

not  
white

*diversity in beginning design education*



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## Transforming the Datum: The Readymade Context in the First Year Summer Studio

*“Transformative learning involves an enhanced level of awareness of the context of one’s beliefs and feelings, a critique of their assumptions and particularly premises, an assessment of alternative perspectives...and a desire to fit the new perspective into the broader context of one’s life.”*

*Transformative Learning* theory contends that the development of critical thinking occurs through self-reflection—the ability to compare new ideas and experiences to one’s preceding values, experiences, and assumptions, and the capacity to evaluate and alter (transform) these assumptions. A diverse recognition and assessment—rather than rejection—of unfamiliar cultural and physical contexts is fostered. *Transformative Learning* views difference—diversity—not as a condition of binary oppositions or prodigious eclecticism; diversity and transformation are, instead, qualities of subtle discrepancies between similarities. Transmutational processes, such as *transposition* and *iteration*, do not always produce highly varied conditions. *Iteration* is an act of repetition and approximation, *transposition* an act of relocation. These are not form-altering transmutations, but adaptations of context and meaning.

This paper proposes an analogous association between first year architectural processes of learning and the re-contextualized “Readymade” objects of Marcel Duchamp deployed in the 1910’s. The pedagogy is founded on the following premise: contextual response occurs through subtle conversions (primarily transposition and re-iteration). The material reality for this contextual transformation is a 5’x10’x2’ plywood site referred to as the *Datum*. The *Datum*, for the student, is a figurative and physical place in which to question one’s preconceptions (and emerging conceptions) of architectural design. The *Datum* is the boundary between preceding values and the actualities of the architect’s education; it is also a bound physical context in which design occurs through manipulations of that context.

### NOTES

<sup>1</sup> Mezirow, Jack. *Transformative Dimensions of Adult Learning*. (San Francisco: Jossey-Bass, 1991), 161.

### abstract

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The task of the architectural project is to reveal, through transformation...the essence of the surrounding context.<sup>1</sup>  
No new architecture can arise without modifying what already exists...<sup>2</sup>

In beginning design education, the first semester architecture student is often considered “unacquainted” with the architectural design environment, a neophyte to the education and profession of architecture. However, after 13 or more years of formal education and more than 17 years of life experience, the first semester design student holds many conceptions of the architectural world: preconceptions and prejudices, as well as factual knowledge and discernment. These assumptions (whether factually-based or opinion-laden) are developed through visceral experiences, narrative histories, media representations, and prior education. Congruently, students’ recognition of their immediate cultural and physical contexts is elevated, though the boundary of that awareness is often at arm’s length. Students are intimately aware of the immediate environment as it affects them. However, students have difficulty assessing a more comprehensive and complex social and physical context. Thus, much of the architectural education resides in questioning the extended context, in extending the boundary of awareness.

Marcel Duchamp, by deploying his “Readymade” works of the 1910’s, called into question both the defining bounds of “art” and the precincts of the gallery. Duchamp stretched the locale of the readymade (the comb, the urinal, etc.) to the gallery, and, in so doing, transformed our perceptions of each. This essay discusses an analogous association between Duchamp’s “Readymades” and the educational process of a 1<sup>st</sup> year summer studio conducted at the University of Arkansas. The studio employed a 5’x10’x2’ plywood site, referred to as the DATUM, to explore notions of contextual response according to the following premise: it is through transformation that the character of and response to a given condition—a datum—is explored. The DATUM was investigated through five transformational means: drawing, mediation, modulation, repose, and rejoinder; each of which will be described. Transformation is discussed as a physical act, a process of design, and a system for learning. (See Figure 1.)

#### TRANSFORMATIVE LEARNING: Preconceptions and Transformations of the Student

Transformative learning involves an enhanced level of awareness of the context of one’s beliefs and feelings, a critique of their assumptions and particularly premises, an assessment of alternative perspectives...and a desire to fit the new perspective into the broader context of one’s life.<sup>3</sup>

Transformative Learning theory contends that the development of critical thinking occurs through self-reflection—the ability to compare new ideas and experiences to one’s preceding values, experiences, and assumptions. Self-reflection structures the capacity to evaluate and alter (transform) assumptions. A diverse recognition and assessment—rather than rejection—of unfamiliar cultural and physical contexts is fostered. Learning, in general, begins with the creation of a datum of reference. This occurs through the a) accretion of haptic experiences, b) addition of repetitive and anomalous incidents, and c) development of expectations. By questioning and altering this datum, transformational learning occurs. Modified definitions of the sequential and recurring processes of transformative learning are:

- drawing in new ideas and experiences
- mediation between new and pre-existing ideas
- modulating the new and the pre-existing
- repositioning (re-pose) of values and assumptions
- continued assessment and response to prior responses: rejoinder

Each of these transformative phases develops an increasing synthesis of familiar and unfamiliar concepts, and at each phase, not only is contextual awareness heightened, but the accountability to assess one’s values with regard to the context is engrained. Each stage of learning described above has an analogous assignment relevant to the objectives of the studio. These are physical acts of transforming the DATUM, with the primary intention of questioning subtle differences. Transformative Learning views difference—diversity—not as a condition of binary oppositions or prodigious eclecticism. Diversity and transformation are, instead, qualities of subtle discrepancies between similar conditions. Likewise, transformational design processes, such as transposition and iteration, do not always produce highly varied conditions. Iteration is an act of repetition and approximation, transposition an act of relocation. Drawing and repositioning are grounded in iteration, and it is often through repetition that both learning and form-making occur. These are not primarily form-altering transmutations, but are rooted in adaptations of context, location, and proximity.

Repetition, as seen in drawing and rejoinder (above), is often characterized as imitation. According to Deleuze,<sup>4</sup> however, repetition gains its definition from difference, not simply imitation or likeness. Repetition (or iteration) is the act of producing autonomous, though similar, objects or concepts. It is a process of doubling. Here, we may consider the terms “dual” and “double.”

An essential difference occurs between these two different terms (dual and double) for the notion of two. Dual refers merely to two unrelated objects, while double refers to an uncanny repetition of the same. The latter thus contains an important paradox which the former does not: to be dual is to be both the same and different, while to be double is to be different and the same. The paradox lies in the fact that the double is...neither one nor two; it would also be correct to say that the double is therefore both one and two.<sup>5</sup>

The “double,” the preceding iteration, allows for the analysis of the preceding version because of its high degree of similitude

and subtlety of difference. It is through comparison—whether opposition, convergence, or deviation—that the beginning design student questions his/her environment and responds to it. The beginning design student, however, often relies on oppositional comparisons; enabling students to recognize subtle differences is difficult. Therefore, the double and its subtle twin gain importance. Students need ways to discern subtle differences of context. Revealing these mechanisms is the primary studio objective. The design problems of the studio impart the conceptual and physical mechanisms (rejoinder, drawing, mediation, etc.) for transforming the context. Ultimately, it is through these means that contextual response occurs. Course preparation investigated several acts of juxtaposition—diptych, triptych, and narrative—each intended to question specific aspects of an object, its context, and the relationship between.

The beginning design student enters architectural education with the notion that design is a microbial stimulus/response relationship, that relationships are binary (linear) in nature. This logic employs concepts of the diptych. The role of the studio was, through the addition of triptych and narrative techniques, to foster students' abilities to understand the complexity of seemingly simple contextual relationships. These structures recognize the complex context of design problems and relationships beyond simple binary associations.

1. the diptych<sup>6</sup>: a binary (linear) structure, a dialogue typified by:

the relationship of a whole system or figure to another whole system or figure

the relationship of parts to other groups of similar parts

2. the triptych<sup>7</sup>: a circular structure characterized by:

three figures, dominant, subordinate, and attendant

a non-serial hierarchy

3. the narrative<sup>8</sup>: a serial structure characterized by:

four or more figures or relationships

a serial hierarchy

These concepts augment the transformative learning process, and similarly enable an increasingly comprehensive recognition of the context. Students begin with the observation and drawing of a localized region of the DATUM. Students, then identify the overriding structure and organization of the DATUM, and in a reduced context, respond to simple elemental structures. The responses are direct singular manipulations and additions. For example, Mediation is the negotiation between two features with a spatial wooden frame. Rejoinder uses a hydrocal mass to connect two neighbors and two edges of the DATUM. Repose is a subtractive manipulation of existing material. Each assignment occurs through the direct implanting, reordering, or removal of units; and conceptual sophistication builds as students are required to negotiate increasingly complex assemblages. This is equally a transformation of the context and the objects therein. There is an analogous association between the aforementioned processes of learning and the re-contextualized Readymade objects of Marcel Duchamp deployed in the 1910's.

#### RE-CONTEXTUALIZATION: Duchamp's 'Readymades'

Marcel Duchamp's Readymades transform the meaning of a known artifact by shifting the customary context of that object. The Readymade is a profane cultural object placed in a refined sacred space: the gallery. Decontextualizing these objects poses a re-evaluation of the object's relationship to the context; in fact, the primary change is a transformation of the context. The direction and hierarchy of relationships among the art, the mundane artifact, and the art gallery continually shift.<sup>9</sup>

The Readymades, such as Fountain (a urinal signed and titled by the artist in black marker), place common found objects into a direct conflict with context. This positioning questions:

- the object and the gallery
- the object and its typical surrounds
- the gallery and its typical objects
- galleries where works like these are housed
- mundane things and their roll in art
- mundane people and their roll in art
- in the case of Fountain, the notepad and the men's room wall

It is the alteration to the context itself that questions the meaning of figure/context relationships. The subject of the work is not so much the displayed artifact; the subject is the

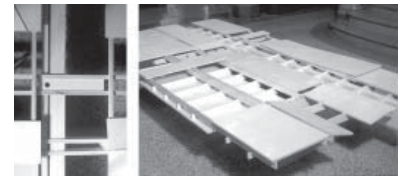


Figure 1 - Image of the pre-existing DATUM.

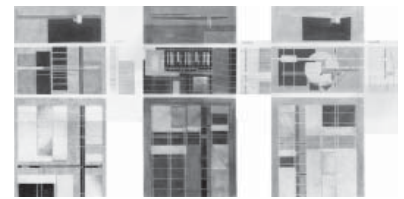


Figure 2 - Graphite "Drawing in the Field," plan and section (top and bottom) documentation of the DATUM and first two interventions (middle).

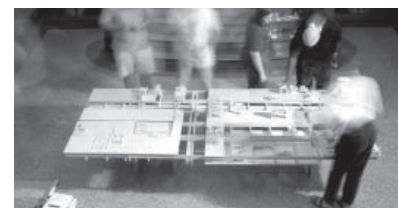


Figure 3 - The first iteration of models, mediating context, are inserted into DATUM.

juxtaposition of the object and its environment. Similarly, Charles Jencks describes, in “The Lesson of the Toilet Bowl,”<sup>10</sup> that the functional meaning of the toilet has been altered (misused, some may say). Jencks states:

*“The toilet bowl seems at first a good example of the modern architectural dictum ‘form follows function,’ because its shape, material and surface are determined roughly by its use, and this shape is...highly sculptural... This has not proved the case.”*

The functional meaning has, more often, been tied to the object’s cultural context than to its formal properties. It has been used as cleaning tank for grapes, a flushable wood-burning fireplace, a washbasin and a drinking trough. This anecdote describes, if nothing else, that Duchamp’s Fountain is not as farcical as some would lead us to believe, and its meaning is driven as much by its location as by its formal properties.

In the first year design studio Duchamp’s work was not necessarily the topic of discussion; little of the work was directly discussed. However, the Readymade, and its subsequent reframing of objects and their context, illustrates a connection between transformative learning and the education of a first year architecture student. Objects of architecture and the making of context occur through relocation and reconfiguration of the available material. The context of the studio discussion was transformed as the context of the DATUM was transformed. The students were not asked to reformulate the entire context with each maneuver; the students were asked to respond to a given region using a specific mechanism of transformation, as previously defined.

Parallel to Duchamp’s mundane artifacts, the art gallery itself may be considered a readymade condition. The gallery has well-established viewing rituals and rules dictating social and physical interaction. In addition, the security of the gallery clearly establishes the separation between the patron and the work. Analogously, the architectural environments of practice and learning maintain their own rules, conventions, and taboos. Each student (and professor) arrive in the “classroom” with his/her own predilections of architectural design education. The DATUM provides these disparate participants with a common “readymade” context in the first year studio.

### THE DATUM: Transformation in 5 Acts

In the summer term of 2003, at the University of Arkansas, a 6-week 1<sup>st</sup> year studio was conducted. This was the first architecture studio for all students involved. The pedagogy for this studio is grounded in the belief that contextual observation and response occurs through subtle conversions (primarily transposition and iteration). The instructors constructed a 5’x10’x2’ wooden site referred to as the DATUM, a bound physical context in which design occurs through manipulations of that context. The DATUM, for the student, was a figurative and physical place in which to question one’s preconceptions (and emerging conceptions) of architectural design; it became the boundary between preceding values and the actualities of the architect’s education. The following five terms/phrases outline the five major projects—acts—that were performed within the context of the DATUM.

#### ACT I: Drawing in the Field

This project set initiated a process of observation of and alteration to the DATUM. A sequence of three projects was developed from three distinct meanings of the phrase “drawing in the field”:

- the act of sketching while in a given locale—recording
- the act of “taking in” one’s surroundings—observing, collecting
- the act of “filling in” an area between defined regions—completing

During the first two stages of this project, students developed a categorization—a language—of the DATUM. This paralleled, quite directly, Bandler and Grinder’s discussion of transformational grammar<sup>11</sup> and the following linguistic terms: unit, structure, and representation. Through these three acts of drawing, students observed the vocabulary of elements (units)—points, planes, edges, masses, and voids—the organization (structure)—patterns, anomalies, and hierarchy—and symbolism (representation) of the given context. In the third segment of the project students began an intervention into the perceived “voids” of the context. Each student inserted a small unit, constructed of three wooden frame elements, into this void. They were not working initially with the complex jargon of architecture, but with the limited language of “alphabet blocks.” These blocks were not viewed as separate from the context; they were the context. As Vittorio Gregotti states, that which is pre-existing is not merely the “background” for the installation of architecture; the context provides the “structural material” for the project.<sup>12</sup> (See Figure 2.)

#### ACT II: Mediation

This next process of transformation questioned the spatial and ideological boundaries of ownership students often place in their work. The project required students to mediate 2-4 constructs from the previous interventions. As a mediating device, a construct of 3 interconnecting planes (defining a volume of not less than 17 cubic inches) conveyed the nature of the arbitration: differences in proportion or geometry, structural language, or location. Students began by questioning the spatial and organizational conflicts within a given region of the DATUM, including the constructs contained within. Students then developed a means for resolving, heightening, and/or connecting divergent constructs to meet the objectives of the assignment.

Students emerged from the project with a vocabulary of mediating techniques—juxtaposition, separation, and assimilation—and correspondent results—amplification of differences, restating of similarities, and integration into a singular system. (See Figure 3.)

#### ACT III: Modulation

The term ‘modulate’ is often used in music, referring to phase change in pitch; the etymology derives from Latin, to measure.<sup>13</sup>

To ‘modulate’ suggests an act of tuning or re-proportioning. The “Modulation” project was a more specified iteration of the “Mediation” project. In this intervention, students were introduced to simple woodworking techniques and inserted a small wooden mass into the DATUM. This minimal insertion focused on subtle proportional relationships and contained a minimal program: to “lock down” another piece of the context, to physically engage and fasten another construct to the larger region. Yet, the modulation could not compromise the structural integrity of the DATUM. Because the module contained a structural program, when inserted into the context, it became the context—a permanent part of the DATUM. (See Figure 4.)



Figure 4 - Masses of modulation being added to DATUM.

#### ACT IV: Repose

The fifth stage of transformative learning previously described (repositioning) is the most difficult for undergraduate students. The deep-seated predilections of architectural design and the proprietary nature in which a student views his/her work hinder the transformational process. Resultantly, this became the most significant project of the semester. The “Repose” project, like “Drawing in the Field,” contained several meanings:

- repose (n): a moment of pause (resulting in reflection and observation)
- repose (v): to question again
- re-pose (v): to re-position

In this act, students reflected upon the history of and changes to the DATUM. What was the original identity of the DATUM? How the identity of the DATUM altered? Which changes were most significant? Which alterations were most recurrent; which were most anomalous? The boundary of ownership was further dissolved as each student evaluated, modified, and reconstructed 2-3 structures previously posed by other colleagues. This further established the DATUM as a community, not proprietary, device. (See Figure 5.)

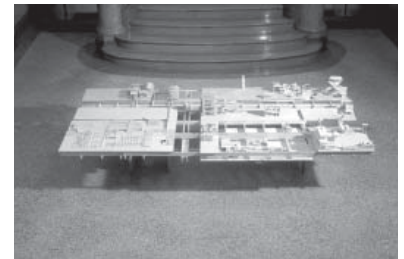


Figure 5 - DATUM after “Repose” models were added.

#### ACT V: Rejoinder

In the context of the DATUM, rejoinder insinuates both the notion of responding to prior responses and the physical act of joining. It is the final act in this sequence. “Rejoinder” was structured such that each project had two neighbors. The project called for a mass to be inserted in a previously restricted zone. The contextual response with a direct neighbor, another student, required the transformation to be collaborative. The immediate adjacency of another student and the structure of the DATUM required a dialogue between local and global emphases. Irwin Roth discusses, in terms of adult education, the shift between global and local concerns should occur at useful points in the thought process. Global systems should reference the task at the scale of the hand and local juxtapositions should reference the project as a whole.<sup>14</sup> (See Figure 6.)

#### CONCLUSIONS

The DATUM becomes the reference from which education bounds, allowing students to engage issues of scale, proportion, structure, spatial articulation, and design communication in a full-scale, bound context. The DATUM places, within “arm’s reach,” a readymade, though unfamiliar, architectural context. Through drawing, mediation, modulation, repose, and rejoinder the student becomes increasingly familiar with that context. Simultaneously, the DATUM is transformed by the student. This perpetual renovation of the known—of transforming the DATUM—requires a continued, active awareness of one’s environment, and resultantly of one’s architectural preconceptions and one’s self. The goal was not to graduate each student through these phases of transformative learning, but to introduce students to these modes of thinking and designing. The “double” contextualizes that which precedes it and is itself re-contextualized by its twin. Juxtaposition is a structure that recognizes complex (though subtle) relationships beyond the static binaries. The Readymade establishes new frames of reference by repositioning old ones. The Readymade Context transforms predilections of architecture by enhancing the students’ abilities to discern characters in a subtle diverse context.



Figure 6 - Cast rejoinder pieces connecting the last void on the DATUM.

#### NOTES

<sup>1</sup> Adrian Forty quoting from the introduction to Vittorio Gregotti’s *Le Territoire de L’architecture* (French translation, 1982). *Words and Buildings: A Vocabulary of Modern*

Architecture. (London: Thames & Hudson, 2000): 132.

<sup>2</sup> Vittorio Gregotti. "On Modification." *Inside Architecture*. (Cambridge: MIT, 1996): 67.

<sup>3</sup> Jack Mezirow. *Transformative Dimensions of Adult Learning*. (San Francisco: Jossey-Bass, 1991): 161.

<sup>4</sup> Gilles Deleuze. *Difference and Repetition*. (New York: Columbia University, 1994 English Translation).

<sup>5</sup> Paul Gordon. *The Critical Double: Figurative Meaning in Aesthetic Discourse*. (Tuscaloosa: University of Alabama Press, 1995): 19.

<sup>6</sup> Gilles Deleuze. *Francis Bacon: The Logic of Sensation*. Trans. Daniel W. Smith. (Minneapolis: University of Minnesota Press, 2002): 55. Deleuze defines the diptych, specifically related to contemporary painter Francis Bacon "... two sensations, each having its own level or zone, can also confront each other and make their respective levels communicate. Here we are no longer in the domain of simple vibrations, but that of resonance. There are thus two figures coupled together. ...what is decisive is the coupling of sensations: there is one and the same mater of fact for two figures"

<sup>7</sup> *Ibid.* 60-63. The triptych defined, again through the work of Francis Bacon by Gilles Deleuze, is a distribution of three basic rhythms, the active, the passive, and the attendant. The active would have increasing amplification or variation. The passive would have a subordinate role, often decreasing in variation or being eliminated. The attendant, always present but never a direct participant.

<sup>8</sup> A narrative structure recites specific times, manners, events, actions and reactions in the order in which they occur, or simply states the facts connected with a subject.

<sup>9</sup> Thierry de Duve. *Pictorial Nominalism: On Marcel Duchamp's Passage from Painting to the Readymade*. (University of Minnesota Press: Minneapolis. Oxford. 1991): 152-163.

<sup>10</sup> Charles Jencks. "The Architectural Sign." *Signs, Symbols and Architecture*. (NY: J. Wiley & Sons, 1980): 83-85.

<sup>11</sup> Richard Bandler and John Grinder. "The Transformational Model." *The Structure of Magic: A Book About Language and Therapy*. (Palo Aalto, CA: Science and Behavior Books, 1975).

<sup>12</sup> Gregotti. 67-73.

<sup>13</sup> *American Heritage College Dictionary*, 3<sup>rd</sup> Edition. (Boston: Houghton Mifflin, 1993).

<sup>14</sup> Irwin Roth. "Challenging Habits of Expectation." *Fostering Critical reflection in Adulthood*. (San Francisco: Jossey-Bass Publishers, 1990): 122-124.