REVIEWING DIGITAL—CRITIQUING THE STATIC CRIT

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ABSTRACT

This paper focuses on challenging design pedagogy to question its ingrained reviewing methods that require the production of static media. This examination looks at new methods of digital design practice that allow a student to both design and quickly output a digitally interactive version of their model for impactful means of collaboration by faculty of all ages as well as other students. Topics covered include the space of digital review, how architectural academia can harness new social media culture, and core concepts surrounding the technologies of information.

Keywords: Pinup Culture, The GIF, Digital Pedagogy

1. INTRODUCTION

In design education, a common aphorism relayed to the beginning design student during reviews is "You put all this work into your digital model, and it doesn't show up on these drawings." The educator is lamenting over the amount of design-thinking and time spent in a medium that did not see the light of day in a public forum. A corollary statement that might be heard earlier in the semester would be "You need to get your design out of that digital model onto paper and pin it to the wall so that we can discuss the design." From the student's point of view, particularly the twenty-first-century digital native who streams videos and posts and shares content all entirely from a small computer in their pocket, one could imagine that the above criticisms are accepted due to the student's novice status, but also raise a level of frustration, anxiety, and incredulity. Further, advances in software development and the inverse relationship between increasing hardware performance and decreasing costs stir the inquiry that perhaps it is our review format with students that truly needs to be revisited. From the faculty's point of view, these statements are supported by the historical discussion point revolving around practice, wherein the printed 2D realm was the format of action for both presentation and construction. This remained a truism through the twentieth century, when presentations to clients occurred through either static slide presentations of images or static drawings pinned to the wall. The construction set would be tantamount to "a truck for pushing ideas from place to place" (Evans 1986, 186), that is, a contract for translating information from one party to another.

1.1 Reviewing Information

These twentieth-century formats, while different in presentation medium—some using a screen and others using print material—share the common challenge of forcing a designer to switch from generation of a design into a pursuit of representing the design. An example of

this moment would be the night before a student's critical review, when the designer switches from "digital modeling," wherein they are working with a live image representation of three-dimensional information to a more "presentable" format, for example, a static image typically presented as an orthographic line drawing or one performed by a heliographic ray-tracing calculation within a render engine (Figure 1).

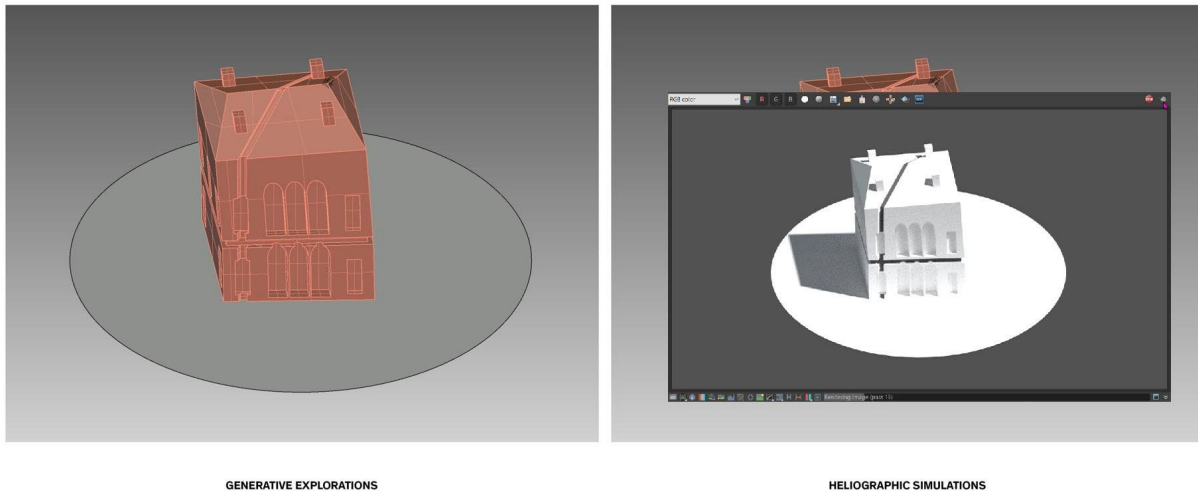GENERATIVE EXPLORATIONS   HELIOGRAPHIC SIMULATIONS

Figure 1: Heliographic comparison (Jonathan A. Scelsa)

Over the past ten years, the introduction of new technology for presentation mediums and translation formats rendered this argument antiquated based on how information is managed and translated. Formats such as virtual reality present the possibility of exploring a virtual model in the same dimension as the one in which it is being constructed. Similarly, the deployment of the parametric Building Information Modeling (BIM) system demonstrated live participation by multiple parties on one informational model. Increasingly we are witnessing the construction industry working directly from the three-dimensional informational model, forgoing the need or desire for printed material and suggesting the collapse between generative information and technical production. First and most obviously, this is a marked change from two-dimensional to three-dimensional representation, a point laboriously credited during the digital upheaval. The second and perhaps more important point is that this is a change from static artifact-based media to live information-based media.

John May, in his article "Everything Is Already an Image," points out that "the world of the orthographer was simultaneously a text and a drawing, the world of the post orthographer is simultaneously an image and a model—an electrical image and an electrical model" (2017, 12). May's argument calls attention to the concept that designers are always developing information and that there are "no pre-technical forms of thought" (2017, 12). So, in a literal sense, we might ask why, as faculty, do we constantly ask students to stop the generative procedure to produce static modes of representation, when we are increasingly witnessing the profession move toward live informational presentations. Beyond the transfer of medium, it is also notable that recent hardware and software advances have offered some subtle potentials for flattening the translation process. While computers have natively been

capable of real-time updates to two-dimensional graphics since the earlier part of this century, it is only through recent advances in affordable graphic processing units or "video cards" that real-time rendering in the third dimension has been facilitated. Designers now have the capability to simulate light and pen effects simultaneous to the design process, flattening the time between design and presentation.

1.2 Reformatting Pinup Practices

Literature on architectural education informs us that studios need to employ multiple types and formats of feedback. Commonly used formats in static paper-based architectural education might include: the one-on-one critique between a faculty and a student commonly referred to as a desk-crit; small group critiques, wherein a faculty gathers a few classmates together and reviews their work over a table-top setting; and of course, the canonic pinup or review, wherein the entirety of the studio assembles in one space to pinup the work and review students in either groups or individuals. The reasoning on alternating between these pinup routines is manifold. First, students learn in different ways; while some require more intimate feedback particular to their project, others learn quicker by seeing how colleagues react to similar problems. Second, this creates a syncopation of the monotony of the day-to-day routine, allowing students micro-incentive-based deadlines along the way.

Yeonjoo Oh et al. comment on this tendency in the essay "A Theoretical Framework of Design Critiquing in Architecture Studios," wherein they write:

Group Crits are especially appropriate for introductory design studios. They are valuable for students with little design experience because they expose students to multiple solutions to the same problem. Compared to larger review groups, crits tend to engage new students who may lack confidence to speak in a larger and more public session. Students can participate more actively in the discussion because of the smaller group size and informal setting. (Oh et al. 2013, 306)

The challenge becomes how to migrate these types of knowledge and strategies into a new era of students working in new ways and expecting to present in new ways within the design and architectural workforce. One of the pitfalls that digital architecture has yielded is the interaction between faculty and student in an individual context. The computer, as a device brought into the studio setting by the student, often involving significant personal investment, does not share the same disposability as trace paper, which served as a shared space between faculty and student. The digital model, more akin to a physical model, may be one that is spun and rotated, but this alone is problematic when done day in and day out in a desk critique setting. The digital desk critique itself could learn from strategies of old where students were asked to bring multiple mediums and formats of drawings for discussion on a table-top setting.

A switchover to exclusively one format of digital production can also appear to students as if they are chasing the new wave of one technology, as evidenced by the sarcastic fifth-year student in a school not to be named, when they were asked to create another GIF of one hundred stacking bricks. The challenge is to bring in these new methods and tools in a varied and meaningful way, not purely dynamism for novelty's sake. I would argue that in the digital era we need to explore with students an equal range of types of formats for digital presentation. By alternating between prepared videos, short GIFs, narrated documentaries, slide decks, and analytic screen captures, we offer students a variety of ways to

communicate ideas that can remain as generative information longer, each establishing their own inherent learning outcomes and provoking different ideas of developing a project.

1.3 Incorporating New Media Practices

The projective GIF, by contrast, forces the designer and student to compress ideas into a controlled amount of space, balancing frame count, resolution, and color as a means of expressing a thought. As a media examination, the FlyThrough mp4 we might categorize as hot media, containing long information of walking down the street of a context before we find a building and thoroughly and exhaustively explore the interior following five minutes of decapitated panning. The GIF, on the other hand, has the requirement of being much cooler; like a television show that jokes about current events, it ties into that which you already know and becomes more equipped to comment on culture. The projective GIF uses the familiar or reproduction of the same with subtle changes, making it an expert tool of cultural critique as a form of projecting a new reality against the dirty realism of our image stream of the moment (Somol and Whiting 2010, 195).

Notably, while the GIF took hold of social media and architectural pedagogy within the past several years, it entered the fray during the period of the parametric, as a means of showing procedures and processes that were elastic by nature. Software such as CATIA, Digital Project, and Grasshopper all had built-in functionality to demonstrate how an algorithmic process could be flexed, pinched, and squished based on the manipulation of a few variables. The GIF, or quick animation, became the proof that the object in question was not merely a compositional product of a wunderkind but rather part of a larger system of making that could produce multiple offspring. The GIF in this procedural world became the systemic binder or the symbol of the flexible diagram. Process also in this manner can tell a narrative, a means of explaining how a design fits into a larger system rather than a mere explanation of its own being (Figure 2). These new systems allow video to be the better tool to evaluate changes in subtleties of color in thermal and other analysis procedures.
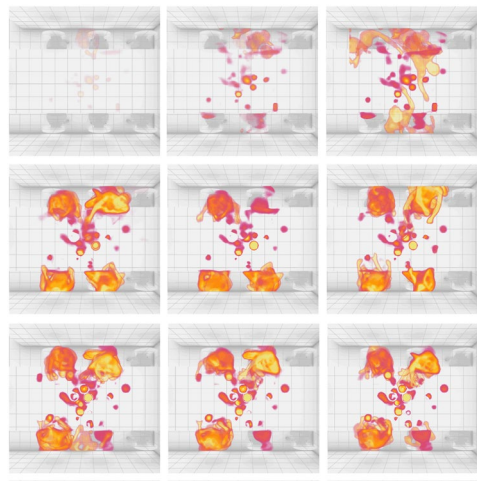

Figure 2: Thermal analysis of a space (Jonathan A. Scelsa)

The clipping plane GIF and rotating object GIFs are perhaps the most hotly criticized of the group, arguably because they have become ubiquitous and easy to produce, given the real-time rendered and ambient occluded environs that students now work within. Despite

their omnipresence, from a pedagogical standpoint, the clipping plane GIF provides a medium that is prerecorded and curated by a student but in a fashion that can be used quickly for discussion in group session without the labor of a massive video (Figure 2). When projected on a whiteboard, for example, this dynamic format commands the attention of a pinup group discussion with a model that is a work in progress. This working-session drawing type cuts down the time between production and presentation and retains the design process closest to its information standpoint.
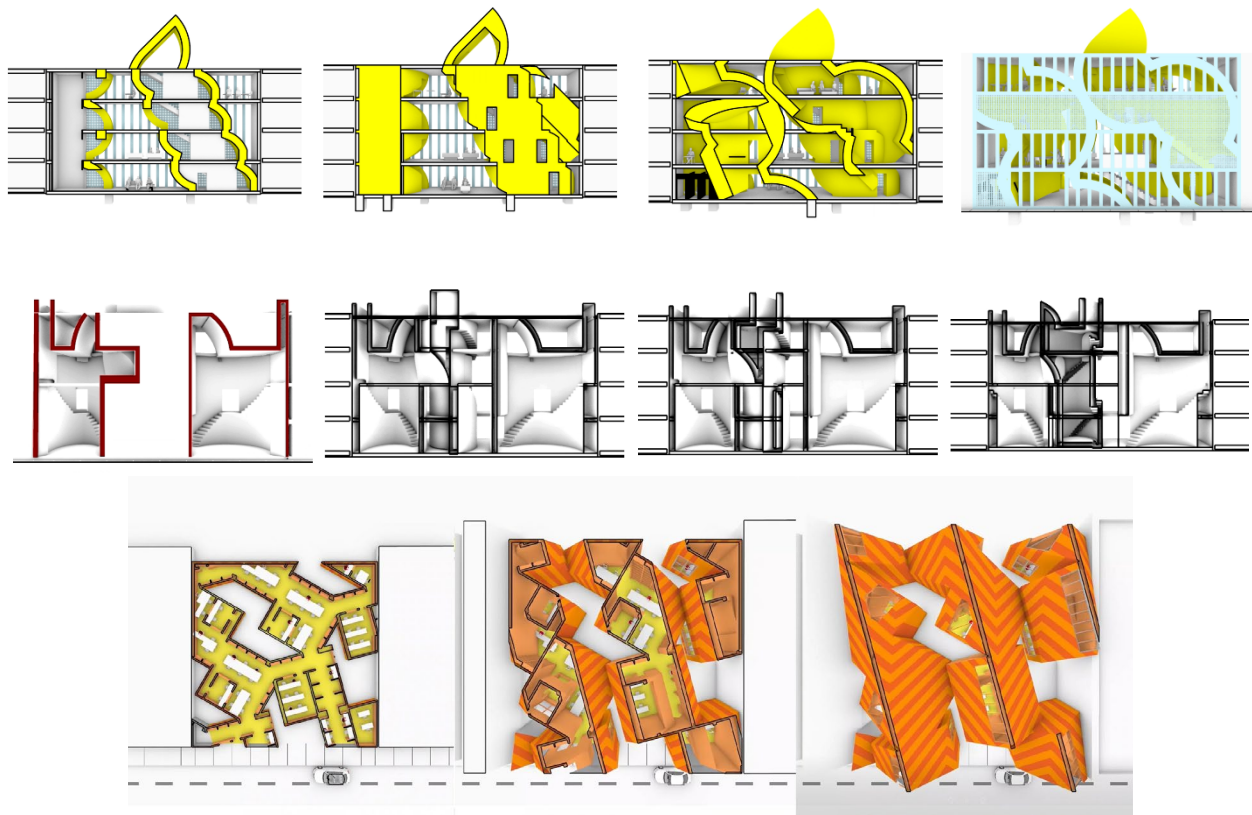
Figure 3: Clipping plane video demo (Jonathan A. Scelsa)

The analytic documentary provides students with a methodology for conducting and accumulating research about a topic, such as a site or precedent study, in a narrative fashion. Unlike a standard precedent study, which might be accompanied by a set of documentation, the prerecorded format asks students to sequence their thoughts in a way that controls the dialogue and output. Asking students to narrate the video, either through prerecorded embedded audio or speaking alongside the motion, engages them with the processes of storyboarding, wherein the videos become a series of ideas linked together rather than pure spectacle. The videos shown here demonstrate a precedent assignment in which a sophomore undergraduate decomposed a building into its prevailing structural logic, and a site analysis in which two students analyzed a site at multiple scales—the district, the larger park, and the building to which they were adapting it—all around a single concept. This

format allows students to continually adapt drawings while sequencing a story (Figure 4). All these formats can themselves be linked within a larger slide deck, an obvious idea to academics and professionals, but one often lost on young students. This act of assembling diagrams and content furthers the process of developing an argument and ideology in lieu of producing pure requirements, as it asks students how they want to speak about the project as much as represent it.

Figure 4:   Analytic documentary (Ipek Battal)

1.4 New Spatial Requirements

Arguably, to facilitate a dynamic day-to-day rhythm, it is equally important to alter and change the spatial method for these routine examinations as much as it is to change the medium of the format. Not only do the variety of presentation techniques structure studio in a dynamic and nonstatic day-to-day rhythm, but changing the spatial notion for each of these routines creates a dynamic and nonstatic day-to-day routine that exposes students to the multiple pressures existent in everyday professional and academic practice. Moreover, examining the new digital presentation arena allows us to correct some of the potential pitfalls that normally are adopted in static one-on-one pinup pedagogy and to explore how other fields are incorporating presentation and digital spaces into their work culture.

At our home institution, we have begun experimenting with different spatial formats for examination as ways to avoid replicating the one-on-one pinup challenges. Deployment strategies have included multiple screens, large-format theater seating, and lounge settings. Multiple screens in a room allow for the comparative learning that is often the reason we use pinups in the first place. Students can examine how projects that differ perhaps in form can employ similar strategies (Figure 4). These photos are from a recent review of sophomore studio wherein students were asked to examine a set of precedents and adapt their sectional structural strategies into a new building system. Precedents were grouped by structural type, and the final projects were presented in these groups, allowing for a rich conversation to emerge between projects. Alternatively, the potential for a larger format gives students in a final review context the ability to command a large space. This sense of implicit respect also serves to turn the tables a bit on the reviewers by placing the student at the podium and having the reviewers form part of a spatial audience. The spatial format has the potential to turn the challenges of screen-based learning into a theatrical performance and an asset.

Figure 5:   Digital review culture, second-year Pratt (Jonathan A. Scelsa)

2. CONCLUSIONS AND FUTURE WORK

The academy has a reputation for being slow to update its procedures while being fast to adopt progressive ideologies. As such, schools need to learn how best to harness their most resilient resource, the youth and energy of their clients. It is notable that our students' generation is far more conscious about the burgeoning climate crisis and energy discussions, a fact that became clear at the author's home institution when students presented statistical information concerning our paper consumption. Imagine the economic message the academy continually sends first-year architecture students by requiring the financially taxing purchase of a high-end computer capable of displaying and editing 3D video information, and then insisting that the content generated therein also needs to be consistently printed and plotted on expensive paper. Lastly, our academic bodies, particularly architecture, have emphasized the idea that design education can prepare students for a multiple array of working conditions in multiple fields. While the argument largely stems from architecture's inherent integrative and creative problem-solving thinking strategy, it may be argued that its methods need to be updated so that our thinking can be more readily applied to how the larger audience works and presents ideas. So maybe we should stop saying, "Don't show me your rhino model," and instead focus on new ways of using digital information in the action-oriented review setting for pedagogical discussion.

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