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The Jeweler, The Baker, The Chocolate Maker

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Abstract
The goal of this paper is to outline the pedagogical approach to research as a foundational skill for beginning students in the design studio, and additionally to reflect upon the way we (as educators) respond to observed outcomes and collective reflection.

Disciplines
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Comments
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> *"Designing is a matter of concentration. You go deep into what you want to do. It's about intensive research, really. The concentration is warm and intimate and like the fire inside the earth..."*
>
> *Peter Zumthor*

Grounding

The goal of this paper is to outline the pedagogical approach to research as a foundational skill for beginning students in the design studio, and additionally to reflect upon the way we (as educators) respond to observed outcomes and collective reflection.

Research, as approached in this context, is intense study undertaken to increase one's knowledge, with the goal of using that knowledge to inform a design proposal – it is a prerequisite of design. Intense investigation of the subject reveals not only pragmatic obligations such as existing conditions, spatial requirements, and performance criteria, but can also reveal poetic potentials. For the beginning design student, the importance of research must be explicitly established as a critical first step, defining a context within which design decisions are made.

With this in mind, the program of artisan presents a rich opportunity for research into the processes of making to serve as a framework for both conceptual and pragmatic concerns. More so, working with local artisans creates the opportunity for site visits, process observation, client conversation, and other, more subtle and, direct experiences. Thus, we asked beginning architecture students to design a work/live space for artisans that would, first demand an understanding of a particular process of making, and that secondly, the investigation of that process might inspire a conceptual design strategy.

The Approach

Experienced designers understand that preparatory research can take many forms – studying precedents, consulting design guides, conducting first-person interviews and user-group meetings, to name a few. Typically multiple streams of research are pursued and combined to develop a well-rounded body of knowledge regarding the subject. It is our observation that beginning students, when undertaking research, look to the internet as their primary, and often sole, source of information. This reliance on the internet leads to a shallow, cursory understanding of a subject, with limited value for or application to design. In order to address this tendency, we outlined numerous specific methods of research for this project.

The studio, through this lens, is understood primarily as a research laboratory, challenging students to study very specific processes as the departure point for design. Each student was assigned to study a type of artisan, either a jeweler, a baker, or a confectioner (the chocolate maker) for whom they would develop a design. They were charged to investigate the

materials, tools, and processes used by their artisan. They were expected to use the internet as an introduction to the topic, but were required to identify and consult books to provide deeper information. Students also were to find films, primarily on YouTube, which showed variations of the production processes through time and included detailed verbal instruction. Additionally, the faculty identified and arranged visits to two local artisans of each type, to supplement the study of secondary sources with direct observation and first-person interviews. Upon interviewing, observing, and documenting a particular process of making, each student developed a space-function diagram outlining the required sequential production processes. Once a clear process (casting a ring or baking a croissant, for instance) was identified, the student developed a diagrammatic mapping of the process noting all required equipment and workspace needs. Lastly, each student was challenged to use the workflow process to find a moment or circumstance in the artisan production process, which they would mine for potential material, spatial or formal design drivers.

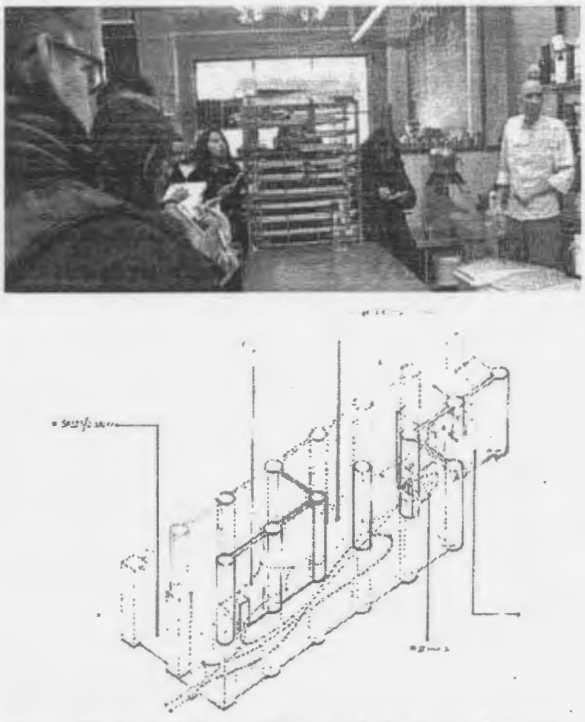

Fig. 1. Student visit to artisan workplace and resulting space analysis drawing.

Fig. 2. Ring casting process study.

Assessment and Outcomes

This project was delivered by two architecture faculty in two different studios, with a clear, if unintended, divergence in outcomes. One studio tended to focus on the more concrete issues of workflow and spatial adjacencies necessary to the artisanal process. One example of this focus was that each group of students studying a particular artisan was required to develop a detailed space-function inventory based on their shared observations of the spaces and equipment of the shops they visited. This was documented in a spreadsheet format with itemized equipment, spaces, and square footage detailed. The other studio focused primarily on the interpretation of the artisan's process into formal relationships within the building. This approach asked students to imitate physical processes in the making of an artisanal product (ring, croissant, or fudge) and to isolate those moments and interpret them into a formal, modeled relationship. Such an approach required each student to understand the "diagram" of the object being studied, and ask, how might the "formal diagram" of the croissant clarify the relationship between live, work, and outdoor spaces for my project. Effectively, it demanded a clear understanding of the originating object, and used it as an imposition of building program relationships. Importantly, this process was then asked to adhere to the required function of delivery, production, and

sales of the artisanal objects. The former studio, with a strong pragmatic focus, generated very strong space programming and the student work demonstrated a clear understanding of the client's spatial needs – but lacked inspiration. The latter studio, with its more abstract direction, was quite weak in the realization of functionally successful architecture but developed much richer conceptual exploration.

The experience of the studio demonstrated that both pragmatic and poetic avenues of inquiry had the potential to be successful facets of the project, but, as taught, very few students found success on both accounts.

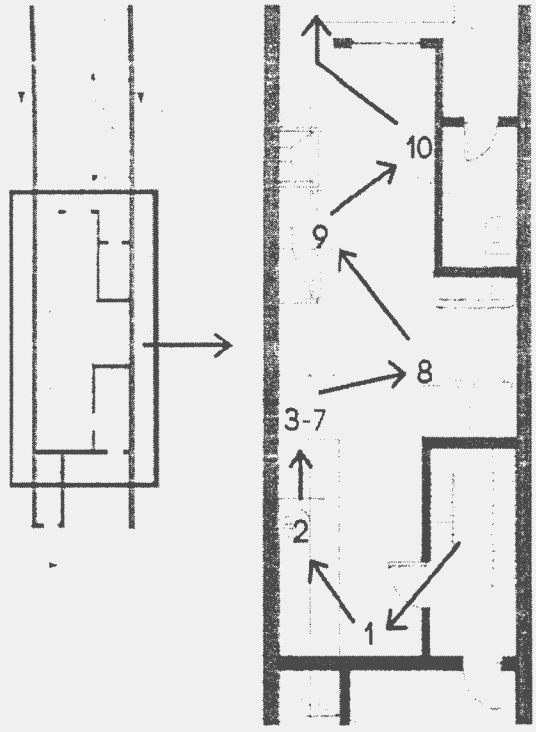

Fig. 3. Pastry kitchen workflow diagram.

Successes:

The in-person visits to artisan workplaces proved extremely valuable as immersive research opportunities. For almost all of the students, this was the first time they had gone into a space with the critical agenda of studying that space to understand how it supports a particular use. Likewise, this was the first time many of the students had attempted to observe and record the physical facts of a space – dimensions, layout, finishes, etc. By investigating the spaces, their layouts, equipment, materials, and the processes of the artisans, students developed a confident understanding of the relative scale of necessary spaces. By talking to the artisans directly, critical details, such as the need for security in a jewelry store, or the fact that much of a baker's work goes on at night, emerged. This first-person experience gave the project a sense of reality and imparted to the students both a sense of authority about and responsibility to the user. There was a level of investment in the project that would have been impossible to capture only via secondary sources.

The multitude of steps required in the production of any artisanal object also provided a rich context as a subject for inspiring design ideas. Anything from an artisan's physical movements, to the object's form, or a change in physical process inspired architectural form, material relationships, graphic expression, and more.

Failures:

As already noted, few of the student designs were successful in both pragmatic and poetic terms. We attribute this not to an inherent flaw in the project approach, but to each instructor favoring, at the start, either a more pragmatic or a more poetic emphasis, and, due to time constraints (the project was only of one half semester duration) not having the ability to redress the imbalance.

Despite the great value of the artisan workshop visits, these opportunities were not used to full advantage. The students proved to be reluctant, unprepared, or unable to engage with the user to acquire quality information. We believe this resulted from a lack of preparation for the site visit / interview process. Students could have, and should have, been tasked with formulating a comprehensive set of question in order to be proactive information gatherers.

Discovery

It should be noted that both instructors have practiced architecture on small projects in which the client is the end user and the architect had the benefit of personal contact with that client. This influence is readily apparent in the nature of a student project type that is very dependent on client needs, desires, and opinions. Additionally, this particular project provided social, cultural, and legal design constraints (IBC codes, downtown historic district codes, ADA codes, etc.), attempting to capture the realities of professional practice, which require balance between a responsibility to the client, social responsibility, and individual genius. By introducing beginning design students to this balance, students are made aware that the research of real space, real needs, and real people's opinions each hold unique weight when making design decisions. Prioritizing those differences in the design process became a key talking point within both studios.

Through this project approach, particularly because of the information gained and relationships made during in-person site visits and interviews, students were capable of understanding that designers must prioritize design decisions - because of the sheer quantity of information to be considered and decisions to be made. They had to balance formal invention with issues of construction and spatial practicality. The students knew what the client might need or want because they knew the client, they were capable of emailing, calling, or visiting the client again and again if so chosen. The comfort in knowing why design is important was no longer an empty phrase such as "What *might* the client need", instead the mantra was "What *does* the client need?" Our response, as instructors was, "I don't know what the client needs, but you know the client, so you should ask them."

The project demanded sensitivity to basic client requirements. It also allowed students to test their hand at what was needed versus what was wanted. Students were forced to judge where their creativity was necessary and where their creativity was a needless complication. Notably, such learning experiences require willing and honest clients. Nonetheless, the opportunity to feel as though the student is designing for others as a real act was felt. This sense of ownership and pride which cannot be imitated

Lastly, in the unfolding of this project, two key observations were made regarding the position of the project and pedagogy for beginning design students:

1) Design is ultimately and primarily in service of others.

2) Designers must be able to prioritize design decisions.

Notes

[1] Merrick, Jay. "Peter Zumthor's Experiments in Space" in *The Independent*. 2011, June 6. http://www.independent.co.uk/arts-entertainment/architecture/peter-zumthors-experiments-in-space-2293428.html

Figures/Images:

Fig. 1. Li, Zejun. Photograph and Drawing, ARCH 202, Iowa State University, 2014

Fig. 2. Werba, Zachary. Study, ARCH 202, Iowa State University, 2014

Fig. 3. Kurnia, Joshua. Diagram, ARCH 202, Iowa State University, 2014