The Hybrid Practitioner

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Published by Leuven University Press

Thomas, Helen, et al.
The Hybrid Practitioner: Building, Teaching, Researching Architecture.

For additional information about this book
https://muse.jhu.edu/book/102693
New viewpoints unfold when buildings are recognised as built testimonies to a slow and often painful design process in continuous motion, rather than perceived as a static result of an unwavering success story. Examining architecture as process creates the potential to consider construction and materialisation itself as place of cultural production, a project seen in relation to local circumstances and available sources, while revealing alternative histories and exposing hidden players. The contributions in this section bring tools and techniques from architectural practice into play within academic conventions. To start with, Wilfried Wang makes an explicit plea for a return to the object: the construction and materialisation of a project as the ultimate place of cultural production, researching the local circumstances and available sources that lead to its realisation and, in the process, producing new insights into the processes and intentions of the designs. Paulo Providência retraces the numerous sketches made by Álvaro Siza Viera’s for the Porto School of Architecture. His re-enactment provides an understanding of Siza’s contextual strategy as one that combines a meticulous reading of the site with continuous, subtle readjustments of the design. Luis Burriel Bielza employs examples from computer modelling, testing their value as tools for academic analysis and reflection. Burriel’s drawings produce alternative insights, that nuance, and in some cases even contradict, the original architects’ intentions, using the Villa dall’Ava by Rem Koolhaas as a case in point. In conclusion, Simon Henley reads his own projects in reverse, deconstructing them into discrete components. A detailed reading of the element of the wall reveals the full complexity of its construction, and the theorisation arising from this fragment suggests a way forward for operative theory.
CHAPTER 20

Understanding Architecture

Wilfried Wang

1. Introduction: Understanding and Judging Buildings

The majority of architectural media and schools of architecture work under the assumption that new buildings will continue to be the main task of architects. At the same time, architectural quality is rarely evaluated. The principle of the freedom of expression is used as an excuse in the race towards ever-more spectacular shapes and ever-more esoteric justifications for formalist design approaches. The principle of appropriateness to ecological, social, cultural, or political contexts is considered a spoilsport. Given this dominant context, it is imperative to understand built culture so that we develop the appropriate design concepts in maintaining and improving as much of the existing fabric as possible and in building better when it is necessary to do so.

As the era of rapid and conspicuous consumption comes to an end and civilisation faces the challenges of adapting its life styles to mitigate the effects of climate crisis, the opportunities for the construction of new buildings should be taken with the requisite earnestness. It is no longer acceptable to compromise the quality of building by following the conventional shortcut towards immediate gratification and ignoring the core Vitruvian tenets that a building should exhibit the qualities of firmitas, utilitas, and venustas, translated into contemporary terms as sustainability, adaptability, and aesthetic delight.

We need to understand how buildings succeed or fail to be sustainable, adaptable, and appreciated. While all buildings are superficially the same – they are all made of matter; they stand up, provide shelter, have facades, contain spaces on the inside – some buildings last longer than others, some are more flexible and adaptable than others, some are more carefully designed and assembled than others and are therefore more appreciated by users and observers.

Before buildings come into existence, it is possible to evaluate their constitutive qualities, their likely overall design quality (as defined above), and their impact on society and the environment. Some of the building’s aspects can be objectively assessed (e.g. life-cycle analysis), others relatively compared, and others still subjectively gauged. The person undertaking this analysis of a design on paper needs to be practised in the reading of written and drawn documents,
as well as possess a well-developed sense of spatial and material imagination to compensate for the absence of real space and form.

Once realised, buildings are incontrovertible physical evidence, leading an existence distinct from spoken or written words, drawings, or photographs. Therefore, regardless what critics, politicians, clients, architects, and others might claim about buildings, their real presence in a specific physical and cultural context can be analysed and evaluated independently from such statements. Conscientious architectural research is therefore publicly transparent, scientifically analytical, and independently verifiable, in short, forensic, according to the Latin origin of the word.

However, rather than investigating buildings in their pathological or criminal dimensions – some buildings indeed possess these, for example, mass housing schemes in conjunction with their occupational regimes – the goal of any research into buildings is to identify their sociocultural ambitions, their contribution to the architectural discourse, and their architectural achievements. Research should uncover a building’s character of reality. By that is meant the identification of the embodied intentions: How would the world be constituted and represented if only all buildings were designed and built along the same lines as the building under investigation? Every building expresses a world view, whether consciously or not.

At a basic, quotidian level, we need to understand buildings because we need to ensure that buildings reach an overall minimum design quality. In simple technical terms, most societies have planning regulations and building codes. At the most ambitious level, we should expect that buildings constitute and represent our social and cultural aspirations. We should strive for buildings to be appropriate for their tasks, that they accommodate normal needs while others should rise above this to celebrate communal values. Some buildings need only be comfortably modest; others should inspire and become symbols of a period and a society.

However, the sad reality is that few people are concerned with questions of architectural quality. Neither politicians, nor clients, not even the majority of so-called architects are interested in this. If they were, there would be better buildings in the world.

We need to understand buildings because we need to design and build better buildings. We need a differentiated understanding of buildings because we need to know when, where, and how to apply our knowledge. As diverse as society is, as varied as our needs are, and as specialised as the activities in our settlements are, we need to design buildings appropriately in response to each of these conditions. That means that not every building should be an icon. We want to learn from buildings so that we can instil in those interested in designing and building an awareness of what is appropriate, a sense of quality as well as an idea of the scope of what has been achieved and what might be possible.
Built Reality

Buildings create reality; they create facts. This reality is not only spatial as well as physical but also bears intentions and meanings. Buildings can consist of symbols, and they can also be symbols themselves.

Buildings are objects in a context; they are “figures” against a “ground.” They differentiate themselves from the context and from others. The act of differentiation is spatial and physical and can be read in terms of the underlying intentions and meanings.

At the level of a building’s component, a wall differentiates between two sides; further, an enclosure defines an interior and an exterior. The factual clarity of such spatial and formal divisions establishes social and cultural values. A wall between two groups of people can be used to separate these two groups. An enclosure around a group of people can both protect as well as control, even incarcerate.

The way such walls or enclosures are constructed and the way that such constructions appear – whether the walls are made of massive materials or of different layers with an outer, visibly decorative surface – can be analysed and evaluated in relation to their actual intentions and perceived meanings.

The way that a given building constitutes intentions and meanings can be compared to the way it actually represents these intentions and meanings. However, just as in any other form of human expression, what is truly intended in an expression is not necessarily what can be observed on the face of it. For example, some architects like to describe their designs with metaphors. The terms rue corridor or streets in the air were used by architects to evoke richer associations than the reality they were able to create. The phrases were coined to blur what was built rather than to precisely describe how the designed spaces really perform. A rue corridor inside an apartment building is not a street, since it is neither a public space nor is it connected to a network of streets. The mismatch between an intention, stated in a phrase such as rue corridor, when analysed, reveals the rhetorical device, in this case the phrase is a hyperbolic metaphor.

The rhetorical devices themselves, by which buildings mediate between the constitution of a physical and spatial presence and the representation of a sociocultural context or value system, are subject to analysis. Any building analysis can be both exhaustive as well as subject to selective examination at junctures where indicative or characteristic revelations provide the key to the comprehensive understanding of the whole.

Buildings as Primary Evidence

In the way that buildings create facts, they offer themselves to be analysed and evaluated through their prima facie composition. Understanding buildings rests on observers looking at the physical evidence before them. Built reality supersedes spoken or written discourse. Built reality is primary evidence.
Describing and Analysing Buildings
Facts require description before they can be analysed. The methodology that
is presented here in outline only was developed as part of a three-year fellow-
ship (1981–1984) within Florian Beigel's Architecture Geometry Research Unit
at the former Polytechnic of North London (currently known as the London
Metropolitan University). A descriptive method for building elements led to an
analytical method for the evaluation of building designs. This was subsequently
integrated into a theory of architecture.

2. A Theory of Architecture

The focus of this theoretical approach is to describe and value the connections
between the physical manifestation of a built edifice on the one hand and its
sociocultural significance as well as its spatial and formal qualities on the other
hand. Any building can therefore be described in its formal and spatial com-
ponents and overall composition. In acquiring information on the building’s
context, both physical as well as sociocultural, it becomes possible to deduce
the building’s significance, its impact on the sociocultural context, and the
contribution it makes to the larger architectural discourse.

In the preparation for the descriptive and analytical method, the largest
impact was made by Paul Frankl's *System der Kunstwissenschaft,* given its struc-
tural clarity and its comprehensive definition of art theoretical terms. The mor-
phological variables were derived from Frankl. The concept of morphological
categories was formulated independently.

Figure Against Ground
The factual basis of any phenomenon rests within the difference it establishes in
contrast to a context. Its recognisability depends on the degree of differentiation
from the context or background. Similarly, the joint between two objects or the
abrupt change in direction on a surface permits a distinction to be made. In
other words, articulations permit parts to be identified. Buildings are assemblies
of parts and each articulation can be recognised for the syntactic and semantic
meaning it contributes towards the overall statement.

Parts to Whole
Buildings consist of parts that are composed into wholes, which in turn can
become smaller elements of larger wholes. For example, a wall could consist of
blocks, and a group of walls could enclose a space. Buildings are understood by
examining the material and spatial composition of parts to wholes.
Morphological Categories of Building Components

The activity of building has structured the way all societies think about its components and the resultant wholes. There are five morphological categories to the composition of buildings that are logically related by way of a hierarchical, telescopic concatenation:

1. constructional
2. tectonic
3. compartmental
4. configurational
5. contextual

Assembling elements of the constructional category renders wholes, which in turn become elements of the tectonic category, and so on.

Buildings as Ways of Making the World

On the basis of understanding buildings as primary evidence, the aim of any building analysis and evaluation is to further understand the building’s implicit or explicit intentions and effective contributions to the making or shaping of the world. Which elements of a building adhere to convention, and which parts intend to reform or advance contemporary practice? How do buildings support or contradict the status quo? To what extent do the parts of a building or does the building itself change common practice, conventional patterns of use or entire lifestyles? Are the designer’s claims to innovation justified, or is it simply just another bold but unsubstantiated assertion, if not a downright item of fake news?

Architecture as a Conscious Act of Building

The goal of understanding buildings is to identify their ambitions and their contributions to the discourse, their achievements as part of the culture of building. Insofar as buildings are recognisably making a conscious contribution to building culture, they can be considered pieces of architecture.

Qualities of a Building

Qualities are compared against criteria. For example, the life expectancy of a building material is known; its interplay with other elements, when properly detailed, can ensure that a building component meets that maximum life expectancy. The long endurance – firmitas – of a building material and a building component can be considered to be a desirable, positive quality. The durable quality of a material of component can be measured objectively; it is an immanent quality. The designer’s choice for a specific period of endurance can be assessed by an external observer in terms of both immanent requirements as well as subjective preferences.
The different uses that a building can accommodate over its existence is limited, but could nevertheless be relatively large in range. The fitness of use – *utilitas*, the way that spaces in a building can ideally, comfortably, or merely adequately accommodate use patterns – is a *relative* quality. Further, buildings possess different degrees of flexibility based on the constructional system’s adaptability and the spatial typology. A building’s flexibility is a quality that is also objective, inherently defined by the building’s morphological constitution as well as by designers’ ability to imagine change.

Similarly, the way that people feel protected in a space to the way that a building is seen to harmonise with its context, go beyond functional fitness, and touch on psychological and atmospheric sensations. While shapes of spaces and forms, even resultant atmospheres can be described objectively, their evocation of beauty – *venustas* – is *subjective* and varies from individual to individual.

**Design Quality**
Given that buildings consist of different components and intentions, it is possible to evaluate the quality of each component and intention in relation to the contribution a building makes towards both the whole and to the cultural context. A building has a high level of design quality if the compositional and intentional relationships of the parts to the components and to the whole are logically coherent, mutually reinforcing and spatially and formally integrated, and if the building fulfils the designers’ stated or implied intentions. Such intentions can be as abstract or theoretical as designers might like; no building is exempt from being analysed on its own as a built fact. The quality of a design, of a building, as a singular term is a synthetic judgement.

**3. Exemplary Building Research**

There have been few cases when buildings have been presented in a way that has made them come to another life other than their mere representation in videos, photographs, or printed words. For example, Neil Levine’s brilliant lecture on Henri Labrouste’s Bibliothèque St. Geneviève at the AA’s symposium on neoclassicism gave the audience an insight into what comprehensive research could mean. Hermann Czech’s meticulous analysis in his book on Adolf Loos’s Goldman & Salatsch Tailors & Outfitters provided another such experience. These provided the inspiration and challenge to probe both un-built and realised designs, and, in the course of building research and through the acquisition of conceptual, compositional, and constructional experience, the description and analysis of buildings became more precise and permitted more immediate pinpointing of the key aspects of specific designs and their intentions. The following are a selection of such research cases.
Fig. 20.1  Analytical diagram of the floor plan of the German Pavilion by Ludwig Mies van der Rohe, Barcelona (1929), showing the implied central axis of the “house” or served part and the implied square of the servant part. Diagram by the author on a plan published in Juan Pablo Bonta’s book Mies van der Rohe, Barcelona 1929, Barcelona, Editorial Gustavo Gili, 1975.

Fig. 20.2  Analytical diagram of the upper floor plan of the New National Gallery by Ludwig Mies van der Rohe, Berlin (1968), showing the two interlocking rectangles. Diagram: Wilfried Wang.
Ludwig Mies van der Rohe

Early topics of analysis continued from research carried out by others, for example, in 1979, I carried on from Wolfram Hoepfner and Fritz Neumeyer’s study of Peter Behrens’s Wiegand Haus, built in 1911 in Berlin. The research was published in the magazine 9H. Ludwig Mies van der Rohe’s direct involvement in this domestic project, his evident fascination with the typology and proportional systems of the Wiegand Haus, led to his development of abstracted versions of the underlying served to serviced typology in houses of the same period as well as to his later interwar brick houses in Krefeld. The ultimate instance of this relationship can be found in the New National Gallery in Berlin.

Alvar Aalto

This interest in tracing typologies and proportional systems has continued throughout my research activities; for instance, it was the basis for looking at Alvar Aalto’s predilection for U-shaped configurations with emphasised high points. It became clear that Aalto had pursued this idea of encapsulating humanity’s progress from primary forms of life to the utmost manifestation of the human spirit as expressed through the fine arts from the Villa Mairea to the Cultural Centre in Wolfsburg.
On a related note, studying Sigurd Lewerentz’s St. Petri Church in Klippan revealed a similar programmatic inscription in the underlying spatial thrust of the building complex as can be found in Aalto’s Cultural Centre.\(^8\) Besides the reflexive ontology expressed in the church’s architectural language,\(^9\) the five central ceremonies or marriage, baptism, communion, mass, and confirmation are aligned along the diagonal of the nave and the parish offices. Lewerentz returns to a topic that he had integrated in his first crematorium project for Helsingborg in 1914.

Heinrich Tessenow
What appears to be conservative, a temple-fronted festival hall, as in Tessenow’s auditorium for Hellerau, was in fact a collective work of art. The pioneer of rhythmic dance Émile Jacques-Dalcroze, the innovator of abstract stage design Adolphe Appia, the experimenting artist Alexander von Salzmann, and Heinrich Tessenow were the beneficiaries of Wolf Dohrn, the Maecenas of Hellerau’s Educational Institute for Rhythmic Gymnastics Jaques-Dalcroze. This was an early twentieth-century successor to the nearby festival town of Bayreuth, Richard Wagner’s chosen site for his operatic version of the Gesamtkunstwerk.\(^{10}\)
Tessenow’s interpretation of modern abstraction was indeed an attempt at conserving archetypes, but they were highly refined humane attempts, contrary to the assertive brutality of the resuscitated neoclassicism of one of his students: Albert Speer.

Hans Scharoun
For many architectural critics and teachers, Scharoun’s work remains an enigma. The Philharmonie remains an unrivalled sociopolitical manifestation of absolute architectural clarity. The concert hall declares the possibility of the lightness of the newly established democracy, as an antithesis to Albert Speer’s megalomaniacal capital of the world. The auditorium’s inclined blocks of seats celebrate the strength of the group in balance with the orchestra, as opposed to the indistinguishable fanaticised mass that the Nazi regime envisaged.

Fig. 20.5  Analytical diagram of the upper floor plan of E.1027 by Eileen Gray, Roquebrune (1929), showing the pervasive application of the Golden Section in the composition of elements. Diagram: Wilfried Wang.

Eileen Gray
The extended and comprehensive study of Eileen Gray’s E.1027 in Roquebrune has provided a true understanding of what building research means. There is not an equivalent total work of art undertaken by one person of the early twentieth century. As casual as it looks, as poorly constructed as it was – in the
bric-à-brac manner that persists to this day in this part of the world – its intentions were universal and its inventiveness astonishing. As her first piece of landscape architecture, architecture, interior, and furniture design, Gray managed to make the entire composition look relaxed, open, unspecific, and undogmatic. And yet, a few clues left to the archive of the Victoria and Albert Museum such as the drawings of the Golden Section and the Golden Rectangle provided the key to unlocking the underlying compositional rigour that underlies this design. The four years of research were crowned by a full-scale installation of the master bedroom at four venues.

Álvaro Siza
The interest in the work of Álvaro Siza has endured since the 1980s. The Boa Nova Tea House is as fresh as it was in its year of completion in 1963. Siza’s projects for Berlin remain potent exchanges with the city’s complex history. His school of architecture in Porto is specific to its site, city, and cultural context, yet it is also generally relevant as an enlightened educational institution. The Church for St. Jacques-de-la-Lande in Rennes is proof that it is possible to circle a square. In contrast to many of his colleagues of a similar age, Siza’s work has remained meaningful, architecturally innovative, and of the highest cultural ambition.

Fig. 20.6 Escuela Nueva Esperanza, Puerto Cabuyal, Manabí, Ecuador (2009). Architects Al Borde, Quito.
Al Borde
Directly answering needs, the young practice of Al Borde of Quito, Ecuador, pursues a contemporary form of bottom-up architecture. The accumulated academic design knowledge is filtered through the daily realities of communities without financial means but with basic needs such as a primary school for a fishing village on the Pacific coast. Given that the “clients” only had $50 for the school building, Al Borde nevertheless agreed to undertake this task by engaging the villagers themselves for the construction as well as local material. Al Borde is one of a number of pioneering architects working outside the starchitecture circle, addressing energies to real needs.

Fig 20.7  Can Gabriel, apartment conversion before (a) and after (b) plans, Mallorca (2012). Architects TEd’Arquitectes, Palma de Mallorca.

TEd’A arquitectes
Behind the cryptic name of TEd’A arquitectes stand Irene Perez and Jaume Mayol. The practice is refreshing in its direct use of local crafts without resorting to any regionalist kitsch, its inventive detailing, its spatial and formal precision, and its synthesis of the great architectural themes with everyday tasks – in other words, their sensitivity for knowing when to say what in a dignified way.14

4. Conclusion

The analysis of individual buildings has permitted reflection on more general architectural topics such as the abiding relevance of the sublime and the picturesque or the differences between minimal and minimalist, or modern and modernist, architecture.
In the context of climate change, the 2003 essay “Sustainability is a Cultural Problem” makes the case that measures against climate change will need to begin with redefining cultural ideals and that the reliance on innovative technology will lead to failure. Subsequently, the 2020 essay on “Site-Specificity, Skilled Labour, and Culture: Architectural Principles in the Age of Climate Change” argues that, for architecture to become sustainable, it needs to embrace principles that ensure an immediate connectedness between regional resources and craft construction techniques to contribute to a lasting and stable regional culture. It is a summary reckoning with the failures of technocratic modernism and a plea for an architecture in the coming age of climate change that acknowledges the unique qualities of place, the creative role of skilled labour, and the need for the presenting of physically constructed culture – as opposed to placeless virtuality – as the matrix for our existence:

designing architectures in the age of climate change could give rise to the creation of authentic identities that are based primarily on specific responses to the sites in their climatic, physical, and socio-cultural dimensions. Skilled labor with knowledge of and experience with regenerative or recyclable materials is needed to translate sustainable designs into credible and legible tectonics and construction details. […] Culture in the age of climate change should mark the beginning of the reversal of the process of autonomy to a process of synergy between nature and humankind. In this necessary transformation, existing buildings and settlements play the main role; new buildings and new settlements should be the exceptions.

Future generations of architects need to be nurtured in the culture of care, in the knowledge and skill of looking after the built fabric. The future hierarchy of importance should be

maintenance and renovation first, before adaptation, addition and replacement. It means recognizing the built environment as a large part of civilization’s heritage. […] It means facing the reality of professional life that a large component of building activity in industrialized countries has to do with the maintenance and renovation of the built fabric. […] It means elevating the task of the small intervention, the self-effacing renovation and adaptation to a cultural goal. […] It means transferring knowledge and aesthetic sensibilities from the specialist to the people.
Notes

2. Rhetorical figures of composition and of conception.
13. The full-scale installation of the Master Bedroom from Eileen Gray’s E.1027 was exhibited at the School of Architecture, the University of Texas at Austin (autumn 2017), subsequently at the Akademie der Künste in Berlin (summer 2019), the Faculty of Architecture, University of Porto (autumn 2019), and at the Basque Institute of Architecture (summer 2021).

Bibliography


