

Architectural History, Version 21.Now

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Questioning the fossilized approach of historical education, which disconnected the historical narrative from its studio counterpart and fast forwarding to now, this paper attempts to question the current utility of history in architectural education by examining when history cohabitates with what is a predominantly a studio-based structure. More specifically, this paper analyzes a particular and methodologically integrative way of teaching architectural history so that its pedagogy, outcomes, and expectations are complementary with those of the design studios. Every design involves historical/theoretical investigations, and architecture can be understood as a practice of concepts and ideas; that practice may precede history as often as history precedes practice. Within this framework, history assumes the role of “repertoire” for applied knowledge, where the analysis of particular buildings does not depend on mnemonic tasks, but centers around cultural and social ideas as well as predisposing constructional techniques. This approach emphasizes specific natures of architectural production: composition (i.e. sequencing, ordering systems, geometry, etc.), tectonics (materiality, structure, assemblies), and culture (politics, science, zeitgeist, etc.), which are also analyzed in specific course assignments. Design studios reinforce history’s usefulness by direct analyses of historical precedents, which are not understood as a mere collection of stylistic artifacts, but rather as conceptual, tectonic, and organizing machines.

“I shall conduct this course not so much basing it on chronology, that is on a list of facts which follows a certain historical timeline, but according to a methodological process whose aim is to look at the essence and most salient qualities of those facts.”

—E.N. Rogers, *The Sense of History*¹

INTRODUCTION

While architectural history perfectly embodies the concept of permanent progression, its pedagogical framework has been characterized by a static approach still based on the memorization of dates, buildings plans, elevations, or the perfect

placements of certain visual elements. While the development of a visual lexicon might be important to break down and analyze cultural and contextual characteristics in architectural production, it is rarely integrated into what appears to be a pedagogical model still dominated by a “studio-based” framework, which prioritizes active learning through the establishment of design problems.² However, in his opening lecture to the course History of Modern Architecture in 1964, Ernest Nathan Rogers, a pivotal figure in Italian architecture and education, questioned the disciplinary and pedagogical nature of historical education and its fossilized approach, which was still based on disconnecting the historical narrative from its studio counterpart. Rather than separating those two aspects, Rogers used continuity as pedagogy, both in the design studio and history seminar. Interestingly enough, Rogers’ work with Studio BPPR (Banfi, Belgiojoso, Peressutti, and Rogers) also explored this just opposition between the validity of historical investigations and the pragmatic nature of design as a practice that seeks innovative solutions to avoid generalization.³

Within this methodology, studio B.B.P.R. proposed an anti-dogmatic tendency that would acknowledge the importance of historical analysis, and which would also recognize the propositions of major modernist approaches identifiable in the work of Loos, Tessenow, Gropius, Mies van der Rohe, and Le Corbusier. While this framework sounds rather contradictive and inconsistent because it still recognizes the importance of historicism (how do we produce newness if the reference is always “yesterday”?), it also attempts to reconsider a field like history, which is normally associated with the development of a stylistic and visual lexicon, which has the tendency to limit historical inclusiveness and thus compatibility within the design process.

In the specifics of Studio B.B.P.R., Ernesto Rogers primarily attempted to redefine historical characteristics such as style and tradition as a way to produce compatible lineages that might link historical analysis to a methodological production, which is avant-gardist as it seeks progression, but it does so by reinterpreting the value and meaning we normally, and wrongly, attribute to history itself. Rogers firmly believed that establishing a linkage with history is a necessary obligation if we want to produce architecture that is both avant-gardist (new), yet historically significant (old).⁴ In fact, Rogers recognized that breaking with the past is needed to generate the new, but he

also attempted to integrate and reevaluate concepts such as “historicity” and “tradition” via critical analysis. More specifically, Rogers stated that the central point regarding history is that of “critically” understanding what is “essential,” and that should not include either stylistic or formal guidelines. In fact, this self-referential process, that of criticality, appears to be structured around the idea of “analogous correspondence,” which in more detail investigates specific historical artifacts in term of their comparable characteristics.⁵

Comparability does not involve the act of replicating specific traits, especially stylistic ones, but in Rogers words “it defends architecture’s aesthetic autonomy while considering aspects tangibly related to its cultural and historical background.”⁶ While this framework is not necessarily identifiable to a specific set of rules, it brings forth the Jungian concepts of analogy, which in his words is defined as: “Analogical thought is sensed, yet unreal, imagined yet silent; it is not a discourse but rather a mediation on theses of the past, an interior monologue. Logical thought is thinking in words. Analogical thought is archaic, unexpressed, and practically inexpressible in words.”⁷ The unexpressed and analogical, in our case, is based on the definition of specific historical and pedagogical constituencies that redefine the way we articulate our three history courses (ARCH 211, ARCH 222, and ARCH 233) as part of our undergraduate program to meet specific Student Performance Criteria and to better integrate them to our core design studio curriculum. Rather than using traditional canons typical of a rather static historical pedagogy whether chronological or thematic in nature, we use other conceptual tools such as compositional patterning, tectonic assemblies, and contextual byproducts. From a pedagogical point of view, these conceptual tools are not just episodically addressed and evaluated into our history sequence, but they are also recursively integrated into our core design studios as well as lectures/seminars across our curriculum, ultimately embodying Ernesto Rogers’ search for what it is meant to be “essential.”

FIRST: ARCH 211

ARCH 211 presents a survey and examination of the classical languages of architecture with specific reference to the contribution of the social, cultural, intellectual, technological contexts to its development. Chronologically speaking, this class covers topics such as Prehistoric, Egyptian, Greek, Roman, Gothic, Renaissance, Baroque, and Rococo architecture. Given its content and focus on ancient building types and stylistic/visual traits due to the nature of the artifacts presented (churches, temples, royal palaces, etc.), ARCH 211 is not immediately relatable to what is normally taught into a beginning design studio. To facilitate this process of pedagogical exchange with its studio counterpart (ARCH 215), our first history course is structured around the concept of compositional patterning, which includes a specific methodology that identifies compositional elements in particular urban structures in order to uncover and understand their religious, political and societal

implications.⁸ This framework is based on the central ideas that architecture is about the production of space. Yet, before we dwell into the production of given space, we have to consider the act of design as a comprehensive gesture that embodies both functional and experiential characteristics.

Phenomenology offers a clear model for understanding human experience through space. According to phenomenologists, spatial and architectural perception is based on personal sensitivity of existential space. Christian Norberg-Schulz defined existential space as a space with character which is either given by its function or by a specific ritual associated to its function.⁹ When a building or landscape achieves this existential purpose it becomes a significant place, uncovering fundamental meanings that are mostly embodied into the environment. In the specifics of ARCH 211, the reading of particular buildings or structures, which include both western and non-western examples, is analyzed in the sense of understanding the whole as a container of particular cultural and compositional/sequential elements (Figure 1).

We must enter a space in order to experience it. Portal or gateway is a general term describing an opening in the walls of a building, gate or fortification, and especially a grand entrance to a structure or enclosure. Gateways become really important in understanding the significance of space as they anticipate important structures or what we call heterotopias. After entering a gateway, we are directed toward a specific place through the use of armatures.¹⁰ Armatures are linear organizational patterns or perspectival sequencing devices that bring people together in an axial space; those spaces can embody ceremonial or casual meaning according to the functions that they were originally given. Usually, armatures link places, monuments, and activities within the city limits in a sort of network system that generates different points of interest. Armatures direct flows to those

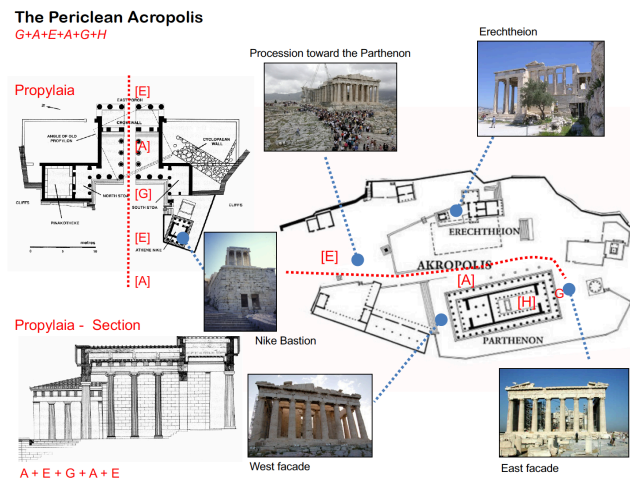


Figure 1. Compositional Analysis of the Periclean Acropolis

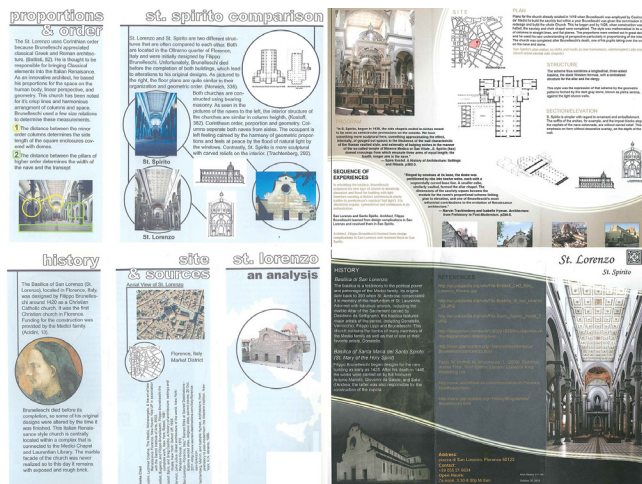


Figure 2: ARCH 211 Compositional Analysis of St. Spirito and St. Lorenzo

points of interest, generating a sequential urban experience which can be categorized into compositional typologies. Streets or Boulevards are generally armatures that differentiate flows. Enclaves are another significant urban element in understanding processional patterns.¹¹ Enclaves are defined as centering device or enclosure around which a part of the city can be design or arranged. All great cities are built around enclaves that tend to regulate the circulation flows generated by the armatures. A square or piazza is the most basic example of enclave. Enclaves start as centering urban or compositional device; often in time, they tend to turn into special places which carry special meanings. When this transformation happens, an enclave or even an armature turns into a heterotopia, or a sort of utopian place where a meaningful ritual happens.¹² In the words of Michel Foucault, heterotopias are defined as: “There are also, probably in every culture, in every civilization real places – places that do exist and that are formed in the very founding of society – which are something like enacted utopias. Places of this kind are outside all places, even though it may be possible to indicate their location in reality. I shall call them heterotopias.”¹³

As part of this process of recognition of a certain compositional logic behind historically significant buildings, students have to complete a graphic assignment in which they are responsible for analyzing an assigned building by recognizing its particular compositional logic. Rather than focusing on its stylistic connotations, this exercise familiarizes the students to understand the existence and sequencing of particular compositional elements such as gateways, armatures, enclaves, and heterotopias in order to delineate specific design constituencies that go beyond stylistic classification. In order to do so, students have to create a pamphlet that via analytical diagram examines a particular and significant work of architecture (Figure 2). In addition to the compositional analysis, students also learn how to integrate particular softwares while developing an understanding of

“representational media, such as traditional graphic and digital technology skills, to convey essential formal elements at each stage of the programming and design process.”¹⁴

We firmly believe that analytical diagrams are a design undertaking; thus, students are expected to approach this investigation with the same rigor, creativity, and enthusiasm with which they will eventually approach the design of their studio projects. Some primary building systems they investigate include: volumetric configuration, programmatic configuration (private to public, programmatic overlaps, etc.), underlying geometric order, relationship between enclosure and structure, main tectonic systems: primary and secondary structural systems, nature of materiality and surfaces relative to main space, and deployment of natural light and response to view/context.

The recognition of those compositional patterns is not just episodic, but it also rigorously analyzed in ARCH 215, which is one of our 2nd year foundation core design studios. ARCH 215, focuses on ordering systems and subsequent modes of architectural investigation and production emphasizing on schematic design principles as related to organizational, spatial experience, and site principles. Through different foundation exercises, students are asked to develop specific design solutions based on the integration of those compositional patterning devices, which are taught into the history counterpart. Concepts of gateway, armature, enclave and heterotopia are addressed to design and articulate a proposal for a sequence of lodging units in the swamps of Louisiana, which is both experiential in its phenomenological nature and ordered by a sequence of processional spaces designed to enhance its experiential subset (Figure 3). The same organizing concepts have also been applied in ARCH 411, which is a seminar that covers urban design theories addressing the emergence of certain urbanites in the context of globalization in both western and non-western locales.

SECOND: ARCH 222

“At its root, modernism is that fundamental. It is a question of having something to represent that is of the moment. In the most radical interpretation, modernism always comes too late. The modern is that which is always new, which is to say, always changing and already old by the time it has appeared. Modernism is always a retrospective act, one of documenting or trying to catch what has already appeared – an attempt to fix life as it is being lived. Modernity is just the very fact that we as human beings are cont.”¹⁵

—Aaron Betsky

ARCH 222 covers the beginning of modernity as an ideological framework with an emphasis on the examination of the modern language in relation to specific cultural and technological subsets. The premise of this course is based on the following question: should we judge architecture purely on its

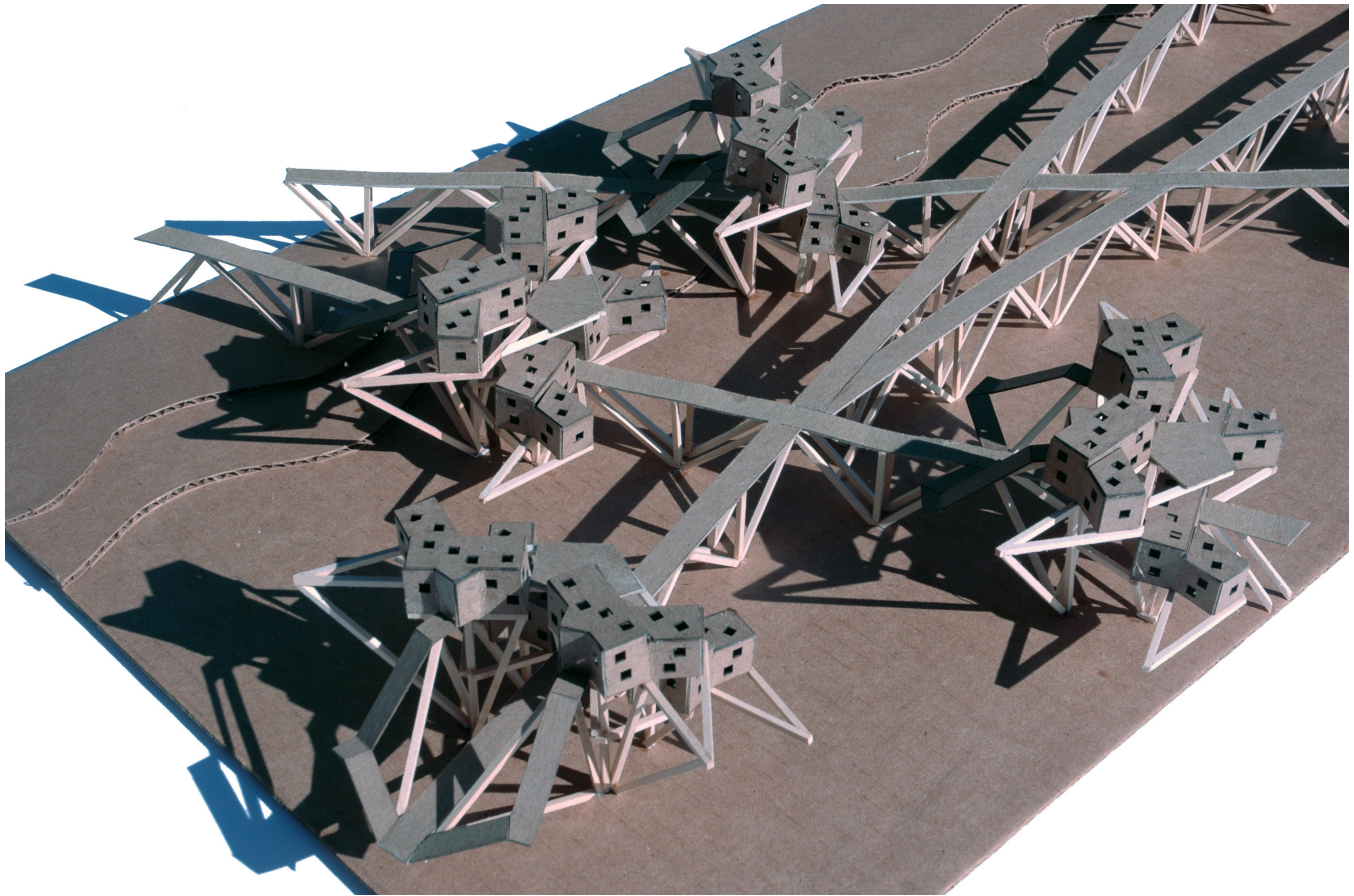


Figure 3: ARCH 215, Black Bayou Lodging by Wes Mitchell

historical domain? Does modern architecture progress out of a specific genealogy of forms? Or, do architects develop ideas and concepts, which are rooted in particular cultural and social frameworks? Through its long and complex history, architecture has often displayed a captivating fascination for words, images, manifestos, and buildings; indeed, architects talk as much as they draw. Every design involves some sort of theoretical investigations, and if architecture can be understood as a practice of concepts and ideas, this course will primarily suggest that practice may precede theory as often as theory precedes practice. Hence, the history of architecture is also the history of its writings and the history of its buildings, and, because of this correlation, we interchangeably analyze buildings as well as theories.¹⁶ Specifically, this course is organized as a survey of the history of Western architecture extending from the mid 18th Century to the mid 20th Century. Its primary focus is to present the development of modern architectural ideals within the social, historical, and technological context in which they were developed.

More precisely, this course examines the relationship between buildings, ideas, and the culture in which they were first introduced as well as to understand how a particular interpretive approach can be derived from socio-economic, ideological,

and formal investigations. It is thus important to trace the history of modern architecture from the point of view of its transformations under the influence of two major forces: the process of modernization, characterized by material changes and industrial transformations, and the development of ideology as a set of strategic expectations and actions.

On the wake of these major changes (mostly technological and tectonic), we analyze cultural developments and predisposing techniques from which modern architecture emerged through the reading of Kenneth Frampton's *Modern Architecture: A Critical History and Studies in Tectonic Culture*. The purpose is to link tectonic developments to the emergence of a certain formal and stylistic language. The narration of historical events is not necessarily chronological, but it is partially and thematically structured around particular episodes such as wars, revolutions, revolts, etc. that enriched the cultural and historical debate of architecture culture. But most importantly, rather than defend or validate a single design ideology, this course attempts to portray the history of architecture as an on-going debate concerning what constitutes an appropriate architecture for the modern era. By the end of this course, our students are mostly able to thematically discuss each architectural movement and its cultural developments and predisposing

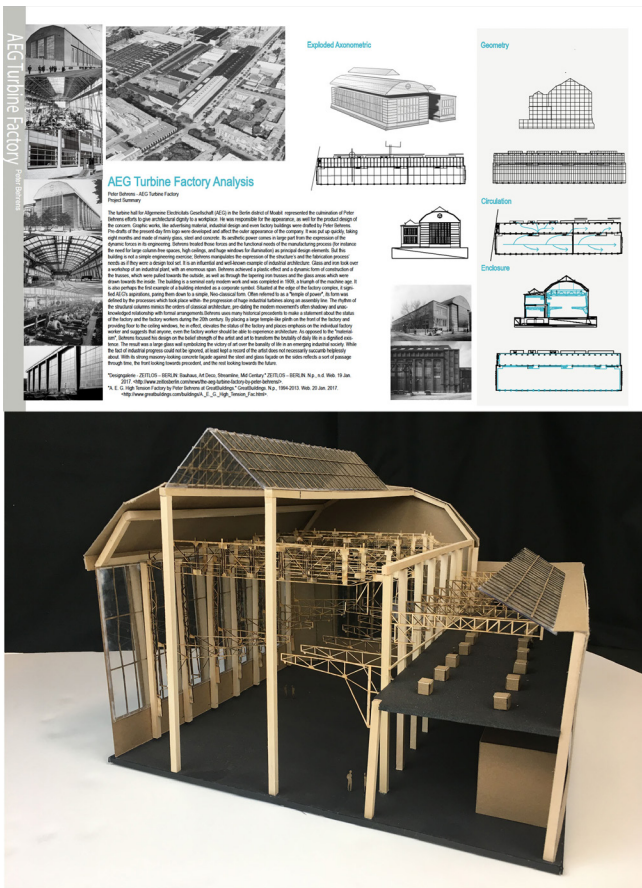


Figure 4: ARCH 222 Compositional and Tectonic Analysis of the AEG Factory by Peter Behrens

techniques. In addition to that, our students also learn how to develop a critical attitude by questioning ideas and concepts in relation to the built environment, which is also explored in ARCH 233 and upper level theory seminars.

To link to its studio counterpart (ARCH 225), students are asked to complete a group assignment where they are to analyze a significant work of modernist architecture in order to understand its compositional and tectonic logic. This assignment includes two deliverables: a graphic analysis and a tectonic model, which are meant to cultivate awareness of the organization of both form and tectonic assemblies as they relate to the cultural framework from which they derive. This is accomplished by using visual diagrams and architectural models as tools for historical discovery. When used as an integral part of the design process, both tools are capable of generating information while offering the strongest exploration methods available. While diagrams provide information about the intrinsic ordering systems relative to a given building, physical models address issues of structural tectonics and materiality, which are equally and inherently important toward a comprehensive understanding of the work of architecture you have to analyze. In this course, students normally work in groups of four to examine and research to construct specific diagrammatic and physical

analysis preserving formal, tectonic, and material qualities. In line with our studio evaluation process, work is graded based on criteria such as craft, material & tectonic considerations, content, and graphical & analytical excavations (Figure 4).

Additionally, students in ARCH 225, and recursively all core design studio courses from 2nd to 5th year, investigate the act of composition as it relates to building components and systems. Thus, the main focus is given by a deeper understanding of tectonic and material assemblies, which emphasizes on a recognition of basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources. In essence, the main pedagogical idea is based on the shared acceptance that in order to think tectonically, students have to build their case studies or precedents at a scale that allows for a more detailed understanding of basic principles utilized in the appropriate selection of interior and exterior construction materials, finishes, products, components, and assemblies, based on their inherent performance, including environmental impact and reuse.

To retain the lessons learned from this exercise, students in 3rd and 4th year studios are recurrently tasked to graphically and diagrammatically study, via a precedent analysis, a building's tectonic assemblages (structural and material), exploring its 2D and 3D qualities, and finally building a physical model to better understand its tectonic and material logic.

THIRD: ARCH 233

“Now more than ever, architecture is evolving at an amazing speed. Appropriated, folded, morphed, contemplated, and contorted — entering into a dialog with fashion, ecology, politics, and art — architecture has become one of the most vital and exciting forms of contemporary culture.”¹⁷

—Philip Jodidio

ARCH 233 is the final course of the sequence, and focuses on contemporary architectural conditions from World War 2 until present day and beyond. As such, its content is the most directly applicable to the studio sequence. Through a series of focused lectures, history is analyzed in terms of movements both formal (Brutalism, Post-Modernism, Deconstructivism, etc.) and informal (e.g. Utopian ideals, steel and glass, hyper-tectonic). These topics often span the entire range of the decades covered, creating a serial chronology of the past as seen through a tectonic lens (Figure 5).

Critical to the operation of the course is the presentation of historical ideas in connection with changes in technology and tectonic frameworks found in culture. The course incepts with a discussion of post-war Modernism in America, with the framing of technology as heroic and leading to an America separated



Figure 5: Case studies on Tectonic Assemblies

from the past, embracing the future. Thus new materials (e.g. plastics, bent wood) and manufacturing processes are understood in a cultural context, explored through contemporaneous cultural byproducts in entertainment, science, and automobile road culture. This is contrasted with the post-war development of concrete in the work of Le Corbusier and Brutalism, where the rawness of the material is a direct result of more traditional labor and process. Similar investigations are used to frame various aspects of Modernism, and the material and tectonic backlash of Post-Modernism; where historic ornament is reinterpreted through contemporary modes of cultural and physical production. With an eye always towards connection to tectonics, more current architectural movements are presented with an understanding of their use and attitude towards materials as a means of experience and expression, and how the detail as a point of connection or dislocation moved to the foreground of theoretical discussion.

As the course deals with current architects and trends in contemporary world architecture, the rise of digital design and production methods becomes a prevailing topic as the

course progresses. The rise of computers in architecture is discussed as an historical condition; how changes in the power of computation lead to changes in formal complexity; how the development of different methods of fabrication manifest in the use of varied materials at differing points in time; and how the cultural byproducts of digital design, such as video games and popular entertainment, can be understood as design expression of contemporary history. The terminology of digital software is integrated into the understanding of precedents, both through form-making and means of fabrication. This all runs in conjunction with the studio course ARCH 235, in which digital modeling and fabrication skills are taught and developed. The history course thus provides an expanded set of precedents for the students own understanding of the capabilities of the software, which are discussed in detailed tectonic terms applicable to the realization of their studio work. Thus, the real examples of the world, dissected through discussion and analysis, generates a new knowledge for the student.

CONCLUSION

“The problem is that, once the Western architectural canon has been thrown overboard, together with its now unpalatable ideological ballast, nobody seems to know what else should replace it. Some have tried to expand the canon, which is an excellent and promising but challenging plan. More worryingly, many are simply doing away with all architectural history altogether, just to be on the safe side, and replacing it with trendy and vastly consensual topics such as the theory of scuba diving, the prehistory of computation, or penguin studies (I am not making that up).”¹⁸

—Mario Carpo

As examined in the initial parts of this paper, the academic work and practice of Ernesto Nathan Rogers proposed an innovative view on historical analysis, which can be used as a critical and informative element integrated with the design process without proposing any sort of stylistic or formal guideline. Because of the level of coordination currently in place within our program, we have been able to create a “quasilinear” system where the history of architecture is taught by using specific ideological and topical ranges in order to link them to the design studio. Rather than strictly chronological, this methodology emphasizes on the topical nature of architectural historic production, which, in our case, focuses more on issues of composition (i.e. sequencing, ordering systems, formal and ideological structures, etc.), as well as tectonic and material assemblies as a clear expression of their zeitgeist and will to art.

“Knowledge is not a copy of reality. To know an object, to know an event, is not simply to look at it and make a mental copy, or image, of it. To know an object is to act on it. To know is to modify, to transform the object, and to understand the process of transformation, and as a consequence to understand the way the object is constructed.”¹⁹

—Jean Piaget

Our design studios reinforce history’s usefulness by direct analyses of historical precedents, which, again, are not understood as a mere collection of stylistic artifacts, but rather as conceptual, tectonic, and organizing machines. This has created a pedagogical palimpsest where before using something, our students have to first understand its essence. To make architectural history relevant in this modern age, when information is easily accessible from multiple devices, knowledge, as connected and actionable design information, must be the pedagogical target.

ENDNOTES

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2. Joan Oackman, *Architecture School: Three Centuries of Education Architects in North America*, (Cambridge, MA: The MIT Press, 2012), 69.
3. Ernesto Nathan Rogers, 10.
4. Ernesto Nathan Rogers, 12.
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6. Ernesto Nathan Rogers, 18.
7. K. Michael Hay, *Architecture Desire: Reading the Late Avant-Garde*, (Cambridge, MA: The MIT Press, 2010), 17.
8. This pedagogical and investigative model was examined during the Recombinant Urbanism seminar at Columbia University GSAPP in 2005, which was taught by David Grahame Shane. The work is also included in David Grahame Shane, *Recombinant Urbanism: Conceptual Modeling in Architecture*, (Chichester, UK: John Wiley, 2005).
9. Christian Norberg-Schulz, *Genius Loci*, (New York, NY: Rizzoli, 1980), 6-12.
10. Shane, 198-200.
11. Shane, 176-179.
12. Shane, 231.
13. Michel Foucault, “Of Other Spaces: Utopias and Heterotopias,” in Joan Oackman, *Architecture Culture, 1943-1968*, (New York, NY: Rizzoli, 1993), 419-426.
14. See NAAB Students Performance Criteria on www.naab.org
15. Aaron Betsky, *Making it Modern: The History of Modernism in Architecture and Design*, (New York, NY: Actar, 2016), 5.
16. The ideological nature of this framework was developed at Columbia GSAPP in Bernard Tschumi’s seminar “The Contemporary.”
17. Philip Jodidio, *Architecture Now! Vol. 2*, (Cologne, DE: Taschen, 2007), 581.
18. Mario Carpo from “We can’t go by teaching the same history of Architecture as before,” *Metropolis*, November 5, 2018.
19. Thomas Rowland and J Carson McGuire, *The Mind of Man*, (London Prentice-Hall, 1971), 8.