

## Architectonics: The Infancy of Architectural Discourse

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The Irwin S. Chanin School of Architecture's *Architectonics* studio, the very first course in the school's curriculum, presents a curious threshold between non-architect and architect, to address the fundamentals of creative invention. Unpacking the pedagogical archive, maintained rigorously by the school, reveals, from a body of studio exercises and work, holistic and critical methods to access spatial ideas, elements and tools that employ a culture of play as "the first steps" towards a professional education in architecture. This research calls into analysis the *Architectonics* studio instructed by Elizabeth Diller, from 1983 to 1985, which embodies a stage of infancy, within the pedagogy of the school, by creatively playing with—bending and extending—established "rules" of the discipline. Using the English psychoanalyst D.W. Winnicott's concepts in *Playing and Reality* as a lens, this research re-establishes the need for an infantile place of play, or, "potential space," in contemporary professional architectural education curricula, to holistically access new material processes, technologies and tools.

### INTRODUCTION

We seldom find the word "Architectonic" establish itself at the root of an architectural pedagogy. Although omnipresent and clearly evident in the expansive landscape of inventive architectural pedagogies in the last 100 years, this curious concatenation, of *archi*, which is extracted from the sum of all that is primary, to the *tectonic*, our beloved adjective for the stand-up ability by forming, making and constructing has evolved from its Greek etymology to establish a unique yet strangely satisfying noun/adjective hybrid suited to address our discourse. Peggy Deamer, in her paper titled *First Year: The Fictions of Studio Design*, immediately asks a set of questions surrounding the dilemma, of a studio program, that strikes the right balance between conceptual thinking and formal dexterity, between material manipulation and cultural critique, and between precedent and innovation.<sup>1</sup> Deamer goes on to articulate the role of the critic, program, object and student, while arguing for the "production of an architectural citizen." It is clear that this position is constructed, in part, from the *Architectonics* studio, at the Irwin S. Chanin School of Architecture of The Cooper Union. If we consider Giorgio Agamben's explanation of *Infancy*,<sup>2</sup> as the appropriation between language and experience, *Architectonics*, as a first-year studio, stands as evidence of a place where design, a condition of quality, is exchanged and learned from *infant* like exercises, experiments and relationships.

Many professional schools of architecture tend to compartmentalize this notion, of first year "design" into epistemological objectives, often privileging concept, form and function, while separating geometry, structure, history/theory, and now technology. For example, at the ETH in Zurich, the first semester is divided into two studios—*Design and Construction*, and *Architecture and Art*,<sup>3</sup> among other sub-categories. Within a massive shift and growth in relevant technologies, and the diversity of trans-disciplinary influences in architectural discourse, revisiting the *Architectonics* studio, by using play as a lens reveals it's resilient position in the production of creative opportunity.

### ARCHITECTONICS

Basic understanding of architecture and its relationship to other arts and sciences. Three-dimensional design and space enclosure, principles of construction, and use of materials. Presentation drawings, plans, elevations, sections, and scale models.

—Anthony Candido, Lewis Davis and Edward Knowles. *The Cooper Union Art School - Curriculum description. 1959*

Introduction to the study of architecture, investigations of the interrelationships of space, structure and visual composition. Exploration of the syntax of architecture. Models and orthographic drawing.

—Abraham, Diller, Wisniewski. *The Cooper Union School of Architecture - Curriculum description. 1983*

Formally established, as a part of the first curriculum that was accredited with a professional degree status, from the academic year 1959-1960, by professors Anthony Candido, Lewis Davis and Edward Knowles, this new foundational studio, which replaced what was simply titled "Architecture" (without any design) was, and up until today, still is, aimed at developing a vocabulary to understand architecture through its relationship to other arts and sciences. By particularly and collectively addressing—dimensionality, both physical and conceptual, principles of construction, and materiality—this playground of assembly and disassembly, formed the basis for what was to become an extremely productive and radical period of architectural pedagogy, at the Cooper Union.

By the early nineteen-eighties, the nature and potential of *Architectonics*, had amassed into widely known and published

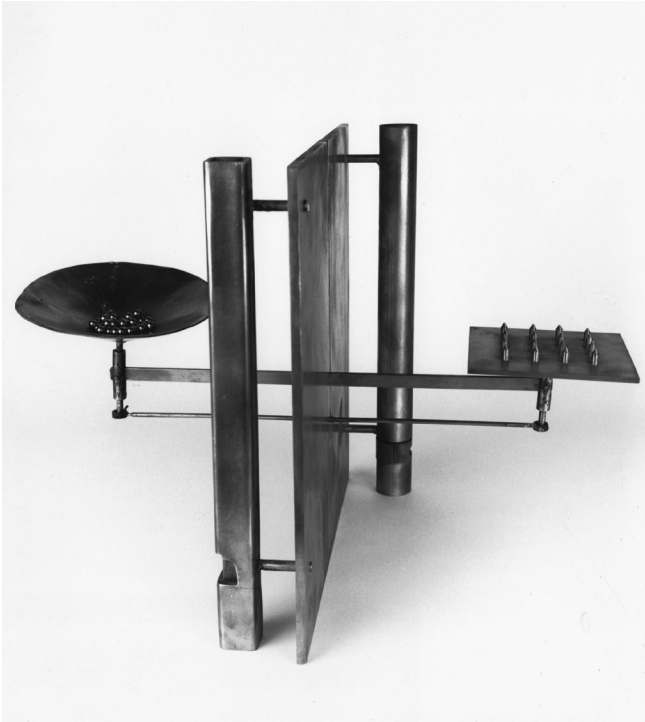


Figure 1: Scale. Andrew Fethes. *Architectonics*, 1983-84. Courtesy of the Irwin S. Chanin School of Architecture Archive.

exercises like the “9 square problem” and the “Cartesian house.” By the second and, latest to be published version of *Education of an Architect* (Rizzoli), in 1988, these notable exercises had become the tools for a wide variety of serious senior studio and thesis projects that have also since been widely recognized. However, what emerges from that moment, which is of specific relevance and significance to us here, of playing with rules, is the *Architectonics* studio coordinated by Elizabeth Diller, from 1983 to 1985.

The studio curriculum asserts that language, the first infiltration of custom into the study of architecture must be subverted.<sup>4</sup> By asking the question—why the condition of equilibrium is identified with sanity—this studio turned the “kit of parts” on its head, liberating it from its pre-established formal norms and static ideals into explorative and new states of deviated relationships, essentially operated by playing with new tools and quite literally and intentionally—bending pre-determined and largely industrial rules. For example, in the work produced by student Andrew Fethes (Figure 1.), playing with counterweight principles to physically construct a scale, pose “known” against an “unknown.” Subsequently, the interpretation of scale, between quantitative and architectonically qualitative is also examined by studying the reciprocity between visual and physical forces. The reciprocity, is extended across the formal development of the geometries and structural components, nuancing a thesis of balance across every element. Within the rigorously fundamental framework, the object can still be manipulated

(Figure 3.), as a tool, to extrapolate and test alternative and complex conditions that derive from the basic principles of balance. Fethes writes of his studies:

*The program was simply to design and construct a balance capable of weighing one pound of material in one ounce increments. My aim was to acknowledge the most fundamental architectonic principles: the simple geometric forms of the pans intersect the main balance beam at one point which in turn intersects the central axis of the dividing wall. The geometric volumes of the buttresses also intersect the central and create a space to store the material to be weighed, and the 16 one-ounce counterweights. Other elements include the development of a landscape on the square pan, and the projection of the elevation upon the central, square dividing wall.*

Playing again, with drawing in alternative projections and abstraction, making of full scale analytic models, and with text, as simultaneous forms of investigation, the “Beam” (Figure 2.), a study in the negotiation between tension and compression is learned through an object like the bow. This architectonic abstraction—along with other exercises like that of the “Connections,” which work with the movement and strengths of joints, hinges and fulcrums, or the mirror and windows exercise that stimulate moments between transparency, opacity and reflection—are able to access and extend a fundamental yet entirely novel body of knowledge. In these constructed, drawn and written temporalities—between

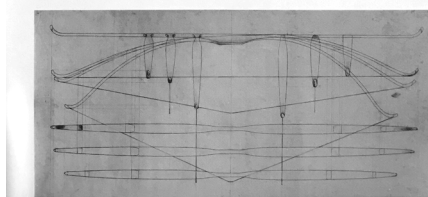
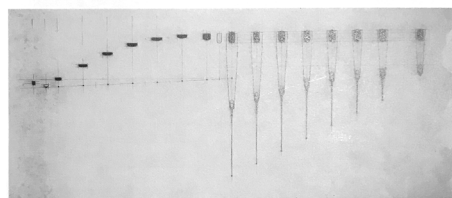
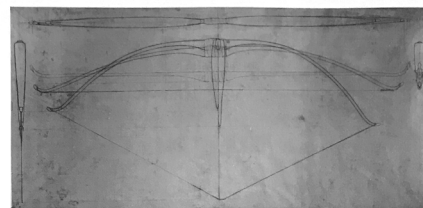


Figure 2: The Beam. A Study in Tensions and Compression. James Richards. *Architectonics*, 1984-85. *Education of An Architect*, Rizzoli 1988.

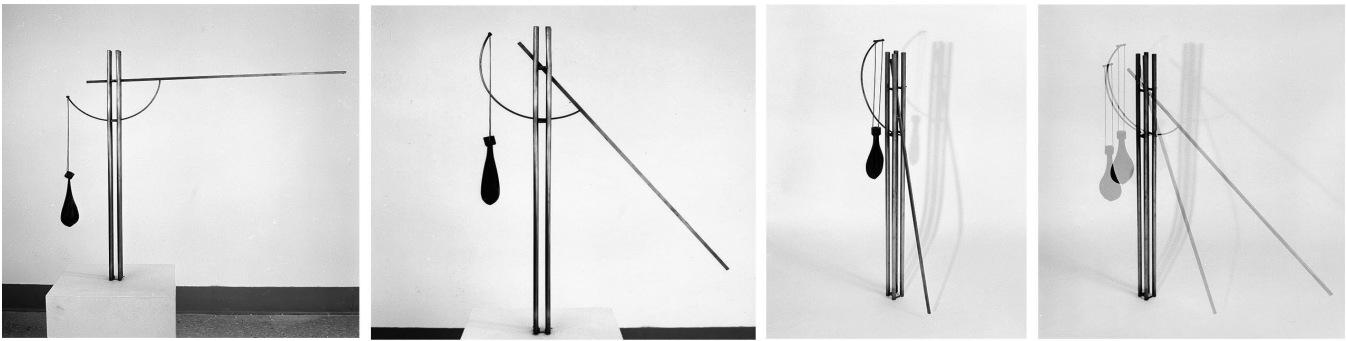


Figure 3: Balance in Scale. Danielle Vega. *Architectonics*, 1984-85. Courtesy of the Irwin S. Chanin School of Architecture Archive.

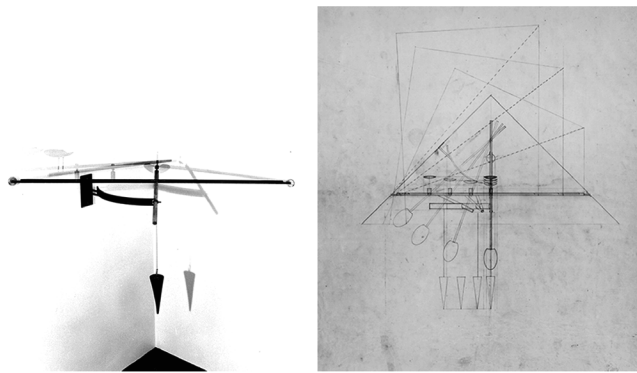


Figure 4: Balance in Scale. Danielle Vega. *Architectonics*, 1984-85. Courtesy of the Irwin S. Chanin School of Architecture Archive.

equilibriums and failures— an architectural culture of play is self-evident.

#### CULTURE OF PLAY IN ARCHITECTURE IN ITS STAGE OF INFANCY: ARCHITECTONICS AND TRANSITIONAL OBJECTS

In creative ability—architecture is qualitative and autonomous, it is imaginary and intuitive, truthful and fearless. In its production—It is quantitative and functional, ecological and social. Architecture inevitably calls into play disciplinary praxis, trans-discursive theory and fantasy. However, the relationship of architecture and play, as a cultural norm, remains somewhat ambiguous. In *Homo Ludens*, published in 1938, Johan Huizinga, while describing the significance of play as a cultural phenomenon, proffers that the processes of architecture, which he subsumes to be a plastic art, “runs completely outside the sphere of play.”<sup>5</sup> Across the 20th century—between the role of architecture as an instrument of socio-cultural policy, and its constructive processes—this relationship of play and architecture is not addressed often enough.

Reading, from a psychoanalytic point of view, into the work from Diller’s *Architectonics* studio, reveals an intrinsic nature of play, which is not only critical in its ability to

access knowledge, but arguable necessary. In embodying a culture of infancy, the creatively constructed objects of study, bear a striking resemblance to the phenomena of *transitional objects*, as described by psychoanalyst Donald Woods Winnicott in his 1971 publication *Playing and Reality*. *Transitional Objects*, Winnicott writes, in his theoretical readings of clinical studies, “stands for the object of the first relationship. The transitional object antedates established reality-testing. In relation to the transitional object, the infant passes from omnipotent control to control by manipulation,” or what I would call, simply as coordination, “and the transitional object may, eventually develop into a fetish object.”<sup>6</sup>

Winnicott insists that the origin of creativity, which he acknowledges as an attitude towards external reality, lies in play. He writes, “*Cultural experience begins with creative living first manifested in play.*” He consequently identifies a place, “*the potential space,*” as a place determined by learning from the experience between “*the subjective object and the object objectively being perceived.*”<sup>7</sup>

It is interesting then, to compare the pedagogy of Diller’s *Architectonics* studio to *transitional phenomena*. While, the objects produced are temporal, transitional and simply act as isolated tools and representations of momentary information, the conceptual language and form is *designed*, by the exercises, to *draw*<sup>8</sup> a precise history, which extends into a pool of cultural experience, activating a *collective potential*. This threshold, between non-architects and architects, activated in play, in Winnicott’s words, “*is neither a matter of psychic reality nor a matter of external reality, neither inside nor outside.*” The production and arbitration of this potential space, of creative and un-resolved exploration, through Agamben’s conditions of infancy and Winnicott’s analyses, support the argument for architectural education to be developed from a culture of *infancy* and *play*, between *language* and *experience*.

With this compelling evidence, Huizinga’s concerns of an architecture without play seems questionable. However, this analysis and argument makes necessary an attempt to

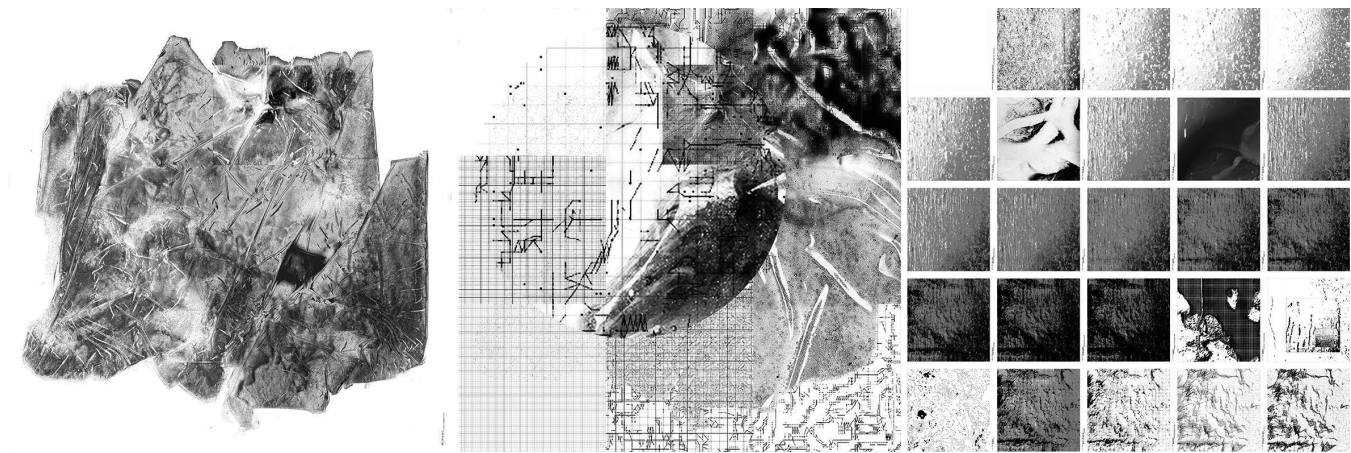


Figure 5: Transitional Material Objects-Material fragments, Catalogue of technological effects, Material States Shantanu Bhalla, Thesis. 2018. Irwin S. Chanin School of Architecture, Cooper Union.

address the fate of play and potential space in contemporary architectural pedagogy.

### NEW BUILDING BLOCKS

Our rules have changed, and so have our tools. While a look back into the archives, at the *Architectonics* studio work of the nineteen-eighties, might have revealed the operation and potential of play in architectural pedagogy, its wide spread effect and relevance have since coalesced into a format of rituals. Standardization and consolidation in professional architectural education, on a global scale, has led to its homogenized state. Most formats (the term in this case as a contradiction to pedagogy) are largely concerned with *representation*. In this paradigm of excessive image culture and media consumption, the crisis of representation is imminent. According to Agamben, in play only the ritual survives. If the nature of the ritual is to induce reproduction, this attribute presents a contradictory effect of play in the education of an architect.

To address this perceived crisis, which directly threatens diversity, the conclusion of this research is the point of conception of a much larger project—for a curricular format that shifts in, out and between the virtual and the real—to establish a potential space in playing with aberrant states of matter (Figure 5.), as a universal response to the issues of professional architectural education today. In learning from this *Architectonics* studio, which continues to establish new questions on the state of infancy in architectural discourse, we have to reimagine our building blocks—within social and ecological concerns—by reimagining materiality itself. In response, this research has prompted extensive experimentation (Figure 5.) and cataloging of technologies that play with non standardized material manipulations, to establish methods of learning and knowing through actions and making, rather than representation, as the new building blocks for play in the age of information.

### ENDNOTES

1. Deamer, Peggy. "First Year: The Fictions of Studio Design." *Perspecta* 36 (2005): 10-16. <http://www.jstor.org/stable/1567358>.
2. Giorgio Agamben, *Infancy and History. The Destruction of Experience*, trans. Liz Heron, (London & New York: Verso, 1993), 4.
3. "Curriculum & Course Schedule." Historical Timeline of Architectural Education at ETH Zurich – Department of Architecture | ETH Zurich. Accessed April 12, 2018. <https://www.arch.ethz.ch/en/studium/studienangebot/bachelor-architektur/bsc-studien-stundenplan.html>.
4. Henderson, Richard, Elizabeth Diller, John Hejduk, Elizabeth Diller, John Hejduk, and John Hejduk. *Education of an Architect*. (New York: Irwin S. Chanin School of Architecture of the Cooper Union, 1988.), 32.
5. Huizinga, Johan. *Homo Ludens: A Study of the Play Element in Culture*. (New York: J. & J. Harper Editions, 1970), 191.
6. Winnicott, Donald W. *Playing and Reality*. (London: Routledge, 2009), 12.
7. *ibid*, 135.
8. To Draw, refers in my opinion to a creative process, which simultaneously extracts and constructs information.