

Productive Accident in Student Analysis of Urban Form and Space

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ABSTRACT

If as educators we are to expect our students to act with confidence within the city as context, we must define and develop modes of inquiry which directly and successfully enable students to engage and understand multilayered, accidental, and experientially superimposed urban relationships. For without such modes of inquiry, we run the risk that our students will fail to appreciate the accidental relationships which are so central to the American urban experience as sources of profound understanding and inspiration. In this paper, I consider successful methods and techniques which my students in two separate courses presently use to analyze accidental relationships which exist in the American city. One of these courses is the first semester of our institution's undergraduate architectural design studio sequence; the other is a seminar course on visual communication techniques which I offer to graduate and undergraduate students. In both courses, I propose specific modes of inquiry which the students use to make sense of accidental relationships and juxtaposed observations within the city. The techniques invoke structured photography, layered mapping, and multimedia collaging. In presenting each of these modes of inquiry to students, I attempt to frame the acts of gathering and organizing information in support of urban site research so as to heighten the likelihood of productive accident.

1. PURPOSE AND RESULTS

The purpose of this paper is to discuss a specific methodology for urban research and analysis dealing with accidental relationships in the American city. Results of the methods proposed here consist of successful student work completed in two courses taught during the 2003-2004 and 2004-2005 academic years.

2. THE IDEA OF PRODUCTIVE ACCIDENT

As an architectural educator at the University of Minnesota, I have found that many successful architectural design students engage in processes characterized by *productive accident*: the discernment of value from unintended visual relationships within evolving work. Among the examples of this phenomenon which I cite in my paper titled Promoting Conditions for Productive Accident (1) is *superimposition*: for example, two drawings completed to satisfy different or competing agendas may reveal through superimposition new and unintended spatial relationships; or models constructed at a certain scale may be placed into other models built at a different scale, revealing surprising and unanticipated relationships between part and whole.

In urban analysis and research of urban forms and spaces, I believe that productive accident can become critical to the process of making sense of observations. This is because cities are shaped over time in response to multiple, persistent, but often unrelated forces; as a consequence, built urban form may appear strongly accidental in character. I contend here that our responsibility as educators to assist our students in understanding this experience can be met through the *definition of specific modes of inquiry* which engage multilayered, accidental, and experientially superimposed visual relationships.

3. DESCRIPTION OF COURSE STRUCTURE AND FORMAT

3.1 Visual Communication Techniques in Architecture

Visual Communication Techniques in Architecture (ARCH 5313) is an elective seminar course offered to students from all levels of the University of Minnesota's graduate and undergraduate programs in architecture. The course provides an opportunity for students to develop confidence in judging the usefulness of specific representational media in their design processes. I developed this course with the belief that the ability to make such judgments is a necessary precondition to producing deeply felt and convincing architectural design work.

The fifteen-week course is structured around a series of cumulative exercises, formulated in response to two subject-themes: analysis of the local environment and analysis of the remote environment. Students proceed from analyzing the shared experience of the University of Minnesota's Architecture Building to the remote experience of buildings in Switzerland, Japan, and India. At the end of the semester, students submit a portfolio of work arguing a point of view regarding the role of media in shaping their perception.

3.2 Architectural Design Studio

Undergraduate Studio I (ARCH 5281) is the first of a series of required architectural design studio courses for Minnesota students pursuing either a Bachelor of Arts or a Bachelor of Science degree in architecture. The course is instructed collaboratively: as many as six instructors in a given semester take responsibility for groups of as many as eighteen students each.¹ The overall curriculum is established at the departmental level, and the individual instructors provide individual interpretation of the curriculum on a daily operational level.

The studio addresses *modes of gathering* through a concentration on persistent history, social ethics, and material philosophy. Students explore the architectural ramifications of these issues through local precedent studies, full-size investigations of material, and the production of iterative scale models and drawings. Students complete the semester by synthesizing study work into a comprehensive design for a shelter or "gathering space" constructed of stone. The component of this course most relevant to the subject of this paper is the two-week phase titled Landscape, in which students are introduced to the complex urban site within which they are ultimately responsible for proposing the comprehensive design.

3.3 Modes of Inquiry

In both courses (ARCH 5313 and ARCH 5281), I propose specific modes of inquiry which the students use to make sense of accidental relationships and juxtaposed observations within the directly experienced urban environment. The techniques include *structured photography*, *layered mapping*, and *multimedia collaging*. In presenting each of these modes of inquiry to students, I attempt to frame the acts of gathering

and organizing information in support of urban site research so as to heighten the likelihood of productive accident.

4. EXAMPLES OF WORK

A project in the Landscape phase of ARCH 5281 requires students to define a path through a selected urban space. At equally-spaced points along the path, each student photographs their surroundings according to precisely defined rules: looking straight down at their own feet, directly to the left and to the right. The resulting photographs are assembled as a collage, which is itself subsequently used as the basis for analytical models. The methodically produced and assembled photographs create opportunities for students to observe unintended spatial and temporal relationships within a relatively abstract graphic composition. Patterns of light and shadow might emphasize, for example, the relatively strong presence of a visible horizon line in one area compared to another; otherwise unobserved symmetries and order might become apparent when the work is considered as a whole. Provided that the students remain alert to possibility, the exercise provides a fresh look at familiar ground.

In Tamer Azazzi's work at Minneapolis's Riverside Plaza housing complex (Fig. 1), several unanticipated relationships became evident: the gridded floor serves as an orientation device (made apparent by the juxtaposition of "straight-down" views showing a rotating grid); bright white columns against a complex visual background recall bright white vertical strips of sky between buildings; facades organized in grids repeat themselves at smaller scales in entrances; and the continuous presence of the walking surface becomes comparable to the continuous presence of strong vertical elements.



Fig. 1

David Wilson, at a site in Minneapolis's Milling District, responds to his initial series of photographs with a figure-ground collage tracing the visible contours of buildings, bridges, railings, and other elements of the built environment which operate to shape space and experience (Fig. 2). The work is remarkable for its direct engagement with the cacophonous silhouette of the urban landscape, as David allows his explorations to be guided in part by deliberate intent (attempting to categorize solid separately from void) and in part by the accidental collisions between adjacent images. The resulting collage is no longer immediately discernible as a composite of several images, but instead becomes legible as a whole, reading strongly as a single continuous reflection upon his urban surroundings. Accidental relationships which emerged from his structured photographs become a jumping-off point for a new and specific understanding of the site.

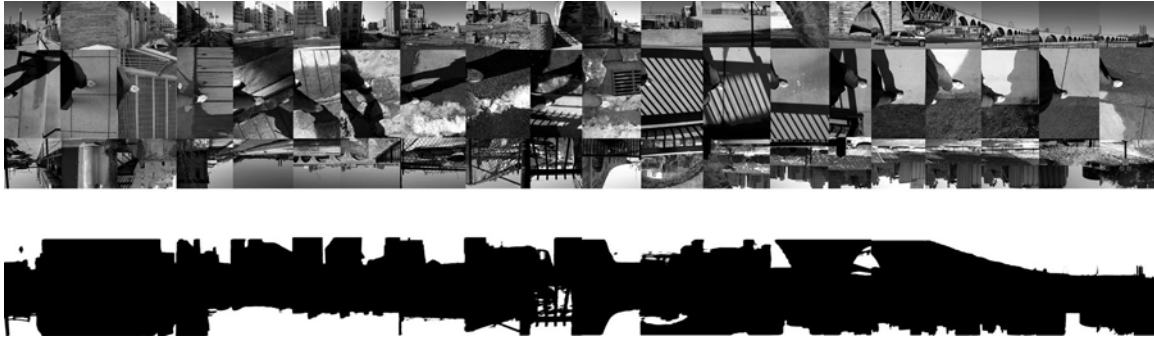


Fig. 2

As another component of the Landscape phase in ARCH 5281, each student conducts on-site reconnaissance in response to which they produce a series of maps at uniform scale. Each map is composed of multiple sheets of translucent paper, and each sheet of paper contains information corresponding to an observation or set of observations. The observations may consist of categorized built phenomena (e. g. constructed streets and paths, building volumes, overhead wires), or perhaps of aspects of experience more difficult to quantify, such as perceived horizons which change over time, perceptions of boundary along a path, and memory evoked by sound and silence.

After her first visit to the site, Laura Malwitz identified a unique location at the river shoreline, at which point the complexity of the site was to her somehow more apprehensible than elsewhere. Her maps (Fig. 3) overlay the presence of built structures and surfaces with speculative drawings having to do with sensory perception. The act of separating observations into translucent layers and then rearranging them heightens the possibility of productive accident: by rearranging the layers, it became possible for her to discuss why and how her perceptions were shaped, and even to speculate as to the possibility of similar experiences elsewhere within the site. The productivity of accident is seen to enable confidence in establishing position and relation to urban surroundings.

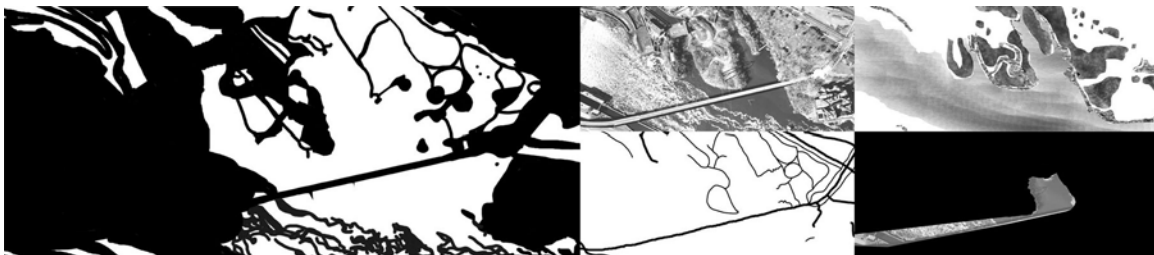


Fig. 3

An exercise in ARCH 5313 asks students to consider the architectural elements which define, frame, and interfere with the perception of horizon, where *horizon* is initially defined to mean a perceptible and continuous line which separates ground from observable sky. Superimpositions of text, color, line, tone, and photograph – some of them deliberate, others accidental – enable the students to address their place

in the city while being specific about how the built environment shapes their understanding of relationships between themselves and their surroundings.

Will Spencer's work (Fig. 4) begins with a composite photograph of an urban site in Minneapolis. In an initial image-manipulation, he identifies and categorizes multiple intersecting horizons corresponding to foreground, middle ground, and background; in two subsequent images, he addresses the horizon as the imaginary line of convergence for all other "horizontals" and as the position of a vanishing point. The work is a convincing illustration of productive accident: recognitions of irregular shape, contour traces, shifts in color, and overlays of tone combine to draw straightforward value from complex urban surroundings.



Fig. 4

Nathan Zook begins his analysis (Fig. 5) with a composite photograph of an urban street in downtown Minneapolis. He immediately recognizes and chooses to emphasize through tracing the irregular, accidental shape of the sky. From this recognition, he puts forward (in superimposed text) the suggestion that horizon ceases to operate the way he expected it to and instead becomes something like a vertical horizon. Again, the work is distinguished by its ability to discern value from the unintended.



Fig. 5

5. CONCLUSIONS

As students study the city through artifact collection and production, the graphic arrangement of their findings (whether photographs, maps, or text) will initially suggest importance, prioritization, presence, and memory. But if the students graphically arrange their findings in a way to promote juxtaposition and superimposition of information (e. g. photographs placed adjacent to each other, or atop each other, or overlays of tone and text atop image), the possibilities for unintended relationships to develop are increased and the opportunities for students to learn – *not simply to re-present found content devoid of a contextual understanding* – are immeasurably strengthened. Research findings arranged graphically are collage-like, in that they deliberately superimpose and juxtapose information from different sources, although they possess additional formality and order demonstrating the thoughtfulness and care inherent in research endeavors. This strong combination of formality and order enabling the bringing-into-being of accidental relationships convincingly parallels the evolution of the city and enables students to act with well-grounded confidence.

Sources

(1) Christenson, Mike (2005): Promoting Conditions for Productive Accident. Unpublished (scheduled for presentation at ASCA International 2005).

Endnotes

¹ ARCH 5281 exercises for Spring Semester 2005 developed by Mike Christenson and Kathy Olmstead, based on previous semester work and contributions by Mike Christenson, Naoto Sekiguchi, Ralph Nelson, Mary DeLaittre, Benjamin Ibarra-Sevilla, Jeanne Sterner, Mary Springer, and Malini Srivastava.