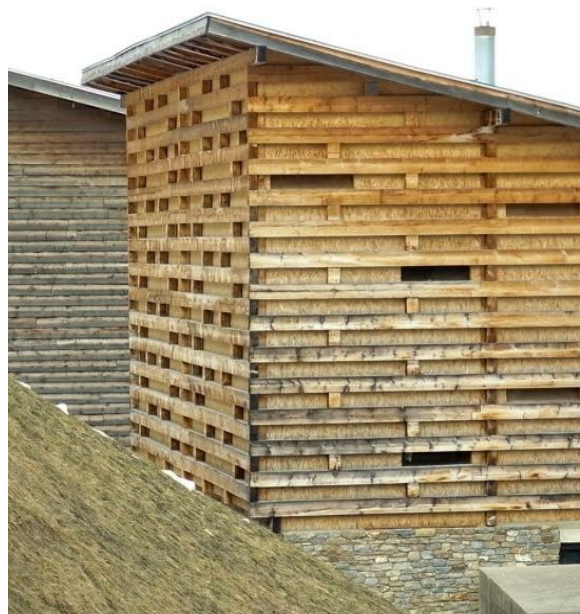
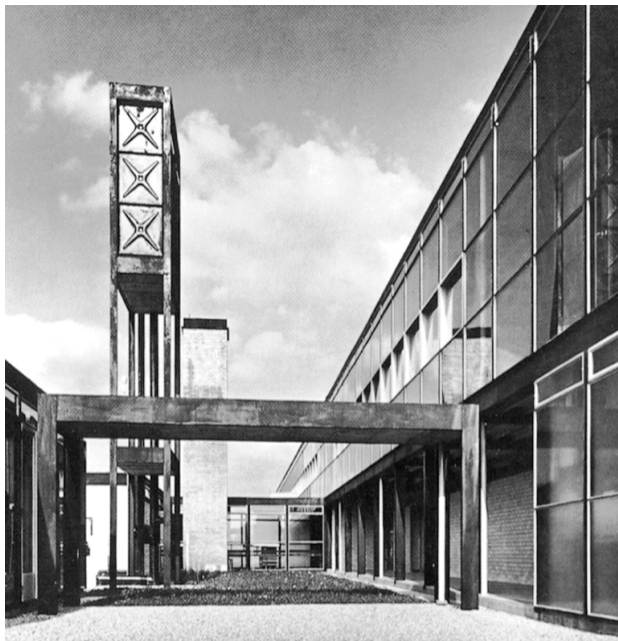


Figure 5 Alison and Peter Smithson, Hunstanton Secondary School, Norfolk (1949-1954), general view. The Smithsons' school, icon of neo-brutalism, exemplifies the post-war research into a new concreteness in architecture, superseding the abstractions of the Modern Movement.

Figure 6 Gion Caminada, barns, stalls, and abattoir completed in Vrin in the year 2000. The wooden rafters allude to the piles of timber in the surrounding woods.

Underlying this attitude is a reluctance to change the characteristics of the materials and a propensity towards a use that respects its integrity in agreement with a preference for a simple elementary construction technology.

Furthermore, the premium placed on the material, which must be clearly recognisable like the construction technique, is accentuated in the Graubünden school of architecture by being used in an untreated condition, that is to say, unfinished so that the project seems not to have been finished. This austere architecture is characterised by its imperfection, the undefined, and the opportunity to modify it. The principle of the unfinished represents an opportunity for the space to assume different connotations with the passage of time thereby rejecting rigid a priori rules. Nothing can be and is ever finished once and for all. There is no perfection able to turn the thoughts of a person away from reality.

The appearance of the building is revealed in the material, in the cement blocks forming the façades of the Blue House in Oberwil (1979-80) designed by Herzog and De Meuron (Figure 2) [2], in the reduced meaning and language of the stone of the Gelbe Haus in Flims by Valerio Olgiati (1995-99) [3], in the wood of Saint Benedict's chapel in Sumvitg by Zumthor (1987-89) [4], in the stacked cement panels of the art collector's house at Therwill (1979-80) by the same Herzog and De Meuron (Figure 4) [5], and in the cement of the house in La Giète Délé (2013) by Laurent Savioz (Figure 14) [6]. In addition, among the projects representing this trend occurring in Switzerland are buildings for agriculture and livestock in Vrin (2000) by Gion Caminada (Figure 6) [7] whose rough-hewn wooden rafters allude to the piles of timber in the surrounding woods, the wooden productions of Jürg Conzett (Figure 8) [7] such as the bridge at Peiden Bad (2000-2002), a material which has a special organic preindustrial value, the clear, sharp, distinct, shiny texture of the façades built by Valentin Bearth and Andrea Deplazes for the Gallery of contemporary art in Marktoberdorf (Figure 13) [8], or the research on materials produced by Corinna Menn (Figure 12) [9].

The willingness to experiment with materials from sectors other than those traditionally belonging to the construction area is part of the openness of the trend under examination.



Figure 7 Alison and Peter Smithson, Hunstanton Secondary School, Norfolk (1949-1954).

Wash basins in the baths that expose the components of the plant and equipment to view.

Figure 8 Jürg Conzett, Bridge at Peiden Bad (2000-2002). On another scale, here the elements that give the product its shape and form are also exposed to view which explains how the function is performed.

Metal frameworks, scaffolding tubes, corrugated sheets, and engineering panels are considered to be potential instruments for constructing.

Any material can be used. There are no good or bad ones but only well or badly used ones. This attitude is the only one that makes planning independent of the methods available, increasing freedom compared to the conditioning of the market. What counts is actual experience in using the construction material in buildings.

THE CONSTRUCTION PROCEDURE

Showing how things function and leaving each item to humbly speak of its own overall function with concreteness encourages knowledge of the phenomena composing the environment. The whole building must be clearly legible. The workmanship excludes all forms of sophistication because the opportunity of exploiting the visual and tactile values of the materials used has not to be compromised and it is crucial to facilitate comprehension of the way in which materials participate in the construction dimension.

Solutions for the construction programme must be simple in the knowledge that the most delicate places in architectural production are the transition lines and the situations of passage. This is a choice that favours information on the construction process rather than exhibition of its result. The principle of undiluted exhibition extends to the plant and equipment, to the electrical wiring, and the plumbing so that all of the building has clarity.

It is an architecture that searches for a balance between the traditional and the future and does not make a show of technology and techniques. It is an architecture which is discrete but this does not make it weak. It is easy to ascertain how the exhibition of the tracks of the construction procedure is an integral part of most of the project by Jacques Herzog and Pierre De Meuron, by Peter Zumthor, Valerio Olgiati, and Laurent Savioz, and generally speaking the architects in the previously mentioned area of Switzerland.

For example, Zumthor used the material to obtain the building's image by showing the traces of the construction procedure, demonstrating the decision to work with primary elements that seem to be obsolete under certain lights and the building's image describing the simplicity and austerity of the aesthetics he adopted. In particular, the District School of Churwalden (1979-83) (Figure 10), that can be directly compared with Smithson's Hunstanton Secondary School, can be interpreted as expressing his poeticism, as well as the Swiss Pavilion at Expo 2000 in Hannover (Figure 11), presented as a perpetual work in progress.

In general in both the neo-brutalists and the Swiss school under discussion, there is an analogy between honesty in the sense of there being no faking in the composition of the architecture and the need for sincere comparison with reality. The social role of architecture is expressed in the sincerity of the construction, which is represented by the correspondence between materials and tectonic layout being as exact as possible.

THE REUSE OF DISUSED SPACES

Both neo-brutalism and asceticism promote the transformation of the disused buildings into renewed daily life that used to animate them. The practice of renovation not only includes a strategy for redeveloping the abandoned and degraded property but also a real and true attitude of rediscovering tradition and cultural heritage. The answer to identifying and controlling run down areas is found in carefully checking the territory in which the project lies. Compared to the consumer society, the architecture of the post-production era is derived from new ethics and is related to direct experience in the society and substantiated in bleak austere spaces.

The practice of regeneration is not only a strategy of renovating abandoned degraded real estate but a true philosophy aiming to value tradition and cultural heritage.

Searching in the communal world for something new with an exceptional nature constitutes another shared characteristic. The *as found* ethics, the attitude of considering the reality and excluding every idealistic schema, referring to unsophisticated meanings in name, untransformed, natural, sincere, truthful, highlights unusual and original aspects derived from the research on peripheries, disused spaces, and direct comparison with the inhabitants. The *as found* poetry represents a precise methodological investigation of reality, a world of seeing things with more ethical than aesthetic intuition. It means the ability to draw the characteristics of unicity from the ordinary world by using sensory perception as an instrument and by emphasising the aspects of normal life forming part of a poor reality.

“The *As found* attitude is antiutopian, and the properties of the things it brings to light are those of directness, immediacy, rawness, and material presence. *As found* is a concern with the here and now, with the tangible and the real - not with high-flown visions and enraptured ideals” [10].

In using the *as found* culture, the Swiss architects search for a new exceptional nature in the ordinary and commonplace found in the ordinary world, including the possible use of materials. The object found, the residual and the raw material are the means of expressing the new search that tends to generate an ever stronger bond between art and the complex reality of daily life.

ETHICAL QUESTIONS

Another shared characteristic connected with the theme of materials and readability of the workmanship is the tendency to express the search for an austere life based on archaic values, on ethics and on spirituality, because, as Zumthor describes, “a special strength lies in the ordinary things of daily life” [11]. The analogies with neo-brutalist thought about the material environment feed directly back into the spiritual dimension.



Figure 9 Alison and Peter Smithson, Hunstanton Secondary School, Norfolk (1949-1954), central hall and auditorium.

Figure 10 Peter Zumthor, District School, Churwalden (1979-83). View inside the gymnasium. In this building, as in the previous case, the architecture is expressed by the construction components being shown. The skeleton of the structure asserts its right to be seen. It need no longer to be clothed for eye appeal.

These analogies suggest that architecture is a way of life, an interest in a more ethical than aesthetic project, rejecting the sophistication of reality and the image, and embracing the concept of transparency, with a passion for an architecture impoverished in appearance but strong in concreteness, projecting a direct image. Furthermore, the clear expression of how things function now contributes to raising the ethical quality of the project.

In the margins of the operators' awareness of project's social responsibility, these experiments are based on the use of appropriate materials and techniques, on the absolute construction necessity for detail, on the honesty with which the inbetween and the transition points are resolved, and on negation of theatrical gestures.

While the market is clearly increasingly perceived as dictating the rules and making space its instrument, and the design activity increasingly as the result of exclusively financial and marketing operations, awareness of ethical responsibility in the project and sensitivity to tradition and social requirements which are always resolved in a cultural purpose are found in some contexts. Today the market is considered to be a living method, architecture is designed using the market's rules, whereas the ethical message and policy of neo-brutalist artists involved the use of architecture for society.

The Swiss architects, and particularly the Graubünden ones, promote an aesthetics that on the one hand communicates the building's and the material's honesty and simplicity whose roots are in the thoughts of the post-avant-garde, and on the other hand places a premium on the pureness of form. Sensitivity to tradition and awareness of architecture's social responsibility attempt a sincere comparison with reality according to project ethics that always have a cultural and social purpose. In conclusion, this trend in Switzerland expresses an architecture that does not want to amaze but is discrete and lacking in novelty.



Figure 11 Peter Zumthor, Swiss Sound Box, Swiss Pavillon, Expo 2000, Hanover (1997-2000). Detail. The pavilion was constructed with 144 km of lumber with a cross-section of 20 x 10 cm, totalling 2,800 cubic metres of larch and Douglas pine from Swiss forests.

Figure 12 Corinna Menn, Reihenhäuser Forellenstube, Tamins (2006- 08). Internal view showing the full expression of the construction materials.

It is irritated to the point of anger if intruded upon, and demonstrates how function and materials used for the parts converge to compose the form, and how they have their own social role of making people aware of the environment.

CONCLUSION

Exploring the opportunity to use materials and craftsmanship including those from other sectors outside the construction industry is growing in architecture today. For reasons connected with both protecting health and to safeguarding the environment, particular attention is paid to the industrial transformation of the materials whose results through time are not easy to verify.

Sometimes the adoption of a prudent attitude prevails, aiming to use untransformed construction materials while fully integrating the architecture with the natural environment. The connections between the two cultural contexts considered here are appreciable in terms of the concreteness of the approach and the strict relationship with the real world that excludes abstract ideological installations.

The use of unfinished, hardly processed, and authentic materials and the decision to expose the construction methods in the building readable corresponds to a life choice, an option for freedom and the possibility of using space to shape the future, and assumes different connotations with the passage of time. The principle that matters is that the detail is transparent, that the method used to join the construction elements together is legible.

The persistence of neo-brutalist aspects in architecture today is therefore a stimulus to developing further experience in the building field specifically centred on the relationship between architecture and society, the role played by technology, on the frank use of local material, the importance of public spaces prepared by recovering and converting disused spaces, all of which is part of the sustainability scenario.



Figure 13 Valentin Bearth, Andrea Deplazes, Gallery of Contemporary Art, Marktoberdorf (1998-2000). The construction bodies of the museum are constructed of masonry in three-headed clinker exposed on both the inside and outside.

Figure 14 Laurent Savioz, house in La Giète Délé (2013). Here the transformed construction stone is integrated by concrete. Both are exposed to view.

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