Architecture Studio Teaching: Breath-taking Architecture

Letiția BĂRBUICĂ¹

¹University of Architecture “Ion Mincu”, Bucharest, Romania.

letitia.barbuica@gmail.com

Abstract: Rem Koolhaas and Herzog & de Meuron share the same interest towards innovation in architecture. Koolhaas is in search of "a certain breakthrough" as declared in his 2011 conference at the Barbican Centre. For Herzog & de Meuron, the materials they use in new ways and with innovative juxtapositions are both a source of inspiration and their final architectural aim.

Koolhaas works on existing architectural programs in the same way as programming a computer. He introduces data and redesigns pre-existing software, resulting in a series of captivating spaces, never before seen, that can accommodate flexible and variable architectural programs.

Herzog & de Meuron start from a space of total freedom: "We have no recipe, no ideological basis, as for example Rossi or the modernists had." (Capezzuto, 2000)

It is worth investigating their works and the way they do architecture in order to understand how 'the new' can create breakthroughs in the development of truly breath-taking architecture.

What are the effects on the architectural process of starting from the materials' expressiveness? What can we learn by starting from the outside in, from texture architecture? In which way can these ideas be used in teaching architecture?

This study gives a set of teaching points and concept strategies to be investigated in the architecture studio.

Keywords: *Koolhaas; Herzog & de Meuron; originality; material; architecture studio teaching.*

How to cite: Barbuica, L. (2018). Architecture Studio Teaching: Breath-taking Architecture. *Logos Universality Mentality Education Novelty: Philosophy & Humanistic Sciences*, 6(1), 1-19. <https://doi.org/10.18662/lumenphs/01>

1. Introduction

This paper is the third in a series of papers¹ investigating new strategies for the architectural design studio. In October 2017 the University of Architecture Ion Mincu passed the continuous accreditation of the Royal Institute of British Architects (RIBA). One of the RIBA requests for sixth year students is to find in their project "the ability to generate complex design proposals showing the understanding of current architectural issues, originality in the application of subject knowledge and, where appropriate, to test new hypotheses and speculations." (UAUIM, 2017). In this context, architecture studio teaching should find new ways to teach architecture to be able to sustain this prestigious affiliation.

This topic is relevant for the general teaching of architecture design, as well as, more particularly, Universities seeking RIBA accreditation – either for the first time or to renew their credentials.

Though this paper proposes certain values to be integrated into studio teaching which are very particular to the architects discussed, these concepts are also universally applicable. They are derived from real architecture and are focused around originality, and testing and investigating new ways of creating architectural objects, experiences and spaces – all the ingredients of breath-taking architecture.

2. Theoretical Background

"Tools for Ideas" by Christian Gänshirt (2007, p. 198) presents a variety of media for architectural design: simple hand drawing, computer operated techniques, and the "two-edged sword" (Gänshirt, 2007) of criticism. But there is no reference to the topic presented in this paper: looking at the methods well-established architects use to do, think and write about architecture, and the way they learn from their outcomes, designs, values and processes.

Adrian Meyer (2008) in "L'architecture de 1900 à nos jours" illustrates graphically the evolution of architecture. Under "Modernism Reflexif" Herzog & de Meuron and Rem Koolhaas are grouped together on an evolution line coming from "Modernism Expressif"; this line 'ends' in

¹ Letiția Bărbuică LUMEN RSACVP 2017 International Conference, 6-9/04/2017 Suceava, "Architecture Studio Teaching, Poetic Simplicity", Letiția Bărbuică, *Architecture Studio Teaching, Transforming Reality*, 2016, in Antonio Sandu & ali eds, WLC 2016 – World LUMEN Congress. Logos Universality Mentality Education Novelty 2016 LUMEN 15th Anniversary Edition", Volume XV (September 2016), *The European Proceedings of Social & Behavioural Sciences*, pg.109-121

1980. According to Meyer, the work of Herzog & de Meuron then deserves a new line – this beginning in 1990 – which runs parallel with Radical Painting and with the artistic current of the Italian movement "*Transavanguardia*".

Hence this paper aims to demonstrate, through the arguments presented in Chapter 4, that the area in which Herzog and Koolhaas are grouped on the synoptic map holds true. This grants us insight into the complex puzzle that is teaching architecture, determining thus what contemporary architecture is, starting from the examples given by these two architectural practices.

Adrian Meyer draws attention to the parallel between the arts movement and architecture, a topic which is not included in architecture studio teaching at the moment at the University of Architecture Ion Mincu.

The 2008 Conference for Education in Oxford connected the quality of architecture to the quality of teaching (Roaf & Bairstow, 2008, p. 5). This paper argues that the quality of teaching can draw as well from the quality of architecture being produced, understanding the concepts, methods and *modus operandi* in order to develop the process further. The focus of the analysis is on the architecture of Rem Koolhaas and Herzog & de Meuron.

A very interesting observation is related to the fact that 'beauty' is not accepted as a quality of a building: "it is interesting, stylish, cool, groovy, it is wild, it is fascinating, it is brilliant"... "It is also OK to say that the building is sustainable." (Roaf & Bairstow, 2008, p. 18) Somehow the 'breath-taking' architecture from the title is hiding behind this type of thinking. It is a word that describes beauty, as beauty is breath-taking. The architectural teaching environment and critiques of architecture are afraid of the heaviness of the word beauty. It is a quality that seemingly does not matter anymore, and we can trace its loss in the contemporary world back to Modernism.

Nonetheless, it can be argued that "most contemporary architecture has degenerated to a purely visual art." (Roaf & Bairstow, 2008)

There are other several issues of concerns in architectural education, highlighted in the thematic conference's books:

a. teaching following "models that are no longer in full accord with the current professional context." (Nicol & Pilling, 2010, pp. 3-23)

b. "design as product rather than process." (Nicol & Pilling, 2010, pp. 192-223)

c. a too-strong focus on studio teaching to the loss of enhancing other skills like communication, collaboration and management – this "is like launching a balloon with not enough gas to fly." (Roaf & Bairstow, 2008)

- d. "not enough courage to see the whole." (Roaf & Bairstow, 2008)
- e. finding the right balance "between practical knowledge & theoretical Knowledge." (Salama, O'Reilly & Noschis, 2002)
- f. the connection between creativity and social responsibility. (Salama, 2005, pp. 75-139)

3. Argument of the paper

The key idea of this paper is to structure a studio teaching strategy based on:

1. analysing the works, strategies, and *modus operandi* of two renowned architects and Pritzker prize laureates: Herzog & de Meuron (2001 laureates) and Rem Koolhaas (2000 laureate).
2. working with the findings of the above when teaching architectural design. The aim of studio teaching is to help students to understand, develop and creatively integrate their learned strategies and concepts into their design; the ultimate aim is that the student built their own tools and strategies for doing architecture.
3. working within the artistic context of the moment: being always aware of the cultural context the student is working in and the teacher is teaching in, with the main focus on the arts. Understanding the relations between the architecture of Herzog & de Meuron and Rem Koolhaas, and the "*Modernism Expressif* " and "*Transavanguardia*" artistic movements. Finding and making use of relationships between architecture and the contemporary art movement.

The book "Architectural Education Today: Cross-Cultural Perspective" (Salama, O'Reilly & Noschis, 2002), the result of a colloquium on the topic in Lausanne (2002), has a chapter entitled "Experience & Experiments" which focuses on cultural context, local architectural traditions and post war experiments in York. There is also discussion of working with the cube² in the architecture studio. However, these experiments are outdated: students should be working with more modern

² The exercise with the cube has been part of the UAUM first year architectural studio design since 2000

ideas, including the best practices in architecture and the most radical art of the moment. This paper aims to present one experiment in Architectural Studio Teaching. This experiment could be designed to suits different stages of learning/teaching architecture, and can be focused on other relevant architects' work.

This architectural studio teaching strategy has also an answer to some of the teaching concerns listed in chapter 2, as follows:

- answer to critique a) - Looking at two prestigious architectural practices and taking them as a model for studio teaching is anchored into reality.

- answer to critique b) - The strategy starts from analysing and understanding architectural precedents, hence it is focused on process and *modus operandi*.

- answer to critique c) - Students will be encouraged to collaborate, to present and to organize through the integration of project work into the proposed teaching strategy.

- answer to critique d) - Focusing away from architectural realm, and trying to find connections between architecture and forms of contemporary art is one way to see architecture as part of a larger picture. Looking also for social responsibility when creating architecture is part of the same strategy and answers critique f)

- answer to critique e) – Shifting focus from concepts, space, *modus operandi* towards a careful look at how things are made, as part of the architectural project. Students are encouraged to consider details, scale cross-sections, quality of the materials used (both seen and not seen), and to address and solve structural concerns related to the design.

- answer to critique f) - Encouraging social responsibility when creating architecture.

Fig.1 – relationship between teaching and built architecture

4. Arguments to support the thesis

The main theoretical argument of the thesis is that, if we agree that there is a connection between the quality of architecture and the quality of teaching [8], then this relationship is two-way: teaching architecture studio can feed creatively off exemplary architecture. (see fig.1)

In order to do so, research that is both historical and analytical must be employed. Such a research method was also discussed in the previously mentioned papers “Architecture Studio Teaching: Transforming Reality” and “Teaching in Architecture Studios: Poetic Simplicity”.

More specific to the subject of this paper, the research explores 38 architectural works built by Herzog & de Meuron and Rem Koolhaas between 1990-2010, and is focused on analysing: space, structure, expressiveness, and how the buildings relate to their external site. Summaries of the research are presented in table 1 and table 2, with each work described by key words in order to identify its main characteristics.

From these processes, strategies can be distilled for the effective teaching of architecture.

The studio teaching strategy presented in this paper helps to achieve RIBA’s request related to understanding of *current architectural topics* and testing new ideas. The design of the studio teaching is based on analysing and understanding existing exceptional works of architecture, hence *understanding current architectural topics*. Starting from this point, the studio needs to encourage the testing of new design ideas and design strategies that spring from the first step of appropriation and understanding.

The need for experiments and developments in the teaching of architecture studio is part of the topics of the following conferences and edited books:

- A New Professionalism: Embedding change in schools of architecture (Nicol & Pilling, 2010)
- Research into Teaching Courses, Design Research Courses and Curricula (Roaf & Bairstow, 2008)
- Revolutionary Concepts for Teaching Architectural Design (Salama, 2005)
- Models of Teaching Architectural Design. Identification – Description - Comparative - Analysis (Salama, 2005)

Hence the topic of this paper is aligned with current interest in the field of architectural education.

4.1. Analytical Research

The analytical research is presented in table 1 and 2 below:

Table 1. Herzog & de Meuron's buildings 1990-2010

YEAR	Herzog & de Meuron	SPACE	STRUCTURE	EXPRESSIVENESS	SITE
1992	Goetz Collection	BOX Modernist typology Introverted space	Hidden Unexpressed structure	MONOLITH FLOATING character (inconspicuous base) PARADOX: transparent material used as opaque: the glass different perception by day/by night	Modernist typology Unconcerned with the landscape
1993	Sport Center St. Louis	BOX Modernist typology Introverted space	Hidden Unexpressed structure	MONOLITH tactile presence of materials ORNAMENT – tattoo strategy	Modernist typology Unconcerned with the landscape
1993	Nicola Production Center	BOX Modernist typology Free plan/flexibility	Hidden Unexpressed structure	MONOLITH PARADOX 1: transparent/mat PARADOX 2: Massive/translucent ORNAMENT – tattoo strategy	Modernist typology Unconcerned with the landscape textile curtain towards the landscape
1997	Swiss Federal Railway	BOX - distorted	Hidden Unexpressed structure	MONOLITH MESH STRATEGY PARADOX: the copper mesh diminishes the massiveness of	Functional connection to the site LANDMARK

				the volume	
1999	Dominus Winery California	BOX within a BOX Exterior covered space	External gabion wall – self-supporting wall	MONOLITH PARADOX 1: simultaneous transparent and solid PARADOX 2: monumental, industrial use	The same material as the traditional buildings in Napa Valley Interior perspectives = special connection with the landscape Ecological/ climatic
1999	Library Project, Eberswalde	BOX-interior Reminiscent of an industrial building	Concealed structure	MONOLITH PARADOX 1: the concrete engraved panels seem translucent PARADOX 2: The engraved windows seem opaque ORNAMENT – tattoo strategy	LANDMARK
2000	Tate New Modern	BOX – within and on top Monumental space = industrial space Public space on a ramp	Structure expressed toward the interior Lightweight structure above the existing massive structure	MONOLITH Floating feeling – barge	Re-connection to the site through the access piazza Reconnect with Tamisa Directed views from the interior

Architecture Studio Teaching: Breath-taking Architecture
 Letiția BĂRBUICĂ

2003	Laban Dance Center	UNIFYING BOX	Concealed structure	MONOLITH/ TRANSLUCENT = PARADOX	Opposes the existing context of a public square
2003	Funf Hofe Munchen	Space coordinated around interior courts Assembled spaces: galleries, passageways, courts	Concealed structure	MESH STRATEGY	Connected with the existing pedestrian routes Reinterprets the existing courtyard block typology
2003	Prada Store Tokyo	Continuous, fluid, non-hierarchical space Space true to structure	Metallic structure kept visible at the facade	MONOLITH + TRANSPARENCY = PARADOX Distorted transparency	LANDMARK unconcerned with the site
2004	Forum Building Barcelona	Open, covered public space Public space on a ramp The main program (conference area) is placed underground	Concealed structure	FLOATING MONOLITH = PARADOX Materials have tactile values ORNAMENT texture and colours	LANDMARK unconcerned with the site
2004	Cottbus Library, Germany	Continuous, fluid, non-hierarchical space	Concealed structure	MONOLITH TRANSPARENT/ TRANSLUCENT	LANDMARK

				ORNAMENT = tattoo strategy	
2005	De Young Memorial Museum, San Francisco	Continuous, fluid, non- hierarchical space Urban cantilevered covered space	Concrete	MONOLITH MESH STRATEGY ORNAMENT = tattoo strategy: image of a pixelated tree	LANDMAR K TOWER It will integrate in the green of the park as the copper will oxidize
2005	Walker Center Minneapolis	Public space on a ramp	Concealed structure	MONOLITH FLOATING PARADOX= seems like a textile/paper façade = FRAGILITY	LANDMAR K glacier image
2005	Allianz Arena Munchen	Scenographi c access route Huge unitary space	Concealed structure	TRANSLUCEN T FLOATING MONOLITH (zeppelin-like)	LANDMAR K in an industrial suburb
2006	Bird Nest Beijing	Huge unitary space	FACADE TRUE TO STRUCTURE	STRUCTURE AS ORNAMENT PARADOX= monolith image and textile feeling of the structure	LANDMAR K
2008	Caixa Forum Madrid	Covered public square Continuous, fluid, non- hierarchical space	Concealed structure	FLOATING (inconspicuous base) MONOLITH Exquisite Corpse Superpose volumes ORNAMENT – in the extension	The extension connected with the urban typologies The Corten – mimics the brick texture of the existing.
2008	TEA	Public space	Concealed	MONOLITH	Local

	Tenerife Espacio des Artes	on a ramp Spaces around courtyards the main space – library is at the underground level	structure The structural wall is treated like a musharabi	ORNAMENT = a photography of the ocean water is enlarged, abstracted to be cut out in concrete	references: grey = volcano, the water Reconnects different levels of the site in a homogeneous way
2009	VITRA HOUSE Germany	BOXES superposed	Concealed structure	PARADOX = unstable equilibrium Oniric image = FLOATING	Starts form the local living typology
2010	1111 Lincoln Road Parking, Miami	Open plan MODERNI ST DOMUS Unusual program mix	Visible structure column and beam	FLOATING SLABS Reinterprets the domino House of Le Corbusier	LANDMAR K Offers perspectives above the town
2010	Museum der Kulturen, Basel	Open plan Public space on a ramp	Concealed structure	Superposed volumes Exquisite Corpse	Takes the roof shapes of the surroundings

Table 2. Rem Koolhaas' buildings 1990-2010

YEAR	Rem Koolhaas	SPACE	STRUCTURE	EXPRESSIVE NESS	SITE
1991	Villa Dall'Ava, Paris	Modernist typology FIELD SPACE ³ Urban and rural space mediation	Metallic structure PILOTIS Ignores the structural axis	Intersection of volumes FLOATING character (inconspicuous base) Modernist language: windows, pilotis, ramp, walkable roof.	Takes into consideratio n the local topography. At the urban scale orients towards Tour Eiffel
1991	Nexus World	Urban and rural space	Concrete	Dense urban living+ house	Unconcerne d with the

³ Simultaneous and complex relations of spaces and space-ways

	Housing	mediation Organisation around central open space Fluid space on two levels Narrow passages FIELD SPACE		with small garden Monolith appearance on the exterior COLLAGE facade	site Creates a dense urban structure resembling an urban island.
1992	Kunsthal Rotterdam	FIELD SPACE Intermediary covered space URBAN PORCH Ramped space	Mixed: metal and concrete pilotis Vierendeel beam Visible and invisible structure ENCYCLOPE DIA= collection and display of structural elements	Modernist imagery – Mies van der Rohe Intersection of volumes FLOATING character = barge FACADE as CROSS SECTION Le Corp Exquis	Different approach towards the park, towards the street
1994	Congress Expo Lile	Segmented space in three functional areas FIELD SPACE Ramped space	Designed by Arup Mix of structural solutions ENCYCLOPE DIA= collection and display of structural elements	Each functional zone has a distinct identity and a different colour	Unconcerned with the site
1995	Dutch House	MODERN IST BOX Philip Johnson typology FIELD SPACE	Exposed concrete structure	Transparency Austerity FLOATING character (short pilotis)	Works with the landscape
1997	Educatorium, Utrecht	FIELD SPACE Ramped space	Concrete columns that do not follow a grid.	Intersection of volumes FACADE as CROSS	Sustainability elements related to the economy

Architecture Studio Teaching: Breath-taking Architecture
 Letiția BĂRBUICĂ

		The floor becomes the roof	Truss beam Attack to the Modernist idea of pure Cartesian structure	SECTION Le Corp Exquis	of heating and cooling: sun shade and green roof
1998	Bordeaux House	Collage space FIELD SPACE	With Cecil Balmond cantilevered volumes with minimal supporting points. Attack to the Modernist idea of pure Cartesian structure ENCYCLOPEDIA= collection and display of structural elements	Superposed volumes FLOATING character (inconspicuous base)	Unconcerned with the site
2002	CCTV Headquarter- Beijing	PATENT: "skyscraper loop" Interior trajectory in sequential spaces Hierarchy of spaces	Metallic structure + concrete core structure: diagrid framing system. Attack to the Modernist idea of pure Cartesian structure	ICON image SIAMESE TWIN TOWERS MONOLITH structure as facade	Unconcerned with the site Explodes the scale of the urban context
2002	TVCC Beijing	ENVELOPED SPACES five parallelepipeds Enveloped random arrangements of public space	Two independent structures: the parallelepipedal volumes + metallic structure for the envelope	Facade folding above the parallelepipedal volume MONOLITH	Unconcerned with the site Explodes the scale of the urban context

2003	Holland Embassy in Beijing	Reinterprets the idea of the inner courtyard Trajectory of public spaces that rise within the buildings BOX + diagonal cut-out	Concrete and metallic Exposed structure	FACADE as CROSS SECTION Transparency MONOLITH Le Corp Exquis	Integration, reference towards the Berlin TV tower
2004	Seattle Central Library	FIELD SPACE	With Cecil Balmond ENCYCLOPE DIA= collection and display of structural elements Attack to the Modernist idea of pure Cartesian structure	ALIEN MONOLITH	Contextual
2005	Casa da Musica, Porto	Central BOX-shape space + ENVELOPED SPACES Trajectory through a hierarchy of spaces	With Cecil Balmond Attack to the Modernist idea of pure Cartesian structure	ALIEN MONOLITH ICON	Urban dialogue; the view from the interior reconnects with the town with the spectators.
2005	SNU Museum, Seoul	BOX + diagonal cut-out FIELD SPACE ramped space Trajectory	Metallic structure visible through the translucence concrete core	FACADE as CROSS SECTION	Insert in the park / takes into consideration the land slope

		through interior spaces			
2006	Milsten Hall, Cornell	FIELD SPACE Multi-functional free plan interior courtyard interprets the five points of Modernist architecture	Visible metallic structure pilotis	FLOATING character MONOLITH TRANSLUCENT	Correlations with urban landmarks
2006	Zollverein Museum	FIELD SPACE the existing space is 'exposed': trajectory, ramps	Metallic structure	Industrial + SCENOGRAPHY	Integration
2006	Serpentine Pavilion London	A contemporary replica of the central space of the old pavilion	With Cecil Balmond – helium roof	FLOATING character translucent satirical image -	Unconcerned with the site
2009	Willy Theatre Dallas	BOX Free plan Theatre machine functionality	ENCYCLOPEDIA = collection and display of structural elements Attack to the Modernist idea of pure Cartesian structure	FLOATING character (inconspicuous base) Industrial character with visible elevators	Urban dialogue; the view from the interior reconnects with the town with the spectators.

4.2. Findings of the research (Modernism investigated)

4.2.1. The Box

Both Herzog & de Meuron and Rem Koolhaas demonstrate a love/hate relationship with Modernism in their architecture.

The box is distorted by:

- the materials used:

*Herzog & de Meuron (Goetz Collection, Sport Centre St.
Louis, Ricola Production Centre, Library Project
Eberswalde*

Rem Koolhaas (Dutch House, Willy Theatre)

- geometrical distortion

Herzog & de Meuron (Swiss Federal Railway, Prada Store)

Rem Koolhaas (Dutch Embassy in Berlin)

- a box within a box:

*Herzog & de Meuron (Domus Winery, Laban Dance
Centre)*

- a stack of boxes:

*Herzog & de Meuron (Tate New Modern, Caixa Forum,
Vitru House)*

Rem Koolhaas (Kunsthal Rotterdam, Bordeaux House)

- a stack of boxes wrapped

Rem Koolhaas (CCTV Beijing, Seattle Library)

- the box without facets:

Herzog & de Meuron (111 Lincoln Road Parking)

4.2.2. The Structure

The denial of a pure Cartesian expressed structure is visible in much of the architecture named above; however, the means of the denial is different.

Koolhaas maintains a continuous attack on the Modernist idea of structure, employing an encyclopaedia of structural elements, including Vierendeel beams, truss beams with rectangular members, trusses with tubular members, steel columns of all cross-sections, concrete columns with round capitals, cables, structural cylindrical tubes, inclined trapezoidal concrete columns, truss ring beams, reinforced concrete shear walls, and a diagrid framing system. For each of his buildings he uses a mix of several of these elements, as is the case with Kunsthal Rotterdam⁴, Educatorium Utrecht, Bordeaux House, CCTV Headquarters Beijing, Seattle Central Library, Casa de Musica Porto, and Willy Theatre.

Herzog & de Meuron conceal the structure of their architecture, and most of the time the building seems to stand with no visible support (namely an unobtrusive structure). This is true for the Caixa Forum Madrid, Forum Building Barcelona, Dominus Winery, and even the Tate New Modern

⁴ The postmodernist approach to structure: Mies van der Rohe is <quoted> and the structure is exposed as in a museum- see the stalactite column from the auditorium

extension which seems to float out of the thin air like fog. The Allianz Arena in Munchen seems so structure-free that it resembles a zeppelin. Vitra House and 111 Lincoln Road Parking look like stacks of games card held up by magic.

The way that these structures are concealed or exposed acts as a *visual surprise*.

4.2.3. The Ornament

For Herzog & de Meuron, ornament is not "a crime"⁵. The decoration is a 'tattoo strategy', which is to say that decorations are embedded in the skin of the material rather than adorned. Engraving, serigraphy, and sand blasting of concrete, glass and metal are possible examples of ornament. They even make use of coloured air in the EFTE cover of the Munchen Stadium.

Rem Koolhaas uses structure as decoration, including the cross-section of the building which is exposed in the facade; hence the facade is 'decorated' with its own cross-section. These ornaments are auto-referential, as in Educatorium Utrecht, Holland Embassy Berlin, and Snu Museum Seoul.

The mesh strategy as a decoration can be considered a way of hiding the 'honesty'⁶ of the building:

Herzog & de Meuron (Swiss Federal Railway, Funf Hofe, De Young Memorial San Francisco, Caixa Forum Madrid)

Rem Koolhaas (Seattle Central Library, Willy Theatre Dallas)

Here, the ornament acts as a *visual surprise*.

4.2.4. Pilotis and others

Herzog & de Meuron work with paradox, which springs from the expression of the materials they use. They say that ".... the outer skin of the building, independently of the structure, can function as image." (Ursprung, 2005, p. 13)

Koolhaas, conversely, works with field space; both make use of a floating character of buildings, possibly a reinterpretation of Modernist pilotis that raised the building above the ground, changing the way the building connects with the ground.

⁵ Adolf Loos essay Ornament and Crime (1908) is considered the basis of the Modernist Movement

⁶ Modernist concept

The floating character acts a *visual surprise* and a de-concentrating moment. Is it a building or a Zeppelin? Is it a building or a balloon in a fair trade market? (Serpentine Gallery)

4.3. Conclusions of the research

1. Mayer's synoptic map has a solid basis for grouping together Herzog & de Meuron and Rem Koolhaas, as they have similar aims, though use different *modus operandi* in order to reach their goals. This allows for a very good didactic example of precedents and *modus operandi*.
2. All the findings of the research can be transformed into teaching objectives which students may investigate in the design studio.
3. This teaching strategy rehabilitates the surprise, the paradox, and the tactile, all of which make for breath-taking architecture. Beautiful is breath-taking. We can rehabilitate the value of BEAUTY in the architectural studio.

5. Arguments to argue the thesis. Dismantling the arguments against

It could be argued that the research on which design studio teaching is based is a retrospective analysis, looking back to the recent antecedents of contemporary architecture. But there is always the pressure to connect with today. The teaching exercise proposed by this paper uses the contemporary world of art as a connecting trigger to contemporaneity in order to bring originality, test new hypotheses and allow for speculations in the architectural project.

It could also be argued that this method invites students to use pastiche ideas. It is the studio's role here to conduct the design process in such a way that the student must pass multiple levels of understanding the building process, space, expression and relation to the site, as presented in the works of architecture of Herzog & de Meuron and Rem Koolhaas, to get to a personal interpretation of the above. It is appropriate to mention here Toyo Ito, Sendai Mediateque: a reference point in architectural history, which is ultimately a reinterpretation of the Modernist ideas of the cube, transparency, and open planning, yet is such a profound original, personal and paradigm-changing building.

There is an ever-present danger of imitation when we start from the masters. However, we can transform imitation from a mimicking of the original into something more spectacular; through understanding the process through which the architect conceived the building, we make a first step to

developing personal and creative ways of design. Imitation would show not that the exercise was unsuccessful, but that it was only partially completed.

6. Conclusions

Designing tools for teaching architecture starting from the strategies and modus operandi of architects who recently produced constantly good quality architecture is a way of engaging the students with the immediate present, as well as engaging teachers to follow new ways of teaching architecture. Understanding concepts, analysing spaces, their structure, and the expressiveness of the building, and considering their relations (or misrelations) to their immediate sites are lessons that direct the students to examine and value the process rather than the outcome. At the same time, tutors will give feedback emphasising and valuing the process through which the student got to the proposed architectural object.

To avoid the multitude of dangers around imitation and mimicking, the prevalence of theoretical knowledge against practical knowledge, and of shifting towards a pure visual art, the design studio should find alternative tools to the conventional approach of teaching studio design.

References

- Capezzuto, R. (2000). Herzog & de Meuron and phenomenological research, a conversation with Jacques Herzog. *Domus*, 823, p. 6.
- Ganshirt, C. (2007). Tools for Ideas. An introduction to Architectural Design. Basel. Boston, Berlin: Birkhäuser. p.198.
- Mayer, A. (2008). *L'architecture de 1990 à nos jours*. Basel, Boston, Berlin: Birkhäuser. Synoptic Map.
- Roaf, S., Bairstow, A. (2008). *The Oxford Conference: A Re-Evaluation of Education in Architecture*. Boston: Wit Press.
- Salama, A., O'Reilly, W., Noschis, K. (eds). (2002). *Architectural Education Today: Cross-Cultural Perspectives*. Lausanne: Comportements.
- Nicol, D., Pilling, S. (eds). (2010). *Changing Architectural Education*. London: Taylor & Francis.
- Salama, A. (2005). *New Trends: Designing the Design Studio*. U.S.A, North Carolina: Tailored Text & Unlimited Potential Publishing.
- Ursprung, P. (2005). *Herzog & de Meuron: Natural History*. Montreal: Lars Müllers Publishers.
- UAUIM internal RIBA report following November 2017 accreditation