Informal peer critique and the negotiation of habitus in a design studio

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Abstract: *Critique is considered to be a central feature of design education, serving as both a structural mechanism that provides regular feedback, and a high stakes assessment tool. This study utilizes informal peer critique as a natural extension of this existing form, engaging the practice community in reflection-in-action due to the natural physical co-location of the studio environment. The purpose of this study is to gain greater understanding of the pedagogical role of informal critique in shaping design thinking and judgment, as seen through the framing of Bourdieu's habitus. The methodology of this study is informed by a critical theory perspective, and uses a combination of interview, observation, and stimulated recall in the process of data collection. Divergent viewpoints on the role of informal v. formal spaces, objectivity v. subjectivity of critique, and differences between professor and peer feedback are addressed. Additionally, beliefs about critique on the individual and group level are analysed as critical elements of an evolving habitus, supported by or developed in response to the culture inscribed by the pedagogy and design studio. This form of critique reveals tacit design thinking and conceptions of design, and outlines the co-construction of habitus by individual students and the design pedagogy.*

Keywords: Critique, habitus, design studio, peer assessment, reflection

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Introduction

The role of self-reflection with a design artifact or problem is widely acknowledged as an important factor leading to developing as a designer (Schön 1985; Cross 2007). This self-reflection can take many forms, including internal dialogue (Schön 1985), sketching (Do and Gross, 1996), and a community of practice surrounding the designer (Brandt, Cennamo, Douglas, Vernon, McGrath, and Reimer 2011). Within the studio environment, I propose informal peer critique as a natural extension of these existing forms, engaging the practice community in *reflection-in-action* due to the natural physical co-location of the studio environment.

This paper will address critique as an emergent epistemology within the design studio environment, socially constructed through a synergy of interaction between peers, individual design of artifacts, and Smith and the supportive role of the underlying design pedagogy. In this context, Bourdieu's construct of *habitus* will be used to describe the social norms (Anthony 1991; Boling and Smith 2010) and epistemological structures (Shaffer 2003) that comprise the studio, which functions as an organism or system that supports the development of student designers.

Critique in Design Education

Critique has long been considered a central feature of design education (Hokanson 2012), serving as both a structural mechanism with which to provide regular feedback (Cennamo, Brandt, and Scott, 2010), and as a high stakes assessment tool (Anthony 1991). Critique is represented in the research literature primarily in formal pedagogical implementations, ranging from an informal desk crit (Boling and Smith 2010; Reimer and Douglas 2003) to a formal critique attended by multiple professors and practitioners that comprise a "design jury" (Anthony 1991; Webster 2006). Hokanson (2012) synthesizes this wide range of critique as a form of distributed learning and evaluation, which occurs through social interaction and engagement in the design studio, while Percy (2004) notes the role of critique as a socializing and enculturation device in design education. The role of developing appropriate patterns of communication about design has been a minor focus, including the development of practice-oriented discourse (Logan 2008; Morton and O'Brien 2006) and a discourse directly surrounding the critique and feedback process (Dannels, Gaffney, and Martin 2008), but the amount of work in this area is limited. Some comparisons may be drawn between critique and assessment, particularly in more formal implementations of critique (e.g., pin-ups or design juries), but informal critique appears to be more emergent, mirroring the professional obligations to communicate and externally reflect with peers (Hokanson 2012), rather than as formative or summative assessment. While some authors have addressed critique that happens outside of the strictures of the design classroom, which is often led by instructors, this area of social life in the studio has not been comprehensively studied or evaluated in its own right.

Bourdieu and Habitus

The work of Pierre Bourdieu has been invoked relatively infrequently in the realm of design education, although his work has been used on a few occasions in architectural education to discuss the social climate of the design studio and the shaping effect of the pedagogy (Stevens 1995; Webster 2006). The primary Bourdivin concepts that have been addressed in the literature heretofore include the concepts of *habitus, fields*, and *doxa* (see Figure 1). These concepts are covered at length in *Distinction* (Bourdieu,

1984), and in condensed form in a summary oriented toward design education by Stevens (1995). I will provide a baseline definition of each primary construct to shape the overall conversation of peer critique within the design studio, although this treatment is not intended to be comprehensive.
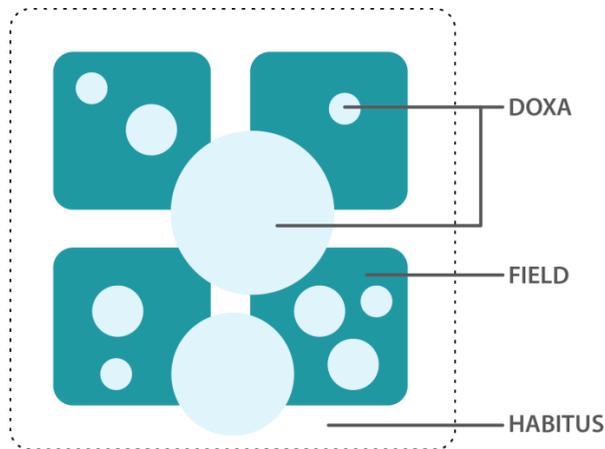

Figure 1. A visualization of how habitus, field, and doxa relate. Doxa may overlap several (or all) fields within a habitus.

Habitus describes a construct that is both individual/psychological and social, and through this individual to group relationship, defines a given culture or set of social norms. It is an "active, unconscious set of unformulated dispositions to act and to perceive" that produces the "feeling" of a given culture or culturally derived space (in this case, the design studio) (Stevens 1995, p. 112).

Fields are the contexts and environments where these relations and norms play out. These fields, which can be intellectual, religious, educational, or appear in other forms, explain the varying actions of an individual when they are placed in different contexts, including the individual's awareness of and participation in underlying power structures (Bourdieu 1980).

Doxa is a combination of unstated, unconscious norms and beliefs that are seen by the individual to be self-evident or "common sense." As ideas move from the realm of the undisputed or undiscussed to matters of opinion, they move into the "universe of discourse" where heterodoxy and orthodoxy reside (Bourdieu 1977).

These constructs can be used to describe the enculturation that is seen as desirable in design education, as Stevens (1995) notes: "Habitus does not determine, but it does guide. Individuals are both completely free and completely constrained..." (p. 112). When approaching the design studio through this lens, we can understand the barriers to enculturation (Siegel and Stolterman 2008) that have already been established in various design disciplines more completely, and identify the divide between the habitus envisioned by the individual novice designer and the habitus that is socially formed and mediated by the surface structures, pedagogy, and epistemology (Shaffer 2003) as experienced between students and professors. Nelson and Stolterman (2012) come to a similar conclusion, stating: "The process of becoming a designer is not a solitary, individual under-taking. It always takes place within a design milieu." (p. 224).

Purpose of Study

Based on the framing of informal peer critique in the design studio, as mediated through the socially constructed *habitus*, the purpose of this study is to gain greater understand of the pedagogical and developmental role of informal critique in shaping design thinking and judgment. While critique is considered to be a vital part of the design studio pedagogy (Hokanson 2012; Shulman 2005), formal critique is often emphasized, with a strong delineation between an expert and novice within that domain (Schön 1985). This delineation reinforces a pedagogically centric view of *habitus,* while largely ignoring the role of the individual in shaping their own design perspective and approach (Crysler 1995; Webster 2008). This paper addresses the structures that are invoked during informal peer critique as compared to stated beliefs about critique, and how these structures may indicate a formation of habitus in opposition to or in support of the pedagogically assumed *doxa*.

Method

The methodology of this study is informed by a critical theory perspective, and uses a combination of interview and observation techniques in the process of data collection. A critical theory perspective allows the researcher to elicit responses for which the participants have tacit awareness (Carspecken 1996), and serves as an exploratory vehicle in understanding initial patterns of design thinking and critique. In addition, the use of stimulated recall allows the researcher to make sense of that participant's responses during the critique dyad and confirm and triangulate responses from previous interviews and observations.

Setting

The study was conducted at a large Midwestern USA university, focusing on students in a School of Informatics. These students were enrolled in a Master's program in Human-Computer Interaction design (HCI/d), which trains future practitioners in interaction and user experience design. The curriculum for this program includes courses in user research methods, prototyping, design theory, and foundational readings in the field. A majority of the students come from a non-design background, with students commonly holding undergraduate degrees in computer science, sociology, engineering, and journalism.

Participants

Participants were solicited through email, using separate departmental list-servs established for first- and second-year Master's students. A similar recruitment message was disseminated within Facebook groups similarly established for first- and second-year Master's students. All participants that requested to be part of the study were recruited.

Data Collection

A series of three interviews were requested from each study participant. These semi-structured interviews included an individual interview, a constructed critique dyad, and an individual stimulated recall and member checking interview.

Initial interview

The initial individual interview included questions relating to the participant's beliefs about critique, the ways they used and thought about critique in relation to their design process, and an autocritique of a self-selected design project that they had recently completed, or were in the process of completing.

Critique dyad

The second interview was a constructed critique dyad, comprised of two participants that were similar in ability and educational level. These participants were asked to critique the project that had been self-selected by their critique partner in turn, with each participant playing the role of critic and recipient. The projects critiqued in this session were the same projects that were used in the individual autocritiques.

Stimulated Recall

After transcription and initial analysis from these two interviews was complete, a third interview session was conducted, including stimulated recall and member checking. The recall session included the selection of five or six video segments from the participant's previous two interview sessions, representing either exemplars in a thematic sense, or segments where intent or motivations were unclear. After each segment was presented to the participant, a series of clarifying questions were asked. Primary themes from preliminary analysis of the data were discussed to clarify meaning and ensure that thematic and reconstructive analysis matched the perceived intent of the participant.

Analysis

The initial interview about the participant's belief about and practice of critique was transcribed and coded using an open coding scheme based on emergent themes. The observation of critique dyads was transcribed and coded using a one open coding scheme for the participant critiquing and another for the participant being critiqued, and complete results of this sequence analysis are included in another manuscript under review. The data from the initial interview and sequence analysis were analyzed, including a comparison of the autocritique to the peer critique to the designer response to note changes in verbalization of design thinking or rationale. Where contradictions or similarities were found in these analyses, discussion of participant reactions from the stimulated recall will be discussed.

Participants

Four participants were enrolled into the study, all of which were students in the HCI/d Master's program. These participants (Table 1) were equally divided between the first and second year of the program. Three participants were from the USA, while one participant was from China. The program as a whole was comprised of approximately 40% international students in the year this data collection took place, and all students had experience working in diverse teams through a variety of coursework. Because students of the same academic year had worked with each other previously, they were previously aware of the projects that they critiqued in the course of this study and had some knowledge of the design process of the related artifacts.

Table 1. Chart of study participants

Participant Name*	Gender	Academic Classification	Country of Origin	Critique Dyad
Paul	Male	2nd Year M.S. in HCI/d	USA	A
Emily	Female	2nd Year M.S. in HCI/d	USA	A
Lisa	Female	1st Year M.S. in HCI/d	USA	B
Jiao	Female	1st Year M.S. in HCI/d	China	B

All participants were assigned a pseudonym.

Findings

Beliefs About Critique

The participants' beliefs about the substance of critique ranged widely, even within a relatively small number of participants. These beliefs seemed bound not only to individual personality and design approach, but also to level of experience (e.g., first year or second year), and how each individual used the shared studio space.

ENVIRONMENT

While the researcher expected to find informal critique within the design studio based on a previous study, participants reported a wide range of locations where critique took place. These environments of critique included: classroom space before or after class (Emily, Lisa), email/chat (Lisa, Jiao), home (Paul, Emily, Lisa, Jiao), phone (Lisa), or outside while smoking (Lisa). The two second year students were enrolled in a capstone design course during the semester of data collection for this study, and also engaged in informal critique during the studio format of that course. All students had experience engaging in critique in a classroom setting that was led by a professor or advanced students, which, while not considered informal peer critique for this study, is important to note in characterizing the overall critique culture of the program and studio.

PARTICIPANTS

Study participants reported a wide range of people that were engaged in informal critique. Some participants used the convenience of the studio space to engage in critique with fellow Master's students and PhD students, while others appreciated the perspective of students outside the program. The people engaged in critique also seem to be bound to the environment of critique. For those who frequently worked from home (Paul and Lisa), a spouse or friend was commonly a critique partner, while for those who worked in the studio, engaging fellow Master's students in that space, or locating students from other programs in common areas was typical.

Embedded Structures

Based on the beliefs that were identified in the first round of interviews, several contrasts or binary oppositions emerged that are helpful to discuss critique in a more structural way. These contrasts include formal v. informal spaces, the role of subjectivity and objectivity in critique, and the divide between professor and student critique. These structures will be discussed in isolation, and then will be synthesized in relation to the development of *habitus* in the next section.

FORMALITY V. INFORMALITY

Lisa created a significant divide between formal and informal spaces, concluding that "[the classroom is] sort of the place to like know that it's not about you, it's about the design, and it's more compartmentalized if you're actually talking about it in that formal setting." While she was the only participant that felt this strongly about the classroom space as a legitimized space for critique, her strong statement that "most real critique I reserve for the classroom" served as an important contrast to the beliefs and actions of the other participants. Paul saw this formal space of critique as reducing legitimacy, since it was done for a grade, and often done "for the sake of critique," explaining: "I'm offering critique for the sake of helping you, not necessarily because like this is a grade [...] it's critique for the sake of getting better." Even while Lisa rejected the informal space of the studio as appropriate for critique, she substituted it with another informal space—outside the building, where she smoked and engaged in informal discussion about design with her colleagues. Lisa described the classroom—a formal space—as the environment where "the shit really hits the fan [...] and that's where you expect it to be," but engaged frequently in informal conversations (often outside) that dealt with "big things—concept things, problem space things."

The binary of formal and informal spaces extends, based on these reflections, to the quality, legitimacy, and appropriateness of critique. While both of these participants were recipients of informal critique that had been helpful to them in their design process, Lisa saw the classroom as a safe, legitimate place for dissent, while Paul saw critique in that same formal space as *pro forma* and often inauthentic.

OBJECTIVITY V. SUBJECTIVITY

A tension between what constituted "right" and helpful critique revealed a number of important beliefs about the nature of knowledge that critique generates. While the participants as a whole believed that their critique (or the critique they got from others) was subjective in nature, they appeared to attach more utility to the generative or provocative nature of the critique than its conformance to objective criteria. Paul described this tension, explaining: "it's too hard to offer kind of a generalized critique [...] like parameter-based critique," concluding "it's just too difficult to say [...] I know all of this stuff enough to say that this is wrong and this is wrong and this is wrong, because there's no way you can—in this field." Emily explained this same tension by shifting the expectation of content, noting: "I feel like critiquing is just as much about asking questions as it is about giving an opinion." In contrast, Jiao considered critique as a synergistic process between participants, where the received critique may trigger tacit design decisions or thinking you already innately understand:

> Like they probably—there is a like light ball lighting [light bulb] that's kind of stuff, but they—um those critiques they are originally probably they've been in your mind, you don't realize it. Just need someone to talk to you and let you tease out that part. [...] I don't think that sometimes the critique seems different when it's the same to you, you internalize it by yourself.

In this way, critique moves from a subjective space characterized by limited access (Carspecken 1996) to an intersubjective space, from tacit, individual design understanding to a space where meaning is shared between both participants in the critique. Even in this move towards intersubjectivity, there is still a personal design perspective; Jiao reflects: "every time you are working on a design or looking at other's design, you are trying to see it from your perspectives, no matter how um sympathetic

you are. […] you will bring it—bring your own (.) I would say experience or history or educational background into it." This tension between an individual's design perspective and the desire for intersubjectivity describes the general arc of the critique process, with communication among participants simultaneously clarifying individual intentions and bringing about a shared, intersubjective space in a reflexive, often generative way.

PROFESSOR V. STUDENT

The participants presented a wide range of perspectives on how to include professors in the critique process, and how to balance the professors' opinions and critique against that of their peers. These encompassed excluding the professor entirely from certain forms of critique because they could get more targeted critique from fellow students, hiding the messiness of their process from the professor so they could get critique on a finished product, or using the professor to identify key flaws in the design process.

Paul pointed out that he tried to treat critique from professors and fellow students equally, but concluded that professors often didn't have the "conversational knowledge about your topic that maybe a lot of the people in our cohort have," and that the critique from professors was not as "tailored to my specific needs or abilities as well as like getting critique from classmates." Lisa represented a different perspective, noting that she often requested informal critique from her fellow students almost exclusively, because she wanted to surprise the professor with her final design and didn't want the professor to see the messiness of her process: "I don't really want him to see like the messy bits where we're losing our minds [laughs] I want him to see like the finished pretty version." Emily represented a third perspective, pointing out the ability of a design expert (e.g., professor) to ask probing questions more succinctly than an informal critique with a fellow student:

> I think the faculty here […] are just like really good at you know, I'll spend ten minutes trying to explain to them what I'm doing, and they ask me like one question, and they're like, answer me that in one sentence. And it's almost like it's a critique and a—I don't think ultimatum is the word, but like a—them kind of almost like demanding that I change my perspective or that I like gather my thoughts.

Discussion

The environment and personal assumptions or beliefs about critique proved to be influential in the actual process of critique. This interplay of personal agency, belief, and action interact through the social construction of normative behaviours and beliefs—in a shared understanding of what comprises the *habitus* of the studio. In this study, the role of the pedagogy and underlying epistemological structures of the studio were seen to support and contrast with the actions and beliefs of the individual design student.

All of the participants interacted in the same studio space and were enrolled in the same general set of coursework. In this way, they shared a cultural understanding of what critique is and how it should be conducted from a curricular perspective. The student understands the pedagogical approach toward design critique as what Bourdieu calls the *structuring structure* of habitus, which "organizes practices and the perception of practices" (1984, p. 170). This structuring structure is what allows for the

existence of intersubjective space, where the pedagogy and individual actions meet. As Calhoun (1993) elaborates, habitus "gives expression to certain meanings that things and people have for us, and it is precisely by giving such expression that it makes these meanings exist for us." (1993, p. 58). A sample interaction between two individuals sharing a similar pedagogical understanding is described in Figure 2, picturing the emergence of an intersubjective space around a specific doxa (legitimacy of critique) within a specific field (the design classroom).
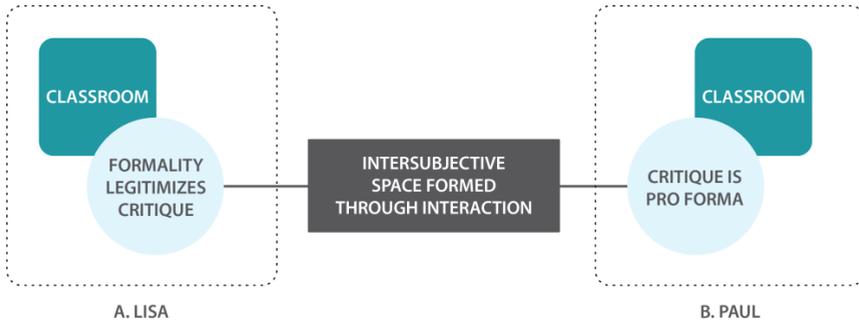
Figure 2. A sample interaction between two student perceptions of the classroom field as mediated through a specific doxa (from the formality v. informality binary). This interaction is resolved by the creation of an intersubjective space, where competing doxa, or implicit beliefs, are made explicit.

While these intersubjective spaces are intentional and desirable when reproduced through the pedagogy or studio environment, attention to the agency and identity of the individual learner within this space is also important to consider. As Webster (2008) notes, the structure of the pedagogy can actually restrict individual freedom or perception of choice, which may result in the production of a certain "type" or "personality" of designer. In the process of performing the stimulated recall, several of the participants realized some of the ways in which the pedagogy had affected their perception of practice—and how their "buy-in" to various elements of the pedagogy or overarching studio habitus had changed their practice in specific ways. For instance, Emily discussed her belief that critique should include three distinct phases: a positive contribution, a critical analysis, and a recommendation of a way forward. This pattern was modelled in a course she had previously taken, and she had unconsciously learned to apply this pattern in her practice of informal critique. However, after she watched the video of her tediously reciting positive elements of the design in an unmotivated manner, she realized that she had reproduced the desired behaviours from the pedagogy, but without explicit awareness of her actions or agreement that this practice was valuable. Even while Emily's experience included tacit agreement that this structure of critique was valuable in practice, Jiao reported an opposite experience, describing her approach: "I throw out steak or meat right away [a metaphor describing how different cultures present an argument, with the steak meaning the primary criticism]. So that makes someone some people feel uncomfortable about that."

While many of the beliefs discussed in the previous section touch on environmental or participatory factors, there are a number of practical beliefs about critique that emerged in the process of performing an autocritique and participating in a critique dyad. Many of these beliefs were expressed through the discursive structure of

critique, including the way critique began, ended, and what important conversational setting shifts occurred during the body of the critique. These discursive structure findings are discussed at length in a related manuscript under review.

While some structures of critique were clearly imported from the larger pedagogy, forming an unspoken *doxa* for some students (e.g., Emily), for others, cultural standards of appropriateness (e.g., Jiao) or prior professional experience (e.g., Paul) shaped these structures more explicitly. It is in this contrast of individual beliefs—or an individual and subjective sense of *habitus*—as compared to the studio or pedagogical assumption of *habitus* that tensions between the pedagogy and the individual student become clear. A difference in *field* may also contribute to some of these tensions, both from a cultural and professional perspective. The studio *habitus* is one of many fields that an individual learner may have come in contact with, so the pedagogical process can be seen as one of enculturation to the practices of HCI/d as a discipline, which is observed through externalized practices like critique.

Implications for Future Research

This study represents an exploratory first step toward understanding how informal peer critique functions within a specific design pedagogy. Additional research that expands this study, both in number of participants and in diversity of methods used would serve to strengthen the initial findings of this study. While the critique dyads revealed interesting and valuable information about the way students structure a design argument and think about design, a more highly ethnographic, observational study may reveal natural patterns of emergence of this form of critique in the studio environment, including frequency, common participants, and themes of discussion.

More work on understanding the role that students play in shaping a unique studio *habitus* is needed. This includes an understanding, from a pedagogical level, of the enculturation process that students are expected to go through, and how a student's identity and agency are implicated in the educational process at large. Factors might consist of attention to all forms of social interaction, including interaction between peers and professors, through internships, and through planned elements of the pedagogy or studio. Addressing elements of the pedagogy and surrounding studio in this critical way is foundational to extending or importing elements of studio pedagogy into new disciplines, as well as creating a more holistic picture of implementations of studio pedagogy in traditional design fields. Beyond the pedagogy, other elements of the sociocultural milieu are also important to consider, including individual conceptions of gender, ethnicity, and culture, and how these conceptions relate to prevailing norms, behaviours, and expectations for achievement in professional practice. These elements represent additional implicit *doxa* that are embedded in the *habitus* of the studio, and may also exist in similar or different forms in a professional design environment.

Other outstanding questions include the role of the educational *habitus*, and how this structure relates to the community of professional practice. It appears that there is often a gap between these cultures of design, and if this gap truly exists, attention to potentially conflicting *doxa* may be at issue. This lens also points out different contexts of learning and working, but there are limited structures and existing literature in place to understand the *habitus* that is assumed by an individual design program—bringing together perspectives of the surface features of the studio, the pedagogy, professors, and students, and the epistemological assumptions of the discipline (Shaffer 2003).

In a more specific sense, greater understanding of critique practice and critique culture is needed, both in a pedagogically-mediated construction like the studio, and in how critique moves from formal, structured educational environments to informal critique embedded in the practice of design (Dannels, Gaffney, and Martin 2008). Both the content of this critique, and the epistemological assumptions about design practice that this content reveals, is critical to understanding how design students are thinking about design and how practitioners are applying these conceptions of design in practice.

Although this study does not provide definitive conclusions as to the emergence or structure of peer critique in a studio environment, especially in other design disciplines, these implications for individual development, pedagogy, and professional practice represent tensions that can heighten sensitivity to peer critique in the ongoing evolution of the design studio. For design educators, understanding the conflicting *doxa* and *habitus* that may exist when comparing the individual design student and the planned pedagogy, especially in the early stages of a design curriculum, may allow for a deeper investigation of incoming student behaviours or conceptions of design as compared to the planned pedagogy. Additionally, understanding the use of design "talk" in formal and informal contexts may allow the pedagogy to naturally support the transition from formal, high-stakes environments consistent with higher education and informal, communicative interactions consistent with professional practice.

Conclusion

In this study, I have described an exploratory study investigating the role of informal peer critique in revealing tacit design thinking, conceptions of design, and the co-construction of *habitus* within the design pedagogy and studio. While work has been done previously on the role of identity and socialization in the studio (Crysler 1995; Webster 2008), more work in this framing of design pedagogy is needed, both in a transdisciplinary and domain-specific context. The framing of *habitus* in this study reveals students struggling to integrate some elements of the pedagogy into their personal practice of design critique, even while there is tacit acceptance and ongoing development of many elements of their critique practice. This agreement or tension between a student's beliefs about critique and the overarching assumptions about critique within the studio pedagogy forms a dialectic that is only resolved by the development of the student, including their personal conception of *habitus* in reaction to or in support of the studio pedagogy, or capitulation by the student or pedagogy. While this study represents only the commencement of inquiry into this form of critique, the framing structures of the studio and the developmental tensions between the student and the pedagogy in this exploratory study provide a substantial foundation for future work.

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