

Architectural Theory in the Undergraduate Curriculum: A Pedagogical Alternative

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Undergraduate architectural education is often composed of a triad—architectural history, architectural technologies, and architectural design. Coupled together, these areas promote a comprehensive understanding of the discipline and creation of architecture. Though theory is often coupled with history, i.e., “history/theory,” the underpinnings of each part of this triad stem from a common ground: architectural theory. In many cases, “theory” is envisioned by students (as well as many instructors) as a set of enigmatic, esoteric texts produced by obscure intelligentsia and read by eccentric literati. As such, architectural theory is often reserved for elective courses, graduate study, or as a supplement to more traditional courses. Alternatively, architectural theory can be understood as neither formal nor textual, neither cryptic nor pretentious. Built forms, themselves, are a manifestation of theory. Likewise, architectural theory is often embedded in more colloquial mechanisms: personal predilections, public opinions, daily conversations between students and instructors, etc.

In essence, architectural theories provide the foundation from which any student or practitioner asserts a particular stance or value structure of architecture. It is through theories that architects align with or dispute other architects or architectural works. When students stand in front of a panel of critics and embark on a discussion of the goals, methods, and outcomes of their work, known or unknown, they are launching a theoretical position. The underpinning paradigm—and all the aesthetic and pragmatic value judgments contained therein—becomes more and more tangible as critics shift uncomfortably in their chairs, lean forward

with enthusiasm, or slump with boredom. Named or unnamed, it is, then, from a similar or distant theoretical stance, that the subsequent critique materializes. In this sense, the understanding of theory is both central and necessary to architectural education. Nevertheless, the formal study of architectural theory remains absent from many design programs; or, if present, the structure of many universities and architecture curricula place architectural theory as an autonomous, peripheral course. Given the importance of architectural theory and the structural challenges of undergraduate education, this paper discusses the development and implementation of a pedagogical alternative to architectural theory. The course has been taught by the author since the spring of 2007 as a required part of the five year B.Arch curriculum at a public university.

ARCHITECTURAL THEORY: A BRIEF SYNOPSIS

Architectural theory, explicit or implicit, is the means by which architects and architectural scholars situate themselves in the world. This positioning is not merely based on embracing fashionable discourses, but is part of clarifying one’s architectural *line of thinking*. It is how the discipline of architecture arose and has evolved. This overarching role of theory is common to nearly all disciplines, though definitions and uses of theory differ.¹ “Theory building develops out of our need to make sense out of life.”²

In the natural sciences, theory refers to an intellectual construct and analytical tool used to understand a set of phenomena. Scientific theories can be *explanatory*—deductive and verifiable (e.g., a

proven theorem)—or *exploratory*—inductive and speculative (e.g., a hypothesis). In addition, scientific theories usually focus on the explanation or prediction of causal relationships. This concept possesses both a common ground and a divergence from the definition of theory used in philosophy and the social sciences, where theories are less strongly rooted in positivistic inquiry and more commonly stem from a wide range of constructivist, deconstructivist, critical theory, phenomenological, and other paradigms.³ In both cases, however, the merits of a theory are based on its reliability, validity, repeatability, and application to practice. “To be useful, theories must exhibit certain qualities: comprehensiveness, clarity and explicitness, consistency, parsimony, and heurism.”⁴ Theories evolve through both empirical testing and cultural resonance.

The diverse discourses that make up the body of architectural theory possess many of these same traits. Nevertheless, architectural theory encompasses a less circumscribed realm; and architectural theory often emerges from less formalized, more individualistic paradigms.⁵ Architectural theory does, however, have a clear, nearly singular origin. In essence, what we now call architecture emerged from various interpretations of Vitruvius’s *Ten Books on Architecture*, as asserted by a number of authors of architectural theory anthologies.⁶ Vitruvius is essential to an understanding of architectural theory not merely for etymological reasons but also due to its ties with a diverse range of concepts that contemporary theory addresses, such as, philosophy and ethics, tectonic expression, urban planning, and other issues.

Following the discovery and publication of Vitruvius’s *Ten Books on Architecture* during the Renaissance, non-architectural philosophers, such as Fichte and Hegel in the nineteenth-century, fundamentally altered the logic systems of the Western world. As a result, various disciplines, including architecture, were radically transformed by the notion of the dialectic: thesis, antithesis, and synthesis. In essence, Hegel’s philosophical system, which built upon the premises put forth by Socrates and Plato in the 5th- and 4th-centuries BCE, eclipsed Vitruvius’s theoretical triad of “firmness, commodity, and delight.” This event is critical in understanding how architectural theories have evolved and continue to transform.⁷ The dialectic is inherently modern and possesses the mechanisms necessary to maintain

sustained critical inquiry (though it should be noted that it is only one artifice or system of logic).

In the context of the present paper, the dialectic is useful for several reasons. First, its structure is readily accessible to undergraduate students. Students do not need a full understanding of Hegel’s or other philosophical works to understand it. Second, the dialectical structure provides a means to analyze architectural theories outside of a historical continuum. This frees the curriculum and pedagogy of the course from the chronological system in which history and theory are often delivered. Third, the structure of the dialectic possesses both a binary construct—thesis and antithesis—which is developmentally and culturally consistent with a majority of undergraduates, and a means by which to transcend the binary—synthesis. The structure provides both a normative foundation and an investigative springboard for critical inquiry. These concepts were central to the development of the undergraduate architectural theory course described below.

UNDERGRADUATES AND THEORY: A PEDAGOGICAL ALTERNATIVE

The overarching purpose of the architectural theory course discussed herein was to enable students to understand the roots, oppositions, and trajectories of various architectural positions, including their own predilections. As well, the course provided students with strategies for proposing, questioning, and recasting these positions as a part of their academic and professional development. Building upon the notion that architectural theory encompasses a wide range of empirical, cultural, and ideological premises, the course put forth the following definition of architectural theory: *the evolution of the objective principles and subjective values that guide individual and collective decisions about and assessments of one’s own and other’s architectural works*. In this case, “objective principles” refers to theories that can be definitively proven or disproven, such as, structural, material, lighting, or acoustic phenomena and concepts. “Subjective values,” on the other hand, refer to belief systems and ideologies, such as, aesthetic predilections. In either case, there was always an explicit focus on “buildings” as representations of these principles and values of architectural theory.

In recent years, architectural theory has been roundly criticized for borrowing from peripherally related disciplines (e.g., semiotics) and drawing focus away from the historical centers of the discipline. Similarly, popular media (and architects themselves) have often relied on metaphorical or analogical language when discussing various architectural works. This is clearly evidenced in the portrayal of architectural design in the plethora of shows on home renovation—*Trading Spaces*, *Extreme Makeover: Home Edition*, etc.—which often discuss architecture in thematic terms. In this author's opinion, this reliance on cursory allegories is problematic for both the discipline as a whole and undergraduate design education. Arguably, this thematic expression of architecture obfuscates the essential, complex, and interwoven components of the discipline: context, space, tectonic expression, etc. This course, therefore, focused on these central components of the discipline, rather than on analogical or thematic depictions of architecture. Although texts were the primary medium for the course, it was made clear to the students that architectural theory is evidenced not only in texts but also (and maybe to a greater extent) in constructed works. For example, even without LeCorbusier's *Towards a New Architecture*, LeCorbusier's rationale (theories) is (are) evident in his constructed works.

More particularly, the goals and learning objectives of the course were articulated to the students as follows. The architectural theory course shall:

1. Advance each student's ability to understand the various trajectories of architectural thinking today and across history, including the ability to:
 - a. discern the similarities and differences of various theoretical texts, be they contemporaneous or separated by vast amounts of time
 - b. understand the relationship between disparate positions in architectural theory
 - c. understand the difference between *architectural* theory and other forms of theory, e.g., philosophy, art, etc.
2. Advance each student's ability to be more self-aware about one's architectural predilections and be able to contextualize them relative to other architectural theories, including the ability to:
 - a. understand the relationship between one's positions in architectural theory/ideology and other similar and disparate views
 - b. better understand the implications of one's ideas and work
 - c. incorporate new architectural ideas/theories into one's thinking/work
 - d. adapt one's own architectural thinking and predilections
3. Advance each student's critical thinking skills, including the ability to:
 - a. more critically engage the content of studio courses
 - b. more critically question the work of one's colleagues and the profession
4. Advance each student's reading and writing skills, including the ability to:
 - a. clearly identify the meanings and value of various architectural texts
 - b. more effectively seek out and identify texts that help one to strengthen your future studio (and future professional) work
 - c. clearly articulate the ideas of others in written form
 - d. more clearly articulate one's own ideas in written form

These objectives were developed in conjunction with other faculty members and the course was designed in the context of the larger curriculum. In its current state, the architectural theory course is preceded by a sequence of two first-year "design methods" courses and three architectural history courses (ancient history, medieval and Renaissance history, and modern history). Likewise, the students have completed 2-1/2 years of the design studio curriculum prior to enrollment in the theory course, and are simultaneously enrolled in a "technology studio," which focuses on structural and tectonic issues.

From the pragmatic standpoint of developing and conducting an architectural theory course in the undergraduate curriculum of a public university, a number of issues were present. In addition to the concerns mentioned in the introduction, presenting architectural theory in a way that is developmentally appropriate and useful to undergraduate students was one such issue. As a result, the basic premises and concepts of the dialectic were used to structure the reading and writing assignments for the course. It was presumed that this dialectic would assist in establishing straightforward categorical definitions, which may better enable

students to (1) critically assess the significance of various works and (2) consciously assess the relative positioning of their own value system of architecture. As such, the content of each class session centers on a particular architectural topic, e.g., "ornament," which cuts across architectural history.

The course contains three major components: readings, writings, and in-class debates. A series of published, transcribed debates initiates the semester, such as, Peter Eisenman and Leon Krier, "My Ideology Is Better than Yours."⁸ Reading and discussing these debates serves multiple purposes. First, it introduces students to the concept of the dialectic in more colloquial terms, i.e., dialectic as debate. Debate is thereby engrained as a common pedagogical practice on day one. Second, the published debates serve as the foundation for initiating and facilitating small-group, in-class debates among students. This enables the instructor to gauge relative participation levels, strengths, and weaknesses among the group in order to facilitate future discussions. Third, debates help students get into the mindset of reading critically, assessing which points they "agreed with" or "disagreed with," and seeking some common ground or alternative to each debate topic. This sets the groundwork for the less clearly outlined debates to come. Lastly, students are asked to speculate on the extent to which each of the debates is still valid and will be valid in the future. This helps to engender a more prospective rather than historical questioning of the course material, such that students begin to ask: "How will these issues affect the profession I will enter?" This segment of the class builds the foundation for objectives 1a-b and 2a-b.

The second segment of the course introduces the idea of "paradigms" and puts forth fundamental definitions of four major paradigms: positivism, constructivism, critical theory (e.g., feminism), and deconstruction. A handful of exemplary readings are used to clarify the differences and purposes of each of these paradigms and their relationship to architecture. Students are then asked to reflect on the debates and readings of the previous segment of the class. Students gain an understanding of how each of the previous debates, theories, and theorists is related to the four paradigms. Students are then asked to reflect, in written and verbal forms, on the following question: with which of the paradigms and theories do you find the most resonance

and the most dissonance? This segment deepens students' abilities regarding objectives 2a-d.

For the remainder of the semester, the class meets two days a week. On the first day of each week, students meet in a lecture/seminar space; on the second day of each, week students meet in the studio space. On the first day, an architectural topic is introduced. For example, the topic of ornament is introduced by projecting a diptych of images on the screen: one of Mies van der Rohe's Barcelona Pavilion and one of a façade in the Roman Forum. Students are then asked which image better represents the term "ornament" and are asked to discuss this in small groups. Initially, many students believe the image of the Roman Forum is definitively the "right answer," then a contrarian view emerges, as some students assert that the Barcelona Pavilion possesses a modern interpretation of ornament. Invariably, a majority of students come to articulate a "both/and" type of answer and seek to justify their assertions. The setup and trajectory of the discussion, in this case, clearly follows a dialectical process.

On the second day of each week, students complete a set of three readings stemming from the topic introduced the previous day, and they prepare for an in-class writing assignment. Readings are organized according to the dialectic—thesis, antithesis, and synthesis—which serves to demonstrate the original deployment, negation, and re-surfacing or reconciliation of a given architectural discourse. "Thesis" texts are defined as architectural treatises written by significant historical architects (e.g., Alberti, Palladio, Viollet-le-Duc, Loos, Le Corbusier, etc.) who established foundational theoretical propositions—cultural, pragmatic, aesthetic, or technological in nature—made evident in their built works. "Antithesis" texts are represented by authors (e.g., Eisenman, Rowe, etc.) who placed the specific ideas and buildings found in the previous category under a particular kind of scrutiny. These authors often paved the way for more self-conscious, more critical adaptations of architectural theory. "Synthesis" texts, on the other hand, are more challenging to classify. Often these texts are difficult to recognize when placed alongside their "thesis" counterparts; "synthesis" texts, in many cases, are the origins of a new "thesis."

Put together as a triptych, the three texts cover both a broad span of architectural history and a

wide range of architectural ideology. For instance, following the debate on “ornamentation,” students complete the following set of readings: Adolf Loos, “Ornament and Crime,” Reynar Banham, “Ornament and Crime: The Decisive Contribution of Adolf Loos,” and Joseph Rykwert, “Ornament Is No Crime.”⁹ In-class writings are conducted in the studio. Upon entering the studio, students are presented with a writing question and asked to develop a one-page paper. More particularly, students are asked to position the discourse in a contemporary context, including current technological, economic, environmental, social, and legal realms of architecture. Again, using the topic of ornament as an example, students are presented with the following question: Assuming that “ornament,” in the most general sense, is unavoidable in architecture, build upon the discourses of Loos, Banham, and Rykwert to develop a stance about the role of ornament in architecture today. Is ornament (i.e., aesthetic expression) predominantly a technological, cultural, economic, or artistic task; some combination of these; or something else?

Students then meet in small groups and discuss the readings and question for approximately twenty minutes, while the instructor moves from group to group. Afterward, students are given approximately 1-1/2 hours to complete a 250-word essay, using their own computers in the studio. As students work through their thoughts and the contents of the paper, the instructor enters the writing process with them, discussing and answering questions that are both polemic and pragmatic in nature. The instructor speaks with students individually, and, as common questions or themes arise, addresses the whole class. Students then submit files digitally and graded according to clarity, logic, flow, grammar, and reading comprehension. The papers are returned and briefly discussed the following class period. Each of these weekly pairs of debates and writings advances objectives 4a-d, while, again, adding depth to objectives 2a-d, and folds in objectives 3a-b.

This process allows the instructor to engage each student individually regarding his/her: (1) personal views and aspirations of architecture, (2) personal thought processes, (3) personal writing habits and styles, and (4) idiosyncratic questions and concerns regarding 1-3. These pedagogical techniques and individual interests are then leveraged in the development of a longer semester paper. Drawing

out individual ideas also helps to further specify the discourse of the small-group and whole-class debates, cyclically calling into question the viewpoints of other students.

CONCLUSION

Given the relative smallness of the discipline of architecture, there is a large amount of published and constructed architectural theory, including a variety of anthologies. In many ways, this demonstrates the importance and centrality of architectural theory to the discipline. Yet the formal study of architectural theory remains absent from many undergraduate curricula, and few of these anthologies are geared toward undergraduate education. In parallel, the variety of ways in which the anthologies of architectural theory are organized demonstrates the breadth of paradigms that architectural theory encompasses.¹⁰ As such, the aforementioned course is simply one means of organizing an undergraduate architectural theory course.

In this instructor’s experience, the most difficult learning objectives to meet in this course reside in advancing student self-awareness—understanding the implications of one’s ideas and work, incorporating new architectural ideas/theories into one’s thinking/work, and consciously adapting one’s own architectural thinking and predilections. This is not only true of the aforementioned theory course but also of design studios and other courses. One three-credit semester of intense study is likely not sufficient. The primary criticism by this author is that architectural theory, this course included, remains a far too isolated and singular aspect of the undergraduate educational experience, and, therefore, does not meet its full potential. Courses such as this one, just like a large body of theory asserts about buildings, will be effective to the extent that they are contextualized rather than remaining as autonomous objects.

ACKNOWLEDGMENT

The aforementioned course was initially developed with Darell W. Fields. Dr. Fields was the lead author of the course proposal delivered to the faculty for approval as a required course in the B.Arch sequence at the University of Arkansas in 2006.

ENDNOTES

1. For definitions and purposes of the term “theory,” see: Robert Dubin, *Theory Building, Revised Edition* (New York:

The Free Press, 1978); Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962); Paul D. Reynolds, *A Primer in Theory Construction* (New York: The Bobbs-Merrill Company, 1971); W. B. Walsh, *Theories of Person-Environment Interaction: Implications for the College Student* (Iowa City: American College Testing Program, 1973). For a discussion on the Greek origins of theory, see: Andrea W. Nightingale, *Spectacles of Truth in Classical Greek Philosophy: Theoria in its Cultural Context* (Cambridge: Cambridge University Press, 2004). The etymology of theory stems from the Greek *theoros*, spectator, and *theorein*, to look at. As well, there is an etymological relationship with the Latin *theoria*, speculation, which possesses theological meanings, such as, the illumination or knowledge given by God expounded by early Eastern Christian teachings. The prefix "theo," shared by these ancient terms and by "theory" and "theology," is worth noting. As in theology, paradigms (world views) are the underpinnings of theories.

2. Walsh, *Theories of Person-Environment Interaction*, 5.

3. A paradigm possesses several facets: (a) the *assumptions* one makes about the world around them, (b) the *questions* one chooses to ask about that world, and (c) the *methods* one uses to pursue answers to those questions. As stated by Hatch: "When you are standing within the circle of logic created by the assumptions of your paradigm, the positions taken by those working in other paradigms simply do not make sense. Paradigms are indeed completing ways of thinking about how the world is or is not ordered, what counts as knowledge, and how and if knowledge can be gained. For discussions of the concept of paradigms and the relationship to theory, see: J. A. Hatch, *Doing Qualitative Research in Education Settings* (Albany, NY: State University of New York Press, 2002), 19; Kuhn, *The Structure of Scientific Revolutions*; and Reynolds, *A Primer in Theory Construction*.

4. Nancy J. Evans, Deanna S. Forney, and Florence Guido-DiBrito, *Student Development in College: Theory, Research, and Practice* (San Francisco: Jossey-Bass, 1998), 17.

5. For more extensive definitions and discussions of architectural theory in particular, see: Linda Groat and David Wang, *Architectural Research Methods* (New York: John Wiley & Sons, 2002), 73-98;

6. This includes assertions by: Bernd Evers, "Preface," in *Architectural Theory from the Renaissance to the Present* (Los Angeles: Taschen, 2002), 6; Hanno-Walter Kruft, *A History of Architectural Theory from Vitruvius to the Present* (New York: Princeton Architectural Press), 21-29; Harry F. Mallgrave and Christina Contandriopoulos, *Architectural Theory, Volume II: An Anthology from 1871-2005* (Maldwell, MA: Blackwell Publishing, 2008), xxix; and Cristof Thoenes, "Introduction," in *Architectural Theory from the Renaissance to the Present* (Los Angeles: Taschen, 2002), 8-19.

7. See, for example: Alan Colquhoun, "Three Kinds of Historicism," in *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory, 1965-1995*, Kate Nesbitt, Ed. (New York: Princeton Architectural Press, 1996), 200-210.

8. Peter Eisenman and Christopher Alexander, "Discord over Harmony in Architecture: Peter Eisenman and

Christopher Alexander in Discussion," *Studio Works 7*, (2000): 48-57, discussion first transcribed in 1982; Peter Eisenman and Leon Krier, "Peter Eisenman versus Leon Krier: My Ideology Is Better than Yours," *Architectural Design 59*, no. 9/10 (1989): 6-18; and Andres Duany, Rem Koolhaas, and Alex Krieger, "Exploring New Urbanism(s)," *Studio Works 7*, (2000): 134-145 discussion first transcribed in 1999.

9. Reynar Banham, "Ornament and Crime: The Decisive Contribution of Adolf Loos," *Architectural Review 121* (1957): 85-88; Adolf Loos, "Ornament and Crime," in *Ornament and Crime: Selected Essays* (Riverside, CA: Ariadne, 1998), 167-176, first published in 1908; and Joseph Rykwert, "Ornament Is No Crime," in *The Necessity of Artifice* (New York: Rizzoli, 1982), 92-101, first published in 1975.

10. Anthologies on architectural theory include, but are not limited to the following examples, which, collectively, illustrates a range of organizational strategies: *Architectural Theory from the Renaissance to the Present* (Los Angeles: Taschen, 2002), which is organized geographically; K. Michael Hays, *Architecture Theory since 1968* (Cambridge, MA: MIT Press, 1998), which is organized chronologically; and Kate Nesbitt, *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory, 1965-1995* (New York: Princeton Architectural Press, 1996), which is organized thematically.