Ethical Becoming, Ethical Fetishism, and Capitalist Modernity: An Ethnography of Design Education

Grant A. Fore
FRXGRA002

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Department of Anthropology
Faculty of the Humanities
University of Cape Town
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COMPULSORY DECLARATION
This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

Signature:_____ Date:_____

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Acknowledgements

Given that so much of this thesis is focused on relationality and indebtedness, this acknowledgments section strikes me as particularly important. I sure hope that I do not forget anyone…

It makes sense to start where it all began. My parents, Gene and Cher, raised me to value education and to strive to live an ethical/moral life. Education and ethics were elusive to me for a long time. Thankfully, I was eventually able to live a life that values both. My parents' wise valuing of education and ethics stuck with me, so that when I finally managed to extract my head from my ass in my mid-20s, I was able to lean on their early lessons to chart a new path. Thanks, Mom and Dad.

I want to thank Beth Huffman and the students in her *Commercial Construction* course for welcoming me into the class and so thoughtfully entertaining my inquiries into their education and design practices, respectively. Without their openness to my presence as a participant observer this thesis would have never come to fruition. Also, many thanks are due to the community partners for Beth's courses: the Kheprw Institute (KI) and Big Car. The personnel at the Kheprw Institute – particularly Imhotep and Paulette – were always supportive of my research and continue to be friends and close collaborators.

Since I arrived at the University of Cape Town in 2010 to begin my MA in Anthropology, I have been mentored and supervised by Andrew 'Mugsy' Spiegel. Throughout the past 12 years, Mugsy has helped me become a critical, fair-minded, and rigorous researcher. My ability to succeed in scholarly activity is a credit to his excellent supervision. I recall that the first chapter I sent him from my master's dissertation was returned to me with what seemed to be thousands of tracked changes and comments. I remember being completely overwhelmed, but I quickly realized that through his edits and comments (which have remained ample), he has trained me to excel as a scholarly writer. When I review or co-author any paper now, I do so with the same critical eye and practices modeled for me by Mugsy.

When Mugsy agreed to supervise my doctoral work, he invited Janice McMillan to be my co-supervisor. During my fieldwork and early on in the writing of this thesis, Janice provided valuable feedback and guidance from her expertise in service learning and community engagement. During the past year or so of writing up my thesis, Mugsy invited Shannon Morreira to also be a co-supervisor. Over that time of intensive writing, Shannon has provided key guidance on how to organize my thesis and how to foreground my voice and argument. Her expertise in higher education and its decolonization has been incredibly helpful, particularly as it pertains to the framing of this thesis. I would also like to acknowledge the generous support of UCT's Department of Anthropology, especially Fiona Ross and Francis Nyamnjoh, who provided me with additional guidance and encouragement.

Throughout both my fieldwork and my writing of this thesis, I was employed full-time as a research associate in the STEM Education Innovation and Research Institute (SEIRI) at Indiana University-Purdue University Indianapolis (IUPUI). I must thank Kody Varahramyan, who, when I decided to pursue my PhD, was my boss and the Vice Chancellor for Research at IUPUI. I remember one day asking Kody if he would support my working on a PhD project on STEM ethics education at IUPUI as a PhD student at the University of Cape Town. My doctoral work was to be just one project among many that I would have to juggle at IUPUI. His agreeing to this rather unconventional approach to completing a doctorate, and his willingness to see the value in it, both for me and IUPUI, has led to the transformation of my career and my identity as a scholar. It is my hope that my work has been a boon to IUPUI, too. Since Kody's departure from IUPUI, there have been two other Vice Chancellors

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Abstract

This thesis comprises an ethnography of design education on which a proposed intervention into the theory and praxis of ethics education is created. It is based on an investigation – conducted in conversation with undergraduate interior design/architectural technology students – into the hegemonic structures of higher education and the singularities that may have the potential to transform them. The ethnographic work involved interrogating students' design processes and ethical sense-making across three semesters of a community-engaged course at Indiana University-Purdue University Indianapolis. The course was designed to mirror the operations of an architectural firm, and community partners acted as "clients." As students designed floor plans, they were affected by multiple actants and forces. The design actants and affective forces constituting student designs are identified to reveal the relations of design. These relations were often concealed and devalued through the hegemonic design logic of capitalist modernity that manifested in ideas such as the "American Dream" and discourses of professionalism which were reproduced through the ideological state apparatus that is the university. While students often made meaning of their experience of design relations through such a hegemonic design logic, such meaning making was not absolute and alternative meanings arose, expressing ethico-aesthetic modes of valuation. When students' meaning making was captured by capital, influential relations were concealed and devalued, creating hauntings within designs. Notions of commodity fetishism and dead labor are utilized to further theorize the concept of ethical fetishism and, in doing so, to imagine new ways both to reveal design's ghostly relations and then to value them for the creative role each plays in constituting the present. By seeking to understand how extensively student design processes are or are not captured by an otherwise totalizing system of capitalism and the beliefs, assumptions, and values of modernity, the thesis identifies moments of slippage where singularities flee the articulating forces of capitalist modernity and the discourses and ideologies born from it. The thesis ends with suggestions towards a new potentiality for ethics education (i.e., ethical becoming) that recognizes and cherishes relationality whilst challenging the beliefs and values of capitalist modernity designing us every day.

“As you will no doubt know,” said my father, “in old apartments there are rooms which are sometimes forgotten. Unvisited for months on end, they wilt neglected between the old walls and it happens that they close in on themselves, become overgrown with bricks, and, lost once and for all to our memory, forfeit their only claim to existence. The doors, leading to them from some backstairs landing, have been overlooked by people living in the apartment for so long that they merge with the wall, grow into it, and all trace of them is obliterated in a complicated design of lines and cracks.”

-Bruno Schulz, The Street of Crocodiles

The air was clearer now. Not wet and steaming any more. She gathered up her tools and was glad to see the steampipe had finally roasted both itself and everything around it dry. Better still, the slow regard of silent things had wafted off the moisture in the air.
-Patrick Rothfuss, The Slow Regard of Silent Things

…they'll never ever reach the moon,
At least not the one that we're after…
But let's leave these lovers wondering
Why they cannot have each other.
And let's sing another song, boys.
This one has grown old and bitter.
-Leonard Cohen, Sing Another Song, Boys

Chapter One

In Pursuit of Silent Things

In August 2015, I began an ethnographic study at Indiana University-Purdue University Indianapolis (IUPUI) on how, if at all, concerns with ethics were expressed within an architectural technology course for interior design majors.[1] Entitled *Commercial Construction*, the course utilized community-engaged pedagogy. My research aimed to identify whether and, if so, how ethical thought and practice were present in this particular educational environment. During the 2015 and 2017 Fall semesters (August-December) and the 2018 Spring semester (January-May), I attended each twice-weekly class meeting either in an IUPUI classroom or at the course's community partner's[2] facilities. During the two-hours and twenty-minute classroom meetings, both the students and their instructor – Beth Huffman, who had warmly accepted my request to be a participant observer in her course – welcomed my active participation in discussions about course content and our shared experiences working with the community partners. For the Fall 2015 and Spring 2018 semesters, the course's community partner was the Kheprw Institute (KI), a local organization aspiring to empower and educate youth in, and other residents of, inner city

[1] At IUPUI, architectural technology and interior design are taught within the School of Engineering and Technology.
[2] By "community partner" or "client" I mean the personnel of a local organization, external to the university, who actively engage with students as they strive to learn both how to do architectural design and how to design with and through their relationships with clients.

Indianapolis. Big Car, an Indianapolis non-profit arts organization and artists' collective, was the community partner for the Fall 2017 semester.

The 2015 course's main project required students to complete a set of architectural construction documents for KI's future headquarters within what was then a condemned and unoccupied house.[3] The course's scope did not extend to actual construction although the students' final designs were given to KI in the hope that the designs could be leveraged in future grant applications to fund a new headquarters.

A total of four course meetings between students and KI personnel were scheduled at KI's then rented headquarters. These meetings provided a means for students to gather information on KI personnel's wants and needs regarding their future headquarters. With their instructor in attendance, students did that through group conversations in which KI personnel shared their organizational history and answered student questions; and through multiple student design presentations that solicited feedback from KI personnel in order to drive an iterative process of architectural design. Students also participated in two scheduled visits to the house they were to redesign. During the first, they toured the house and recorded measurements; the second was for a service project.

It was during the Fall 2015 semester that I met Gabriela,[4] a 21-year-old interior design student in her second year at IUPUI. Gabriela was consistently one of the most outspoken students in class, and she, more than any other participating student, developed a fondness for KI, particularly for one of its senior personnel, Paulette. Gabriela reported spending time beyond her course responsibilities meeting and having personal conversations with Paulette. She also led efforts for the class to have a focus group with KI's youth interns, known as "the Tech Wizards,"[5] to gain their insights into their desires regarding KI's future headquarters. Though by no means exhaustive, these and various interactions I had with Gabriela inform

[3] The house had not been lived in for several years. It was, at that point, primarily used for storage. There was a substantial hole in the roof. Precipitation entering the house had caused black mold in sections of the first-floor drywall. There was also a large hole in the second-floor's flooring.

[4] Throughout this dissertation, I use pseudonyms for all students. I do this for two reasons: 1) several students, like Gabriela, consented to share personal histories of trauma with me and I aim to safeguard their anonymity – although minimal harm is likely to come from a loss of confidentiality; and 2) pseudonyms were part of the consent process approved by IUPUI's Internal Review Board and through UCT's ethics clearance process. I also use pseudonyms for interns at the partnering organizations. However, I have not anonymized the two organizations – the Kheprw Institute and Big Car – nor their executive staff, since this is public knowledge easily attained on the internet. I have also refrained from giving the course instructor, Beth Huffman, a pseudonym, because she was the only *Commercial Construction* course instructor at IUPUI during my research period.

[5] The "Tech Wizards" focused primarily on learning videography and web design skills. They occasionally used these skills working with KI's clients.

the following vignette, which I offer here as a means to demonstrate some key themes explored in this thesis.

Money Bunnies or the Mysterious Lives of Receptacles

Gabriela's formative years had, in her own words, been "very rough." The life she described in her interviews with me certainly justified that characterization. However, her hopeful attitude, and her acknowledgement of personal victories following profound personal crises lent a bittersweet quality to the brief life history she shared with me.

At an early age, her parents had separated. Her father had paid child support but, from what I could gather, her mother could not be trusted to use that money as intended.

> … my Dad would send me money bunnies when I was younger. He would cut the bottom out of a [plush] bunny, put a bunch of wadded-up one-dollar bills in there, sew it back up and send it to me, because my Mom wasn't getting me the things that I needed … so, she didn't know I had money to get food and things like that.

Gabriela grew up in an environment where stuffed children's toys doubled as currency for obtaining bare necessities. I imagine a young girl's bed decorated with the flattened husks of stuffed bunnies; toys that, once emptied of their currency content, drooped when held.

After Gabriela's father had left their home, her mother had brought abusive men into their lives. She reported witnessing her mother being beaten numerous times. During one such altercation, when Gabriela was aged 13 or 14, she threatened to kill a man.

> I put [a knife] to the guy's throat, and I basically said, "I'm going to kill you if you don't leave," because he broke into the house and I heard my mom scream. I ran downstairs and immediately pulled a knife and knew what I was going to do with it. At that moment of time, I lost everything that I ever was. You threaten someone's life, that's not a thing you play around about, especially when he looked me in the eye and asked me if I was serious. And I said, at that moment, I was.

Gabriela claimed that this incident represented her loss of innocence. From this moment on, she said, she regarded herself as an adult. In our conversations, Gabriela used this account

and others – including that of the money bunny – to frame her empathic experiences with others, particularly the "clients" she encountered during the *Commercial Construction* course.

Gabriela shared these stories during a semi-structured interview I designed to generate a brief life history and also to explore her perceptions related to the course's semester project: designing a headquarters for KI. As stated above, each *Commercial Construction* student that semester was required to produce a set of architectural design documents for KI's future headquarters. Students were expected to pay special attention to KI's mission and to its value system: empowering local residents through helping them to develop a sense of "self-mastery"[6] and to recognize their capacity to develop their talents, which until then had not been justly valued within the dominant social structures. As KI members explained, their values were symbolically expressed through the "scarab beetle"[7] of their logo, since this beetle is about "rebirth," "transformation," and "creating from waste." Since one of KI's primary projects was an aquaponics[8] system in which hydroponically grown plants use fish waste to purify an aquarium's water, students also had to include sufficient space for that.

First, students used 3D modeling software to document the existing building, a two-story residential house with a basement. Next, they drew up new floor plans to repurpose the existing building to accommodate a community center. In addition to the aquaponics system, the course instructor expected the students to give special consideration to "historic precedent" and "structural integrity." Moreover, they were required to ethically navigate the intricacies of the International Building Codes, which, in Beth's words, meant to aim to "mitigate the loss of life."[9] Students maintained communication with KI personnel through email and multiple project presentations and meetings throughout the semester, all of which provided them with helpful feedback about their evolving designs.

In Figure 1, I have overlaid my interview and observational data from and about Gabriela onto her final floor plan to illustrate how she grasped and incorporated into her design the multiplicity of KI personnel's interests and desires. While her design reflects the

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[6] During one site visit, a senior KI member stated that "self-mastery" is about "master[ing] the self through the context of a skill." KI's website expands: "[Self-mastery] highlights our focus on learning from one another to improve our work and sharpen our skills to create the change we want to see in our community and the world" (http://kheprw.org/, 16 November 2016).

[7] The eggs of the scarab beetle are laid within dung or animal carcasses. This beetle is represented in KI's logo.

[8] Aquaponics is a cyclical system utilizing fish waste as a nutrient source for hydroponically grown plants. The plants purify the water by using the waste, thereby completing a cycle.

[9] In every semester, Beth used this clause. She did so to explain how the students – as well as all architects and interior designers – needed to heed the IBC in order to ensure that loss of life is less severe or not nearly as bad as it might be in cases of accidents or other catastrophes were the code not applied.

expressed desires of KI staff – which I too witnessed and recorded as a participant observer during students' information gathering meetings – it ultimately represented Gabriela's consolidation of many forces at play in the relational process of design. Her floor design was, in part, the result of her understanding of KI, of what she called the "community" that KI served and of her perception that she shared a history of suffering with members of that community, KI's personnel and interns included. That said, Figure 1[10] does not exhaust all the influential forces that impacted Gabriela's design. Examples – which will be built upon in

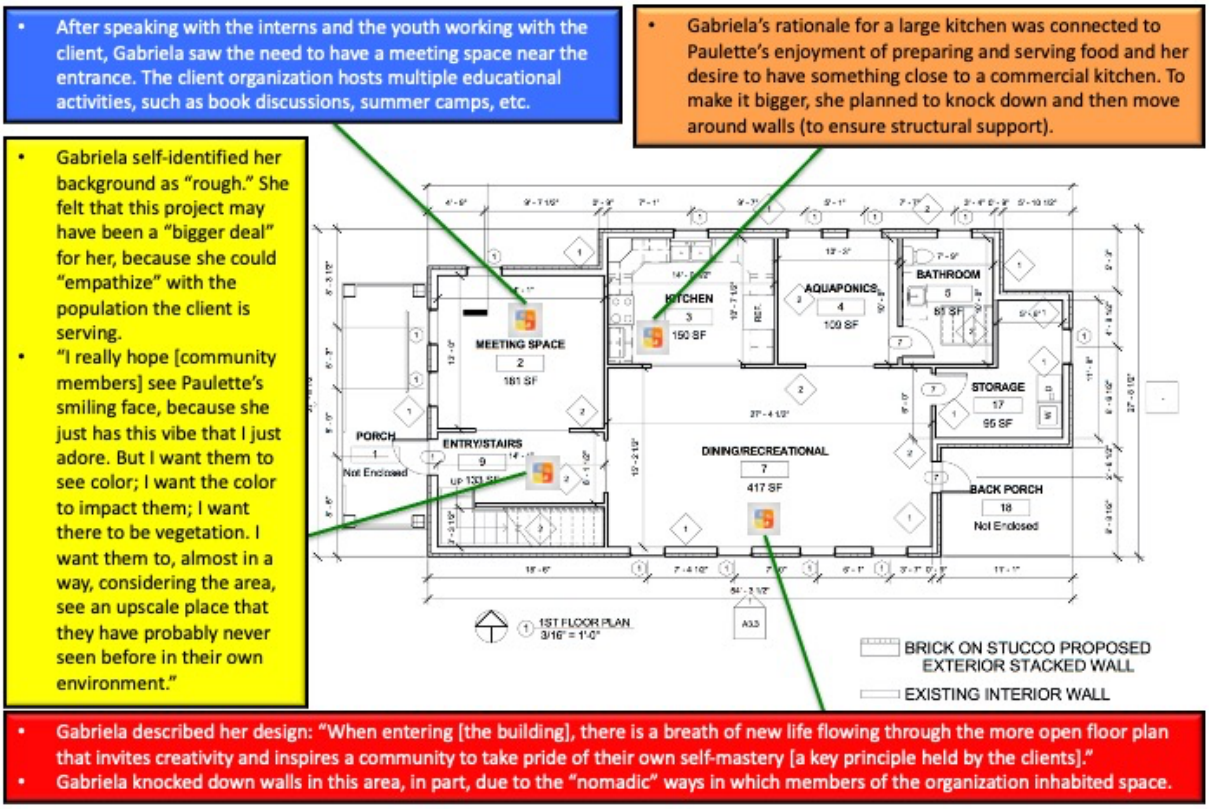


Figure 1: Gabriela's final first-floor design

later chapters – include the building code, the house's material structure, her design software skills and ideas formed in collaboration with peers that profoundly impacted her design's final form.

Gabriela placed significant emphasis on her sense of her own emotional connections to KI personnel. During our interviews Gabriela spoke in great detail about two women who had particularly inspired her – her great-grandmother and an elderly woman for whom she had helped build a home, as part of an IUPUI service trip to New Orleans. She said she had now developed a similar affection for Paulette. As indicated in Figure 1's yellow and orange

[10] In American English, the "first floor" is the "ground floor" of British English. Since students wrote and labeled their designs in American English, "first floor" is used throughout this thesis.

boxes, Paulette's influence pervades Gabriela's design to the extent that she imagined the space as having to showcase Paulette's affective presence for those seeking KI's support for the first time. To justify her design including a kitchen larger than that in the existing structure, Gabriela reported that, since Paulette loved to cook for everyone who either works at or visits KI, she had sought to open up and expand the kitchen space.

When detailing her rationale for her own design, Gabriela also explained her belief that her own personal struggles had enabled her to empathize with KI personnel, particularly the youth interns who were actively involved in KI's educational programming.

> I think of … the things that affected me … how can I change that for somebody that walks into this environment? How can I give them hope – because I needed hope? How can I inspire them – because I needed to be inspired at that point of time in my life? How can I make someone feel a certain way the moment they see this place?

As made explicit in Figure 1's red box, "creativity" and "self-mastery" are perceived by Gabriela to be "invited" into the space by virtue of the open floor design.[11]

Taken together, Gabriela's words and design set an imaginative scene: a distraught individual happens upon KI's community center and dares to approach the front door. They knock and enter into an open, colorful building where a smiling matriarch greets them before offering them food and engaged conversation about their personal aspirations.

As Gabriela spoke to me about the spaces she was designing and the reasons behind her architectural choices, I began to see the lines comprising her design as receptacles for vital potentialities, alive with relationality: her own past suffering, her empathy for struggling others, her fondness for the exceptional women she had encountered in her life, and her hope for a better future for herself and others. In other words, Gabriela utilized her own subjectivity, as it manifested for her in the aggregation of her past experiences, as a lens through which she could make sense of her present and, in turn, play creatively *with* the affective reverberations of others to create something new. The past experiences she drew upon informed how and why she incorporated KI personnel's expressed wants and needs. Through her subjective openness to the diversity of feeling, opinion, and personal history she

[11] To be clear, I do not mean to suggest that Gabriela listened to Paulette and the youth interns only and dismissed the ideas of other KI personnel. For purposes of this opening vignette, I only focus on their influence to demonstrate briefly the power of the student designer/client relationship. Later chapters offer more nuanced description than that allowed in an illustrative, opening vignette.

encountered throughout the course project, I would argue, Gabriela *ethically* produced a design which was constituted through a unification of multiplicity: a process demanding *care* and *concern* for the diversity one encounters. Gabriela created designs by co-mingling the vibrant hues of her past with the affective forces of the present, not with docile materials. The lines of Gabriela's design – and those of her peers which I explore throughout this thesis – do not represent only actual and potential boundaries, trajectories, and points of arrival or departure; those lines – much like money bunnies – are receptacles containing the processes of their relational becoming and the latent potentialities each becoming holds for the imagining of futures otherwise.

In what remains of this introductory chapter, I first situate this thesis within the growing field of design anthropology. I then introduce some key theoretical concepts that are relevant to my analysis in the following chapters before contextualizing my fieldwork site and my methods.

Anthropology and Design: Toward New Expressions of Ethics Education

I situate this thesis at the intersection of anthropology and design (see Clarke, 2017; Drazin, 2021; Escobar, 2018; Gunn, Otto, & Smith, 2013; Suchman, 2011). While there are far more detailed histories of design anthropology than I can offer here (see Drazin, 2021; Murphy, 2016; Otto & Smith, 2013), I aim in this section to situate my project by introducing some of the history of thought related to the intersection of anthropology and design. According to Otto and Smith (2013: 5), anthropologists and other social scientists have been utilizing their knowledge and skills to support the design of the industrial landscape, particularly regarding questions of productivity and efficiency, since as early as the 1930s. Such studies conducted by these early "industrial anthropologists" contributed to the design of industrial structures and management practices (ibid.). This tradition continues through to the present in articulations of business anthropology and design anthropology, as well as in the utilization of ethnography in corporate contexts. Design, business, and corporate anthropologies are not intended, however, simply to reproduce the existing relations of production, nor to make them more efficient and cost-effective.[12] Rather, design anthropologists have together constructed a rich discourse that, over the course of several decades, has critiqued the power relations within these corporate/business design

[12] Admittedly, these ethnographies can, at times, be translated to be used in ways that misrepresent an anthropologist's intentions (see Otto & Smith, 2013: 6-7).

environments (see Van Veggel, 2005) and has argued for actual participation from end-users in the design process (see Blomberg & Burrel, 2003).

Much of design anthropology is performed in industry settings, where anthropologists might give design professionals "social context, value propositions and a sense of appropriate change" (Drazin, 2021: 238). Design anthropologists, then, often are engaged in work that "open[s] up the appreciation of design as a global and largely corporatized knowledge economy, of manifest concepts exchange between mutually anonymous people and groups" (ibid.). In these anonymized and relational spaces, design anthropologists must negotiate the tensions and roadblocks that might and do arise as design "objects" circulate and, in doing so, new matters of concern and change occur. That said, in this thesis, I am not concerned with design "objects" but with design "actants" and the "affective forces"[13] they possess as architectural drawings/designs circulate between the interior design majors doing the designing – which requires a great deal of care and critical reflection or a relation of the student to their own self (particularly their experiences) – and the community partner and instructor collaborating with the students through guidance and feedback. For me, and I explore this throughout, design – at least in this project's context – is not about a relation between subjects and objects but between subjects, or, if one is so inclined, between human and more-than-human subjects that interact and, through interaction, modify others. This situates my work more within the world of posthuman design that anticipates the need for new kinds of human than in the realm of human-centered design (ibid.).

It is also clear, given the position and focus of this project (i.e., design ethics education situated in a university), that I am researching within a context beyond the industry and corporatized settings in which design anthropologists often operate. Design anthropology is no less relevant to my context than more traditional sites of inquiry, and it is the job of this thesis to demonstrate this relevance and, in doing so, contribute to the growing theory and methods of design anthropology.

The above suggests that design anthropology does not exclusively belong within the industry context, and that there are arguably different domains arising from the intersections of anthropology and design. Escobar (2018: 53-59) identifies four such domains. First, for Escobar, *design anthropology* is focused on the utilization of anthropological knowledge and methods within the design process. On one hand, this approach often situates the

[13] I expand upon the idea of design actants and affective forces in the next section of this chapter, as well as in Chapter 2.

anthropologist within a collaborative design team and takes on an applied, or "market-driven," focus (Escobar, 2018: 54). This is most similar to what has been described above. On the other hand, within this domain, the design anthropologist may also take an "activist" approach and seek to address social issues through design (ibid.). In some ways, this thesis has "activist" inclinations, specifically in that I see the need for, and have the desire to work toward, new ethical expressions of humanity as a species capable of addressing issues across multiple scales, regimes of value, and ontological commitments. This marks a kind of activism perhaps best aligned with Fry's (2012) redesigning of the human (see below) to ward off the "defuturing" effects of modernity and capitalism, as I am focused on redesigning ethical education in order to cultivate the becoming of future designers through alternative onto-epistemic frameworks.

Anthropologists in design have also argued in favor of the theoretical and methodological distinctions of design anthropology (Gunn et al., 2013). While my goals and intentions may differ from industry-situated design anthropologists, the methods they employ are still relevant to my work. As I explore in my methods section, studying design processes does require rather specific methods that enable the anthropologist to, as Escobar (2018: 55) states, "tack back and forth between action and reflection." In order to accomplish this, there is a clear need for anthropologists researching design contexts to critically consider materiality. One way of doing this – which I employ in this thesis – is to engage in design-artifact analysis (Blomberg & Burrel, 2003). In this study, design-artifact analysis was conducted with my student interlocutors, who were the designers of the artifacts (e.g., floor plans) in question. This collaborative artifact analysis was made possible through triangulation of the artifacts with interview data, participant observation fieldnotes, and other course assessments/assignments.

The second domain Escobar (2018) identifies further highlights the relationship between *ethnography and design*, with particular emphasis on what anthropology can learn from design (see Rabinow, et al., 2008). According to Escobar (2018: 56), within this domain, ethnography is "rethought as a design process," meaning simply that ethnography is rearticulated according to common design practices and concepts, like "collaboration, diverse partnerships, and outcome orientation." This borrowing process, according to Escobar, who is following Rabinow, et al. (2008) here, helps to transform ethnographic methods in ways that increase their capacity "to understand contemporary worlds and imagine constructive courses of action" (Escobar, 2018: 56)

Relevant to my purposes here, the second domain represents what Gatt and Ingold (2013) refer to as "anthropology-by-means-of-design." Such an approach thrives on what Ingold (2013, 2017) and Gatt and Ingold (2013) call "correspondence." Here, anthropologists are imagined as "observant participants," who act in correspondence with others, meaning that "they become participants in among, rather than above and beyond, the ongoing life situations with which they deal, where they and their designs play out on the same level field as everyone else" (Gatt & Ingold, 2013: 154). I attempted to do this throughout the duration of my thesis research. However, designing floor plans was not the "ongoing life situation" with which I was most concerned; rather, my design focus had always been on the theory and praxis of ethics and design education. While my student interlocutors were not necessarily interested in educational design, we shared experiences of learning design by doing it. Through my participation in such contexts, I was able to ethnographically examine the design of the educational environment and activities and to participate in and critically reflect upon student floor plan-design processes. Therefore, I see this thesis as a kind of *ethnography-as-design* that, in its conclusion, will outline a new pedagogical design for ethics education via my concept of ethical becoming. In other words, I fundamentally see this ethnography as an intervention into the theory and praxis of ethics education, an investigation – conducted in conversation with students – into the hegemonic structures of higher education and the singularities that may yet transform them.

Third, Escobar (2018: 57-59) argues for recognizing a domain called *the anthropology of design.* This domain introduces critical theories and analysis into anthropological investigations of design. At the heart of this domain is the understanding that much of design theory and practice has "depoliticized" design (Escobar, 2018; Suchman, 2011); and that, due to this loss of – or concealment of the means for – criticality, design may often contribute to reproduction of the socio-cultural and political-economic status quo. An anthropology of design would seek to incorporate critical theories of, for example, capitalism, race, and gender. In doing so, anthropologists engaging with design can begin to explore the radical political opportunities that arise when the power relations of design, and the "objects" produced therein, are revealed and critiqued.

As with the other domains introduced thus far, I connect this thesis to the domain of an anthropology of design. For example, I employ Escobar's (2018) operationalization of the

onto-epistemic framework of (capitalist) modernity[14] as a way to situate and understand U.S. higher education and also to interrogate how students made meaning of their design experiences (see Chapters 3 and 4). In my concluding chapters (see Chapters 6 and 7), I grapple with Marx's concepts of dead labor and commodity fetishism to conceptualize how design relations are concealed and devalued. In other words, I later concern myself with the "ethical fetishization" of design relations and how my concept of "ethical becoming" might be mobilized to challenge it. By seeking to understand how, if at all, student design processes are captured by the totalizing system of capitalism and the beliefs, assumptions, and values of modernity, it may then become easier to identify moments of slippage where singularities may flee the articulating forces of that onto-epistemic framework and the plurality of discourses and ideologies born from it.

The fourth domain identified by Escobar (2018: 189, see Figure 6.2) is his own novel configuration, which he calls "ontological/transition design."[15] This mode of design connects ontological design and transition design. Escobar (2018: 115) describes the former as deeply concerned with ontologies alternative to that of (capitalist) modernity; in other words, ontologies that recognize and value the relational constitution of everyday experience. Also present in this modality is the idea that the tools we design, in turn influence how we experience and come to understand reality (see Winograd & Flores, 1986). From this perspective, if the design technologies (i.e., tools and practices) my student interlocutors used were themselves designed and then implemented to serve capitalist-modernist purposes, they would be likely to perpetuate and naturalize that onto-epistemic framework in how the students make meaning of their design experiences. In order to then subvert this framework and the status quo it (re)produces, designers (and design anthropologists) need to foster opportunities for reflexive experimentation with alternative ontologies and the tools and technologies that might emerge therefrom. I describe the beginnings of such experimentation amongst my student interlocutors and me in Chapter 5. That said, in depth pedagogical experimentation with alternative onto-epistemic frameworks was premature for this thesis' research, since I am here focused on using ethnography to design new modes of ethics

[14] The onto-epistemic framework of capitalist modernity refers to the dynamic coupling of the beliefs of modernity – e.g., the individual, the real, science, and the economy (see Chapter 3) – with the exploitative practices, ideologies, discourses, and rationalities of (neoliberal) capitalism.

[15] Escobar's ontological/transition design resonates with anthropology's "ontological turn." In short, the ontological turn in anthropology refers to the embrace of "postdualist" perspectives that challenge normative beliefs and assumptions about the relation between subjects and objects, nature and culture, and mind and body (Escobar, 2018: 64). In doing so, social scientists committed to this turn have directed their inquiries toward, for example, relational processes, materiality, more-than-human entities, affect, and emotionality.

education undergirded not by capitalist modernity, but by a relational process ontology of ethical becoming (see Chapter 7). Intervention and experimentation with ethical becoming as a way to design educational experiences of ethical significance is a future direction.

As the name suggests, transition design (or design for transitions) mobilizes design as a way to experiment with strategies and tactics for transitioning from the systems and structures (e.g., capitalism, modernity, hierarchy, patriarchy, racism) that have perpetuated the deterioration of ecological and social processes to new modes of existence based in relationality. According to Irwin et al. (2015), transition design may also foreground the co-creation and exploration of shared visions, the use of critical theories of change, the adoption of reflexive practices and a commitment to openness, and the construction of new modes of designing (see Escobar, 2018: 155, Figure 5.1). Transition design also acknowledges the need for new systems of value and for a lived, relational ethics situated within particular places.

Escobar's merging of ontological and transition design creates a mode of design that supports the self-organizing processes of the Earth and its inhabitants, local/communal autonomy, alternative economic configurations, movement away from the hegemonies of capitalist modernity, and the valorization of relationality – all in the pursuit of an ecological pluriverse.

Ontological/transition design is also related to the work of design theorist Tony Fry. For Fry (2012: 37), humans are "unknowingly" the products of design, and the logic from which humans have been designed has contributed to the unsustainability of economic growth. Therefore, Fry (ibid.) proposes that we must "redesign ourselves" via "the relational development of a new kind of 'human being.'" Redesigning the human, for Fry (2012), is about combatting the "defuturing" effects (e.g., climate change) of capitalist modernity, which limits, if not outright destroys, potentialities for sustainable futures. Redesigning ourselves, therefore, is the beginning of what Fry calls "futuring" activities, which distance humans from destructive beliefs, assumptions, and practices while reorienting us to new beliefs, assumptions, and practices that make futures possible. "New habits," according to Escobar (2018: 158) are "essential if different design futures are the desired outcome…Besides changes in mind-set, one might thus expect the creation of skill sets appropriate to the transition design task." Indeed, designing for transition will need new habits, skill sets, beliefs, assumptions, and practices; however, in design anthropology, such transitional knowledge and skills, while ethically-rich, often only partially articulate their ethical import. This means that ethics is often not explicitly operationalized within design anthropology approaches.

For example, while neither Escobar nor Fry shy away from invoking ethics in their writing, it does not take a central role which, as I argue in this thesis, is necessary. The new habits, beliefs, assumptions, skill sets, and practices identified by Escobar, Fry, and other scholars operating at the intersection between anthropology and design do not explicitly fuse design anthropology with the theoretical richness of ethical thought and relational care practices.[16] For me, employing anthropological and design knowledge and skills to "redesign the human," and thereby make different futures possible, requires a deep and informed engagement with ethics as something one thoughtfully and critically lives. It is also the case that one does not just awaken one day as an ethical person. Becoming ethical requires practice, cultivation, and guidance. Quality ethics education is, therefore, necessary if we are to actually succeed in redesigning ourselves.

My intent in this ethnographic text is to contribute to the design of worlds otherwise. My approach is, however, modest: to interrogate ethnographically the design processes and ethical sense-making of students across three semesters of a community-engaged, undergraduate interior design/architectural technology course and, in doing so, to point to new potentialities for ethics education that uplift relationality and challenge the beliefs and values of capitalist modernity that design us every day.

In the paragraphs above, I have made evident that I see tensions and contradictions between life under the totalizing system of global capitalism and the thoughtful practice of ethics. For me, ethics is concerned with the values we embody as we inquire into what we *should do* and what we *can do* in the face of conflicts, whether those conflicts be in relation to one's personal conduct or to a greater social ill. Ethics is about thoughtfully responding to the world. However, this response should not be confused with mere thought and words. Ethics is about reflectively and virtuously acting as we engage with all to which we relate. There is no ethics without relationships. Whilst undertaking my research, I have asked myself: how does the hegemonic operation of capitalist modernity affect the ways we relate to others and the ways we value relationships? The answer to this question is at the heart of this thesis and constitutes my overarching concern with redesigning ethics education.

For purposes of this thesis, ethics is not about following rules or norms which may serve simply to reproduce the status quo. It is also not about applying teleological universalisms to complex, idiosyncratic problems. In what follows, ethics is about the

[16] For a recent exception, see Drazin's (2021: 243-246) discussion on the role of an ethic of care in design anthropology.

relational and critical process of becoming something new: something that harmonizes with the world, something potent that, with cultivation, is capable of bearing the fruits of worlds otherwise.

Theoretical Framework: Relational Process Ontology

Crafting a critical challenge to current trends in the teaching and learning of ethics within design and design education requires an alternative ontology or onto-epistemic framework upon which such a critique can rest and such alternatives can be imagined and operationalized. As my argument unfolds, I detail such an alternative. However, at this point, it is important to set the foundation for what follows.

The alternative I craft here is grounded in the relational process ontology of Alfred North Whitehead (1967, 1978).[17] The Whiteheadian concepts detailed in this section are important for my analysis moving forward.

A mathematician with formal training in theoretical physics, Whitehead shifted focus to metaphysics in his later years. This was in response to late 19th and early 20th century scientific and mathematical discoveries – such as relativity and quantum mechanics – that he believed destabilized the "metaphysics of scientific materialism" so that a new ontological system, aligned with contemporary scientific findings, was needed (Stenner, 2008).

Whitehead (1934: 36) asserted that – rather than assuming concreteness – *activity*, *process,* and *inter-relationality* better represented a reality consistent with contemporary scientific findings. Whitehead aimed to construct a conceptual framework for process – comprising multiple features – that could be used to describe every *actual occasion*, "from the most infinitesimal atomic events…to [our] subjective experience of this room right here and now" (Stenner, 2008: 99). These actual occasions are "drops of experience" that are all "complex and interdependent" (Whitehead, 1978: 18). Furthermore, according to Whitehead, everything is made up of these relational events of experience. The assertion that everything is "made up" of actual occasions does not mean that there is no difference between things. It means that differences between things are differences in "degree" (of complexity) not of "kind" (Henning, 2005: 73).

That said, the difference between "atomic" actual occasions and the complex, personal consciousness of a human subject is signified by Whitehead's notion of a "society"

[17] Adequately detailing Whitehead's entire relational process ontology, a very complicated metaphysical system, is far beyond the scope of this thesis and has been exceptionally elaborated elsewhere (Deleuze, 1993; Henning, 2005; Pomeroy, 2012; Shaviro, 2007, 2012; Sherburne, 1966; Stenner, 2008; Wallack, 1980).

of actual occasions (or even "societies of societies"). Such a society has endurance and is multitudinous, highly complex, and structured (Wallack, 1980: 81). With the complexity or "the intensity of coordination" found in humans comes the capacity for the "conceptual entertainment of possibilities" (Henning, 2005: 73). Humans can perceive and entertain innumerable potentialities while an "atomic" actual occasion may lack such abilities and simply conform to its past becomings. That said, the features of the relational process at play in an atomic actual occasion's becoming also applies to societies (e.g., a human subject). This can be beneficially explored through Whitehead's (1967, 1978) notion of *prehension.*

Prehension is concerned with grasping or ap*prehending* objects within any given actual occasion. Whitehead (1978) refers to these prehended objects as "data" or an individual "datum." Following Latour (2004: 75), I see all data as "actants" in that they possess the capacity to "intervene" or "modify" other subjects via prehension. For Whitehead, such grasping of data is informed by a subject's "subjective form," or how it "feels" or demonstrates "concern" toward an object (Whitehead, 1978). As a becoming-subject is "lured" by the affective force of data, it is affected by these data (it *prehends* them) and, through this interaction, a new subject, which Whitehead calls a "superject," is created that itself has the capacity to affect (or lure) other subjects, thereby participating in those subjects' becomings. The superject, then, is the concrete actualization of potential that itself becomes a datum. Moreover, the superject is characterized as having "objective immortality;" that is, it has the capacity to be prehended as part of any future actual occasions, each of which is "constituted by [its] synthesis of other actual [occasions]" (Sherburne, 1966: 24). An actual occasion, then, is both a superject (i.e., a prehended object) and a prehending subject (Sherburne, 1966, p. 35). Through process, the past, and the once actualized novelties objectified within it, continue to exert their influence on the immediate present.

In the previous paragraph, I referred to the important role of affect and affective force in Whitehead's relational process ontology. Steven Shaviro (2007, 2012) has made a similar observation regarding the role of affect in Whitehead's thought – i.e., the Spinozian "capacity to affect and be affected." According to Shaviro (2007: 1), Whitehead's emphasis on *feeling(s)* results in the idea that subjectivity is "affect-laden."[18] What Shaviro is referring to here is that, in the feeling or prehending of data, a becoming-subject is affected. I conceptualize all data/actants as possessing what I refer to as *affective force*, or the power to

[18] In Chapter 7, I return to this connection between feeling and affect through an engagement with Whiteheadian aesthetics, particularly his conceptualization of beauty.

influence/inform what becomes in any given present moment. I operationalize my understanding of (design) actants and their affective force in Chapter 2.

As stated at the beginning of this section, I see Whitehead's relational process ontology as potentially providing the foundation for an alternative onto-epistemic framework to capitalist modernity. In addition, I also see Whiteheadian concepts like prehension, datum/data, and relational becoming as playing a fundamental role in how I define the questions guiding this research project, as well as how I reflect upon my ethnographic data. At various times throughout writing this thesis, I have asked: as they go about designing, how are my student interlocutors affected or lured by a variety of data/actants? How and why did the students prehend that data? How did the students participate in the actualization of some potential within that data, both within their own subjectivity and within their designs? In my efforts to answer such questions, I examine how, if at all, the design education experiences of my student interlocutors both reproduced the status quo of design and design education and/or introduced opportunities to map new ethical and aesthetic trajectories. As I analyzed and interpreted the data presented in this thesis, Whitehead's thought enriched my description of student design work in that, as will become clear later (especially in Chapter 7), it provided openings into new modes of valuation that, if critically integrated into educational environments, could be capable of sparking potential otherwises to capitalist modernity. Through the data presented in the chapters that follow, I aim to demonstrate the complex ways that students prehended the needs, values, and desires of the course community partners – or "clients" – and, in turn, how their prehensions were both etched upon and prehended by their designs.

To conclude this subsection, I also need to point out that Whitehead's philosophy overlaps with John Dewey's work, specifically that in *Experience and Education* (1938/1998), where Dewey describes a process that flows by means of "continuity" and "interaction." Here, Dewey uses "continuity" to refer to "the continuity of experience" in which a subject continuously draws on its past in the form of knowledge abstracted from previous experiences. The subject then brings prior experience to bear on its "interactions" with other subjects/objects within future events. As a whole, this process is described as flowing along an "experiential continuum." Dewey's conceptualization of process is arguably commensurate with Whiteheadian process and becoming. It could even be argued that Dewey's most relevant contribution here is in the potential in his work to characterize such a process as *learning*. The relationship between becoming and learning is explored further in the closing chapter of this thesis.

Contextualizing Fieldwork: Instructor, Partners, Course Design, and Students

My initial conceptualization of this study grew from a general interest in exploring the teaching and learning of ethics within STEM courses utilizing community-engaged pedagogies. I hypothesized that, within this pedagogical context, I would be able to inquire ethnographically into moments when STEM students applied their ethical thought in practice. In STEM education, ethics is often introduced as topics related to discourse around the responsible conduct of research (RCR). Within RCR, ethics may be equated with compliance to a pre-determined set of research norms. Closely related to this is the use of codes of ethics, which were very relevant to the engineering and engineering design context in which the *Commercial Construction* course I studied was situated.

In a systematic literature review on engineering ethics education in which I participated (Hess and Fore, 2018), we analyzed 26 published studies to identify trends in engineering ethics education research and practice. We found (2018: 566) that the most common pedagogical strategies recorded in these studies as being used for teaching ethics were "codes or rules" (85%), "case studies" (81%), and "discussion or debate" (77%). These findings suggest that engineering ethics education was most often concerned with ethical reasoning, decision making and compliance with established rules and standards. These approaches leave little educational opportunity for a lived, relational practice of ethics that requires both critical awareness of particular problems and consequent action. Pedagogical strategies capable of fostering such practice-oriented ethics were reportedly seldom employed. For example, the sampled articles showed that in only 8% of the described cases were attempts made to teach ethics through "real world exposure," whilst in an additional 8% of the cases, ethics was taught through "community engagement" (ibid.). Given these findings, it is evident that there is a paucity of literature on teaching engineering ethics using experiential learning strategies and on research into the ethics-learning outcomes of such strategies. I intend to address this gap in this thesis.

I initially identified the *Commercial Construction* course as a possible research site because, at the time, it was one of few STEM courses at IUPUI that utilized community-engaged pedagogy. Prior to identifying that course, I had sent emails to three different STEM instructors, expressing interest in collecting data in their community-engaged courses. Only Beth Huffman, a professional architect turned architectural technology and interior design instructor, responded. She expressed enthusiasm about my project and consented (more on

consent in the "Student" subsection) to my being a participant observer in three semesters of her *Commercial Construction* course.

In the following subsections, I contextualize my field site. I first focus on describing Beth as an instructor. Second, I describe the non-profit organizations that Beth recruited and collaborated with as her course's community partners. Third, I delve into Beth's course design. And finally, I detail some distinctive characteristics of my student interlocutors.

Instructor

I now offer a general introduction to the Beth's approach to teaching architectural technology and design. I do this to demonstrate how she drew on her past architectural experiences in her teaching and also to include an example of how she playfully included me in the class. Although I make reference to Beth's instructional style throughout this thesis, it is useful to introduce a few of its finer points here. I found Beth to be an engaging instructor, who was always seeking out new activities and strategies to introduce in her courses. She was open to recommendations from students and regularly connected with centers and institutes on campus for instructional support (see below). Understanding how Beth taught and why she did so in particular ways helps to provide insight into how capitalist modernity and professionalism came to influence some of the sense-making done by students (see Chapters 3 and 4).

In each semester, Beth designed her classroom to operate like an architectural firm. Beth's reasoning for this was directly connected to her experiences during the early years of her career. She described feeling as if her education had prepared her inadequately for the professional world's complexity, particularly as pertains to collaborating with others (e.g., construction professionals and clients). Consequently, she reported, she had chosen to shift her career focus to teaching the next generation of architects, interior designers, and construction professionals, so that they could be better prepared for the professional world. Her course design directly reflected her past experience and her educational objectives.

The *Commercial Construction* classroom included five workstations, each comprising a couple of two-person tables arranged to form a large square. While students had to produce their own individual designs, Beth encouraged them to work together, to bounce ideas off each other, to ask each other questions, and to help each other to problem solve. When teaching the complex functions within the Revit design software (described below), Beth often demonstrated by projecting her computer screen display onto both sides of the room

and then walked the class through particularly tricky functions by narrating her steps and thought processes as she completed them.

Beth also facilitated student learning on the International Building Code (IBC) and Zoning Code by drawing on her own professional experience and using humor. Each semester, she shared an example from when she had just started her design business and had worked with a Colorado strip club. She explained that the club owner had wanted to build a fenced-in patio area alongside an existing building where the dancers could take smoke breaks. The fence was to preclude their being in full view of neighboring businesses which were complaining, as were their customers. But zoning officials had insisted that the whole building had to be brought up to code – including a $30,000[19] sprinkler system – before they could approve the patio addition. Beth then explained that, in her experience, zoning officials show leniency toward buildings perceived to benefit "the community," and that protecting the neighboring businesses' allegedly morally fragile patrons from the sight of scantily clad ladies was not perceived as a true boon to community by zoning officials. The story always earned chuckles from the students.

Beth also tended to use me comically as a foil in the hypothetical examples she created to explain the reason for particular code conventions. For example, while teaching the IBC requirements for egress routes and exits from buildings, she created scenarios where I was the cause of a dangerous situation. Once she created an acted-out scenario where the classroom door was the intended path of emergency egress. She had me arrive first at the exit door. But since I was slow in reaching the door, everyone slammed into me in a panic, pushing me up against the inward opening door which then could not be opened. Everyone in this play scenario "died" because the door did not flow with the path of egress and because I had failed to see the fire as a matter of urgent concern. In another scenario she created, I had a pathological love for smoke and fire and lit a bunch of smoke bombs at one exit from a building. She used this to explore the necessity of multiple exits from commercial buildings.

As indicated, each of Beth's classes included a "community partner" organization that acted as the course's "client."[20] In her experience as a professional architect, Beth explained, there were often breakdowns in communication between clients, architects, construction professionals and interior designers. The course's community-engaged design was intended to give students opportunities to work with a client, to listen to their desires, to integrate those

[19] All dollar values are USD unless otherwise indicated.
[20] Hereafter, I will not be placing the word "client" in quotes. However, to be clear, when students talk about their client, they are referring to Beth's community partner, who is acting as a kind of "mock" client.

desires into a design, to consider client feedback on design iterations, and to compose a final construction document in which students were strongly encouraged always to consider builders' practical needs.[21]

Community Partner Organizations (aka Clients)

Both of Beth's community partners – the Kheprw Institute (KI) and Big Car – were Indianapolis non-profit organizations. The former focused on developing self-mastery and community wealth within socio-economically depressed neighborhoods, and the latter's work was directed toward urban placemaking through the arts. I introduce the community partners here, because, in many ways, students saw the personnel of these organizations as their clients. There were many relationships that affected how students conceptualized and designed their floor plans. However, I found that their relationships with their clients had arguably the greatest impact on student design processes. One must, therefore, understand the clients to interpret the designs.[22] In this subsection, I first discuss KI, which worked with two student cohorts (Fall 2015 and Spring 2018), before introducing details about Big Car, which worked with the Fall 2017 cohort.

Kheprw Institute

As explained in my opening vignette about Gabriela, the Fall 2015 cohort focused on redesigning an existing property to become KI's headquarters.[23] In the run-up to the Spring 2018 semester, I again worked with Beth to partner with KI. I had stayed in contact with Imhotep and Paulette after the Fall 2015 semester and had learned that KI had used ideas from the 2015 student cohorts' designs to create a funding proposal to make the old house

[21] An example was to minimize, if not remove, all fractions beyond measurements by quarters and halves because, as Beth explained, in her experience, builders dislike their work being impeded by excessively tiny fractions.

[22] One must acknowledge that the non-profit, service-oriented work of the community partners likely provided a much different educational experience than if the students had worked, for example, with a for-profit corporation. It is beyond this thesis' scope to compare the educational differences between using for-profit versus non-profit community partners in community-engaged courses. That said, I suspect that the openness of KI and Big Car to letting the students in on their public missions and their lack of constraining practices (e.g., corporate branding) could have offered the students ample opportunities both to critically reflect on the public goods that could be achieved through their designs and to practice greater freedom as they made design decisions. A for-profit corporation may have had much more rigid specifications for their buildings and may have been more guarded about their public purposes. In interviews, several students stated that they were not interested in entering into commercial design as a career, because they perceived that designing for commercial properties would be tightly controlled and disruptive of their personal creative expression.

[23] During the Fall 2015 semester, this house was owned by Imhotep, the Executive Director and Co-Founder of KI, and his spouse. On 28 April 2022, I spoke with Paulette, who informed me that this house was a "KI property" now, meaning that the house was owned by KI and no longer by Imhotep and his spouse. As of 28 April 2022, Paulette reported that the house is still being used for KI's community development activities.

habitable for KI interns and visiting youth, while also setting aside space for a large kitchen that could be used to provide recently released felons culinary arts training. Since their design needs had changed from a community center, Beth, Imhotep, and Paulette agreed to another mutually beneficial partnership. I offer more details about the Spring 2018 project in Chapter 2.

Beyond the distinct needs KI wanted addressed by each student cohort, it is important to explicate two other facets of their work. One is KI personnel's consciousness of their role as educators explicitly devoted to helping people achieve self-mastery. This manifested in KI's senior personnel's active involvement, as co-educators, aiding Beth's students' educative processes. In their interactions with the students, KI staff always asked probing questions about the designs being presented and about what each student was learning from the experience. Their commitment to helping people achieve self-mastery also manifested in how they engaged their KI interns and ensured that, during meetings with *Commercial Construction* students, KI interns were always as, and often more, engaged with the design students than KI's senior leadership. KI interns were encouraged to share their vision of what the redesigned building should be.

The interns' extensive involvement, and the fact that, when students met with KI staff everyone would sit at tables scattered across a large room in a disheveled circle, led several students to report feeling that KI's organizational structure was unclear and lacked a definite hierarchy. Yet these same features represented a second core KI facet: non-hierarchical organization. By this I mean that KI personnel always blended in, sitting where they wanted (but still close to each other), and each speaking freely whilst including the interns. Although there were clearly senior leaders, they often deferred to KI's young interns and gestured for them to play significant roles in discussions with students. Moreover, at no point did the students experience anyone at KI giving a "formal" welcome or standing up at the front of the room and addressing them. Nor did they see anyone wearing business attire. Upon reflection, many students also described KI's organizational practices as rather "nomadic," and that they found this strange and, as some students stated, "unprofessional."

This facet of KI created uncertainty amongst Beth's students in both semesters that her classes worked with KI. During one class discussion with the Spring 2018 cohort, Beth asked the class "Who is the client?" to which students responded that they felt unsure of whom to listen to regarding design specifications. They then asked whether the clients were the two senior KI personnel, Imhotep and Paulette, who seemed to hold the institution's history and direct its vision; or whether KI's interns were the clients, since so much of the

space was to be used for intern housing. As one student (Dakota – see Chapter 5) put it, should they be designing for "the clients of the client" (i.e., people assisted by KI)? By this discussion's close, there was some consensus that Imhotep and Paulette were ultimately the students' client. Yet, as shown below, the interests of both KI's interns and "the clients of the client" were also carefully considered.

Big Car

During the Fall 2017 semester, Beth's students worked with Big Car, an Indianapolis non-profit arts organization and artists' collective concerned with "placemaking and socially-engaged art" (see http://www.bigcar.org/about/, accessed 27 September 2017). Big Car's organizational emphasis on "placemaking" was a significant influence on students as they created their designs. Big Car's website states that "True placemaking is, at its core, about creating and setting in motion the kind of open and free, public social infrastructure we need to be better connected with each other" (https://www.bigcar.org/our-approach/, accessed 23 March 2019). According to the Big Car approach, placemaking is a grassroots initiative concerned with creating a sense of home. Big Car also drew a line between placemaking and gentrification. Big Car personnel asserted that their endeavor was in no way directed toward gentrification; rather, as stated on their website, they wanted placemaking to achieve "place keeping" as opposed to the "place taking" commonly associated with gentrification.[24]

Throughout both my fieldwork and thesis writing, Big Car was involved in an urban revitalization movement in Indianapolis' southeast side Garfield Park neighborhood. Part of this movement involved creating affordable housing for artists. Big Car's focus on artist housing arose from a problem they reported having long observed. When Big Car was established in 2004, it was located in the Fountain Square neighborhood, just north of Garfield Park. Big Car's artists had beautified the Fountain Square neighborhood resulting in it becoming what turned into an artistic, high property-value hub that eventually priced Big Car itself out of Fountain Square.

That experience, in Fountain Square and elsewhere in Indianapolis, led Big Car to create a program precluding pricing artists out of neighborhoods they beautified. Its goal was

[24] To clarify, I understand that even well-meaning placemaking may result in an unintended consequence of gentrification – see Burns' and Berbary's (2021) critique of placemaking. Noteworthy is that Big Car personnel consistently reported what I perceived as a sincere commitment to fighting gentrification. Whether or not Big Car is a placemaking force, a gentrification force, or a bit of both is beyond this thesis' scope. My focus is on how students created designs with and through their relationships with Big Car personnel. I should add that the students had no readily apparent critical awareness that gentrification might possibly arise from placemaking efforts.

to buy vacant houses and to make them available to artists. To achieve this, Big Car had partnered, in Garfield Park, with Riley Area Development Corporation and the Indianapolis Neighborhood Housing Partnership to purchase vacant houses. They then sold a 49% share in those properties to qualifying artists in what they called their Artist and Public Life Residency program (APLR). Participating artists were to receive down payment assistance and were expected to participate in artistic placemaking over the following six years. If they wished to leave, the consortium would purchase the artist's share, placing the property back in the program at the same price for which it was originally listed.[25]

Beth's Fall 2017 semester students were tasked with developing their architectural design skills by redesigning one of Big Car's houses for a future APLR program participant. A Big Car intern, Jess, then living in the house, acted as the students' primary client. They were required to consider Jess's suggestions for improvements to the living space and also to create gallery space for APLR participants to hold monthly[26] public art shows. What this meant in practice becomes clear in my later discussions (Chapter 4) of the students' various floor plans and what influenced their designs.

Course Design

Having briefly introduced Beth and both community partners, I now provide a detailed examination of the course design. I first discuss the course design in terms, particularly, of its learning objectives. Second, I examine each semester's unique features and educational experiences through an analysis of Beth's course assessments.

General Course Overview

Commercial Construction was a course for second-year undergraduates. At the time of the Fall 2015 semester, *Commercial Construction* offered students their first significant exposure to the BIM (Building Information Modeling) software, Revit.[27] Beth thus had the difficult task of teaching students (and me), who were at beginner level, the ins and outs of a very large, complicated, and complex BIM software system. While Beth did several demonstrations and in-class tutorials, adequately learning Revit so that one could actually

[25] More information on the APLR program at: https://www.bigcar.org/project/aplr/ (accessed 27 September 2017).
[26] Events featuring and celebrating local art and artists are held each first Friday of the month across Indianapolis.
[27] Students entering *Commercial Construction* did have significant experience with the AutoCAD 2D drafting and drawing software.

complete architectural drawings took a lot of extra-mural time and a considerable amount of support from peers, teaching assistants, Beth, and YouTube. The Fall 2017 teaching assistant told me that YouTube videos illustrating how to complete particular functions in Revit became her "best friend" when she had taken *Commercial Construction*. As I tried to learn Revit over my three semesters of participant observation, I had to lean on Beth, teaching assistants, and the students.[28] By the time of the Fall 2017 and Spring 2018 semesters, the Interior Design program had begun introducing Revit which meant that the Fall 2017 and the Spring 2018 *Commercial Construction* cohorts respectively had one and three students who had already been introduced to Revit. At times, other students (and I) sought them out for assistance.

There were several – Beth and many students would have said too many – learning objectives central to the *Commercial Construction* course. The syllabus lists the following course objectives:

- Complete architectural working drawings (partial contract documents) for a small commercial building using BIM [Building Information Modeling – 3D modeling] software.
- Have improved BIM skills.
- Prepare preliminary drawings for a commercial building.
- Draft architectural working drawings for a commercial building in accordance with good construction practice. These drawings may include, but are not limited to: floor plan, elevations, wall sections, and details.
- Develop an understanding of professionalism in the Design Technology discipline.
- Synthesize and apply information and data from a variety of sources to propose a solution or solutions to a community, national, or global problem.

[28] Despite being in the class for three semesters, I never developed, or tried to develop, the kind of proficiency in Revit that the students did. That was for two reasons. First, in my experience, learning Revit required much extra-course assistance because, during scheduled class time, there was almost always a queue for Beth's assistance. I determined that it would be unethical for me to demand much of Beth's or the teaching assistants' time when registered students struggled to meet course expectations. Second, my own time was constrained by other fieldwork responsibilities, such as conducting observations and writing field notes. I did learn much about Revit during those three semesters, but my knowledge is limited to basic floor plan creation, which is what I focus on throughout this thesis.

The first four bulleted course objectives relate to using Revit to create architectural drawings. While not explicitly stated within the fourth bullet, "in accordance with good construction practice" included student awareness of and sensitivity to the IBC and Zoning Codes, which were both a primary focus of the course. That was because it was the Interior Design program's students' first extended engagement with those codes. The fifth bulleted key objective, professionalism, and how to demonstrate it verbally, in writing, and through proper comportment, is explored in Chapter 3. The significance of community-engaged activities as a course objective becomes apparent in the fifth and sixth bulleted key objectives, where the latter focuses on "synthesiz[ing] and apply[ing] information…to propose a solution or solutions to a…problem." A large amount of data (e.g., client desires, the IBC and Zoning Code, students' own past experiences, their developing proficiency in Revit, and the state of the existing buildings' structures) circulated through the students' relationships with personnel at the partner organizations, with Beth, and with their peers. Through their prehension of these data students learned how to apply them in order to solve the problem(s) or address the need(s) of the partner organizations (see Chapters 2, 4 & 5).

Differences Between Semesters

I now examine how the course differed from semester to semester by looking closely at what assessments were assigned and when they were assigned. Table 1 facilitates this comparison – one which, I argue, testifies to the complexity and uncertainty that comes with teaching courses in partnership with off-campus organizations. Table 1 also illustrates the course content and structure changes resulting from (1) my presence as a participant observer, (2) end-of-year student feedback, (3) instructor exposure to new instructional strategies and (4) collegial relationships. To further explore these themes, I examine each of the assessment categories – Journal Entries, Design Assignments, Code, Revit, and Conceptual – and I unpack the subtle reasons why changes occurred from semester to semester.[29]

Table 1 shows that the course's various versions required differing numbers of journal reflections as well as slight differences in topics and due dates in the course sequence. According to Beth, my presence in her course was one reason for the eight (rather than the

[29] While I do not build upon this point here, I want to acknowledge that the course design – like student designs – was modified over time by a variety of different data/actants that possess affective forces.

Table 1. List of Commercial Construction Assignments Across Semesters

Differences between semesters according to Assignment List			
Assignments	2015F	2017F	2018S
		JOURNAL ENTRIES	
Journal #1	Week 1 (8/26); Topic: KI Website	Week 1 (8/23); Topic: Top 3 Learnings Desired & Define SL*	Week 2 (1/16); Topic: KI Website
Journal #2	Week 2 (9/2); Topic: KI Exp. & SWOT Analysis	Week 2 (8/30); Topic: Big Car Website	Week 3 (1/23); Topic: Top 3 Learnings Desired & Define SL*
Journal #3	Week 4 (9/14); Topic: Design Concept	Week 7 (10/2); Topic: Design Concept	Week 8 (3/1); Topic: Design Concept
Journal #4	Week 6 (9/28); Topic: Feedback and Integration	Week 8 (10/9); Topic: Feedback and Integration	Week 9 (3/8); Topic: Feedback & Integration
Journal #5	Week 7 (10/7); Topic: Service Reflection	Week 17 (12/13); Topic: Final Reflection	Week 17 (5/1); Topic: Final Reflection
Journal #6	Week 10 (10/26); Topic: 9 Question's for KI	N/A	Week 17 (5/1); Topic: Extra Credit on Impacting Society
Journal #7	Week 11 (11/4); Topic: Reflection on Interim Presentation	N/A	N/A
Journal #8	Week 17 (12/14); Topic: Final Reflection	N/A	N/A
		DESIGN ASSIGNMENTS (ITERATIONS)	
Space Plan	Week 4 (9/16)	N/A	N/A
Building Shell	N/A	N/A	N/A
Existing Interior Walls	N/A	Week 5 (9/20)	N/A
Color Plan	Week 5 (9/23)	Week 7 (10/2)	Week 8 (2/27)
Color Plan Presentations	Week 5 (9/23)	N/A	N/A
Exterior Inspiration Photos	Week 6 (9/28)	N/A	N/A
Interim Presentations	Week 10 (10/28)	Week 7 (10/2)	Week 9 (3/6)
Revised Color Plans	N/A	N/A	N/A
Verbal Presentation Review	N/A	N/A	N/A
Life Safety Plan	Week 8 (10/14)	Week 10 (10/25)	Week 11 (3/22)
Exterior Design	Week 10 (10/26)	N/A	N/A
Demo Floor Plan	N/A	Week 12 (11/6)	N/A
Final Floor Plans	Week 12 (11/9)	Week 12 (11/6)	Week 12 (3/27)
Elevations	Week 12 (11/9)	Week 13 (11/13)	Week 13 (4/3)
Ceiling Plan	Week 13 (11/16)	Week 14 (11/20)	Week 14 (4/10)
Wall Section	Week 15 (11/30)	Week 15 (11/29)	Week 15 (4/17)
Final Presentation	Week 16 (12/9)	Week 16 (12/4)	Week 16 (4/26)
Final Construction Documents	Week 17 (12/14)	Week 17 (12/11)	Week 17 (5/1)
		CODE	
Code Study Practice	N/A	Week 4 (9/11)	Week 8 (2/27)
Code Study	Week 4 (9/16)	Week 8 (10/11)	Week 8 (2/27)
		REVIT	
Revit Exercise 1	N/A	N/A	Week 3 (1/23)
Revit Exercise 2	N/A	N/A	Week 5 (2/8)
Revit Exercise 3	N/A	N/A	Week 7 (2/20)
		CONCEPTUAL	
Mind Mapping	N/A	N/A	Week 4 (1/30)
Digital Story Script	N/A	Week 15 (11/29)	Week 15 (4/19)
Peer Review of Script	N/A	N/A	Week 15 (4/19)
Digital Story Storyboard	N/A	Week 16 (12/6)	N/A
Digital Story	N/A	Week 17 (12/11)	Week 17 (5/1)
*Service Learning (SL)			

usual five) journal reflection assignments in Fall 2015. She explained having been slightly nervous of my being there during that first semester and that she had wanted to ensure that I had ample opportunity to collect the data I needed. She also expressed – despite my explanations of the project – that she was a little uncertain about what I would do with the data I collected and what I would say about her and her teaching. To help allay her concerns, I joked with her several times throughout the duration of my research that it would be rather embarrassing for me if I were to conduct unethical research on a project on ethics. I also assured her that my focus was on students' learning and practice of ethics, not on evaluating her teaching.

While I have observed it mostly with secondary STEM teachers (see Fore, et al., 2015), the managerial surveillance of school administrators/evaluators to which Indiana's teachers are subject has contributed to a noticeable lack of teacher willingness to experiment with new and risky instructional strategies and to a general malaise about being evaluated/judged. Beth had similar worries. She was aware that committing to community-engaged pedagogy could be quite precarious because so much can and does go wrong. As she explained, this also occurs in actual architectural practice. When things went wrong in the education setting, however, student dissatisfaction was documented on Beth's end-of-year evaluations. And, referring to her department's performance review process, Beth also lamented on several occasions that her course's successes are best represented qualitatively

(e.g., through particularistic narratives of student growth) – data not captured nor as seriously considered by institutional managers as the quantitative data gathered through the end-of-semester student evaluations. Given these concerns and that, in my experience, Beth is a very kind and helpful person, it is unsurprising that she created many assignments that I could, in turn, use for my research.

For example, Beth created a special service-learning project in Fall 2015 (Week 6) with an assessment titled, "Journal Entry #5" due in Week 7. Students were expected to complete this service project, comprising a two-hour cleaning of KI's dilapidated building in preparation for renovations. It involved sweeping, throwing away junk cluttering the house, and cleaning old appliances stored on the premises. With Paulette's permission, I worked closely with two students, Jakub and Sasha, to lift a set of musty carpet squares and to discard them along with some old electronic equipment by playfully tossing them out of a second story window. As we did this, Sasha's joy and laughter was so contagious that Jakub and I ended up laughing with her the entire time we worked on the task.

The service project also enabled students to spend extra time in the house they were redesigning. Jakub, for example, found this very useful, because he was able to learn, more than otherwise possible, about the building's condition. For example, while we were tossing carpet tiles through the window a rotted board beneath Jakub's foot slightly gave way. Looking up, Jakub and I saw the fairly substantial hole in the roof where rain had been entering. Earlier, when Jakub, three other students and I had descended (by ladder) into the basement, Jakub was able to determine that there was insufficient space for his original plan to include KI's aquaponics system there. Cleaning out the clutter also enabled us to measure spaces previously inaccessible when we first visited the property for a tour in Week 1.

Fall 2015's journal entries #6 and #7 (Weeks 10 and 11, respectively) also testify to the number of interactions students had with KI personnel: a total of six, half of them presentations of design iterations (two interim and one final), two for information/measurement gathering, and one service-cleaning day. In contrast, the Fall 2017 semester course included just three interactions with Big Car – two presentations and one information/measurement gathering session. Since there were so few visits with Big Car, there was no reason to have, for example, Fall 2015's journal entries #6 and #7. Similarly, since the Spring 2018 semester with KI included only two presentation meetings (one interim and one final), there was again no need for these two journal entries. The Spring 2018 semester with KI, as with the Fall 2017 semester with Big Car, had no service day so there was no need for an associated journal entry.

The primary factors affecting the number and timing of each semester's journal entries were the logistics of working with an external organization and the idiosyncrasies of that organization. In Fall 2015, Beth's relationship with KI had been established well in advance of the semester, permitting the first class visit to KI to occur during the first week of the semester. Similarly, in Spring 2018, the first visit to KI occurred early – during the second week. In contrast, finalizing the partnership with Big Car for Fall 2017 started out slowly, leading to scheduling difficulties and to students having their first meeting with Jess – Big Car's intern – only during the semester's fourth week. Consequently, the "Design Concept" and "Feedback and Integration" journal entries occurred much later in Fall 2017 (respectively Weeks 7 and 8) than during the Fall 2015 semester (respectively Weeks 4 and 6).

Due to the late start with Big Car, the Fall 2017 cohort spent its first four weeks exploring the IBC and Zoning Code, since there was still little design work to be done. By the time this cohort had their first meeting with Big Car and visited the property to take measurements of the existing structure, they were already behind the Fall 2015 cohort's design pace. Consequently, the due dates for the initial "Design Assignments" (i.e., Color Plans and Life Safety Plans[30]) during Fall 2017 were two weeks later in the schedule than they were during Fall 2015. The due date for the Code Study,[31] for which initial designs were required, was also set for later (Week 8 as opposed to Week 4), despite the students having spent much of the first four weeks of class exploring code.

Beth described the Code Study as "a living, breathing document" and as "a puzzle" – Beth *loved* puzzles. In best practice, the Code Study needed to evolve as student designs evolved. For example, if a student substantially changed the square footage of one of the rooms, they needed to recalculate the occupancy load for that room – which could, in turn, require additional restrictions – and record it in their Code Study. By the time the Fall 2017 cohort reached the later design iteration assignments (i.e., Final Floor Plans and Final Construction Documents), they had caught up with the Fall 2015 cohort's pace. But the

[30] Color Plans – the first versions of students' floor plans – were used to convey design ideas to clients who likely lacked architectural expertise and did not need all the dimensions, elevations, wall section details, and ceiling plans. Those required Revit competency the students had yet to cultivate at the beginning of the semester. Life Safety Plans were floor plans that explicitly outlined criteria of the IBC to which their designs would need to conform.

[31] For clarity, the Code Study was a document that included square footage of each room, function of each room, occupancy load, construction type, allowable area increase, minimum number of exits required, egress width required, maximum distance to exits, sprinkler system requirements, required number of plumbing fixtures (e.g., toilets, sinks, and drinking fountains), Americans with Disabilities Act (ADA) requirements, and fire rating requirements.

misalignments resulting from the delay in finalizing the partnership with Big Car made for, as students reported, a rather stressful semester of an already tightly filled class.

That said, the Spring 2018 semester also faced operational challenges. For example, when the class showed up for the first meeting with KI, only one KI intern was present and she knew nothing about the meeting. When I called Paulette, she told me that she had completely forgotten. When she arrived about 20 minutes later, she was the first there although four others, Imhotep and three other personnel, joined shortly thereafter. At the next class meeting, Beth used this experience as a teaching moment for the whole class when a few students expressed frustration with the tardiness of KI staff. Beth stated that, in addition to their willingness to work closely with students and give good feedback, one of the reasons she liked working with KI was that sometimes their personnel were a bit unresponsive and sometimes KI personnel might show up late or forget the time of the meeting – providing examples of what happens in what Beth called the "real-world reality of working with human beings." She added that she had been stood up many times by clients in her professional life.

Unlike the previous semester with Big Car, the Spring 2018 students had both an initial meeting with KI and had taken measurements within the first three weeks of class. This allowed Beth, during the early weeks of the semester, to focus on the following: (1) conceptualizing the needs of the "client;" (2) doing a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis of the client's project; (3) drawing up the initial footprint of the building from student measurements (led by Melanie, Beth's teaching assistant, who stood in for Beth when she was ill and absent early in the semester); (4) drawing up Color Plans; and (5) learning really specific details and processes for how to design floors/levels, walls, doors, roofs and stairs in Revit. Beth's Revit demonstrations/tutorials were far more detailed than they had been in previous semesters, largely because she had ample time to work with Revit and because a greater number of students in the class had had introductory Revit experience. Students were working extensively in Revit in week three of the Spring 2018 semester while, during Fall 2017, students did not do much Revit work until week five. Yet, unlike the Spring 2018 cohort, which did not begin a deep dive into the IBC until week six, the Fall 2017 cohort had had a lot of early exposure to the IBC and Zoning Codes. This variation across semester schedules highlights a give and take that occurs from semester to semester that arose from the relationship with a community partner. Depending upon how things played out with the partnering organization, the early weeks of Beth's class were dedicated primarily to the IBC and Zoning Code or to learning functions in Revit and starting one's architectural drawings.

Returning to Table 1: I have yet to describe the Revit Exercise assignments and the five types of assignments I have characterized as "conceptual." Beth had first started with Revit Exercises during the Spring 2016 semester; one I did not observe. The exercises were created by a teaching assistant and were added because that student cohort was, according to Beth, "very, very, very vocal about Revit" and the struggles they were having with it. Beth generally categorized the Revit Exercises as "busy work" and did not seem to want to assign them unless there was student demand. Melanie, Beth's Spring 2018 teaching assistant, was instrumental in getting the Revit Exercises added back to the class. Melanie reportedly felt that she and her peers could have benefitted from these assignments when they took the class in Fall 2017. These comments serve as examples of how students directly influenced Beth and how she determined course design from semester to semester.

By the time I had returned to acting as a participant observer during Fall 2017 and Spring 2018, the conceptual work completed for the class had become more intensive than in Fall 2015 (more on this below). This conceptual work was epitomized by students' *design concepts.* These design concepts were themes that students identified as being inspirational or as guiding their design process. Some examples include: *community*, *puzzles*, *evergreen*, *revival*, *hope*, *life source*, *playground*, and *rainbow*. When discussing design concepts in Fall 2017, Beth explained that she expected the students to be able to describe how their concept is "present in every view of [their] design." During Spring 2018, she also connected the design concept to what she called the "heart" of the design and encouraged students not to get bogged down in the "technical" aspects of their designs. In an interview, Beth expanded upon the design concept and connected it to how a designer puts him/herself into their designs. I witnessed many instances of how powerful these design concepts could be.

Throughout this thesis, I explore how these design concepts and the life experiences of students are etched into their architectural drawings. I also show that, just as Beth thought about them, for several students these design concepts were quite personalized, meaning that students had wrapped up a lot of their own experiences and values into these concepts.

Beyond the design concepts, other conceptual work was done through what Beth called a "Digital Story," in Fall 2017 and Spring 2018, and additionally through "Mind Mapping" in the latter semester. Beth had reportedly learned about digital storytelling[32] through a colleague at IUPUI's Center for Service and Learning. For her class, Beth wanted

[32] More on digital storytelling can be found at https://csl.iupui.edu/resources-support/assessment-resources/storytelling/index.html (accessed 10 May 2021).

to use Digital Storytelling as another mode of student reflection on the processes of designing with a client. In their digital stories, students were required to reflect upon the semester and describe their design concepts, their designs, and what they had learned. Beth also reported that she saw digital stories as another artifact that might be useful to the client.

While digital stories were used as a summative reflection, mind mapping was more formative in that it helped students to begin to formulate their design concepts. Figure 2 shows a mind map created by Neil, a student in the Spring 2018 semester. In his mind map, Neil included sketches of the exterior of KI's building (left center), as well as sketches of some of his design ideas (center) that addressed specific requests of KI personnel. Also of note, Neil included a concept statement in the lower left-hand corner and eleven key words

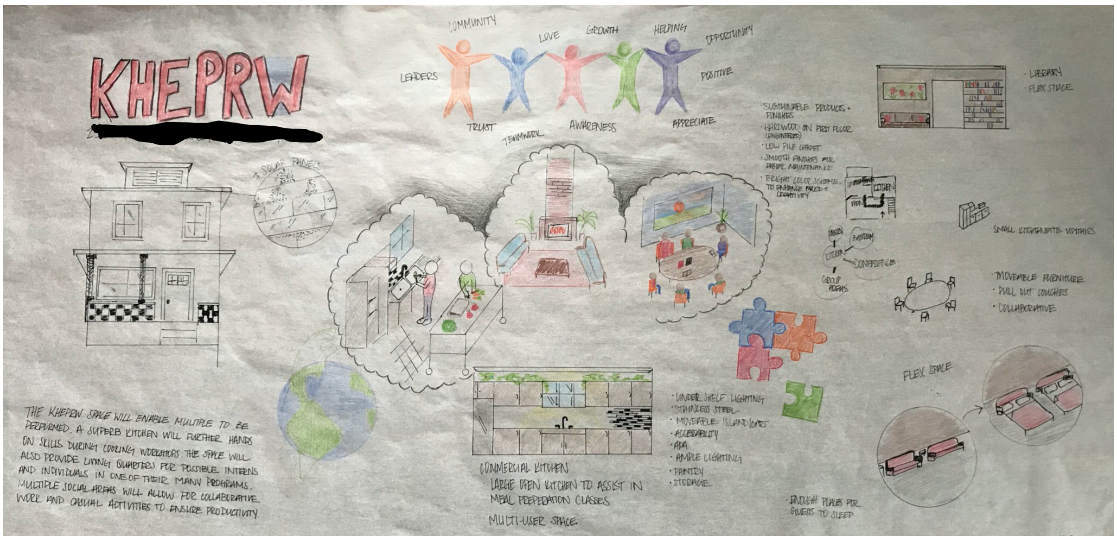


Figure 2: Neil's mind map

(top center) that stood out to him about the mission and vision of KI. While Beth reported being aware of mind mapping prior to the Spring 2018 semester, she said she had never previously used it in her classes. Inspired by both a colleague in her department and one of the Spring 2018 students – Annie, who had recently completed a mind map for a furniture design class – Beth decided to experiment with mind maps. Beth also felt that KI in particular would love to see the students' thought processes. She was right. Paulette absolutely gushed over the mind maps during the students' Interim Presentations.

Students

Each student that participated in this study was majoring in Interior Design. The students in each offering of the *Commercial Construction* course were in their second year of post-secondary study. In my three semesters of data collection, Beth's course had 35

registered students. I worked with a total of 32 of them since three did not consent to participate in my study. Of the 32 students, 28 were female; and, of those 28, two were Latina, two were Middle Eastern, and one was South Asian – the remaining 23 were of European descent. One of the four male students was Latino, while the other three were of European descent. Given this profile of the student participants, it should be unsurprising that many of the students whose experiences and designs are specifically highlighted in this thesis are women, particularly those of European descent (Sasha, Melanie, Lindsay, Carmen, Scarlett, Dakota, and Annie). However, I have also written extensively about the two women of Middle Eastern descent (Amira and Esen), as well as one Latina (Gabriela) and the one woman of South Asian descent (Baheera). Two of the men (Jakub and Neil) also feature in the coming chapters, but mostly I document details about their female peers.

Specific information about each of these students is given in later chapters when it becomes relevant. As I did with the opening vignette on Gabriela, I use much of this thesis to describe key experiences from the life histories of some students. I do that because it enables me to offer insight into how and why they made particular design choices.

My student interlocutors had a diversity of experiences, interests, and values that they shared with me. At times, this took our conversations to rather dark places, and I do not shy away from going to some of those places, as trauma and hardship are part of many of their stories. Without their courageous speech, their openness to my presence in the classroom, and their commitment to including me in their design processes, it would have been impossible for me to substantiate the arguments I present in this thesis. I am deeply indebted to each of them.

At this point, I need to briefly address the research ethics of this project.[33] When I recruited students to participate in this study, I needed to do so in a way, as required by IRB, that provided students with opportunities to give consent and reassurance that their participation in this study (or lack thereof) would remain unknown to Beth, given the instructor-student power relationship. I recruited students on the first day of class. During that first meeting, Beth would leave the room for about 15 minutes while I explained the study to all the students and gave each of them a study information sheet and a written consent form to sign. By signing the consent forms, students were agreeing to my recording fieldnotes

[33] As a PhD student at the University of Cape Town, I presented my research proposal in March 2017 and was granted ethical clearance by the ethics review committee (application # EARC2017-01). Given that I was also an employee of IUPUI, conducting research with IUPUI students, I needed to submit an Internal Review Board (IRB) application for Indiana University review. My IRB application (#1508652556) was approved as "Exempt" on September 4, 2015.

about class experiences and my interactions with them, as well as to being recorded during interviews and to consenting to my accessing their course artifacts.

All but three students consented to participate in the project. I spoke to each of these students and told them that I would still interact with them in class at times; however, when I did so, I would not record any notes about our interactions. I explained that this approach would be undertaken to ensure that Beth was unable to determine who was and was not participating in my research. I assured these three students that I would also not access their course artifacts or try to arrange interviews with them. All three found this arrangement suitable.

Methods

This study was conducted as part of my job as a Research Associate in IUPUI's STEM Education Innovation and Research Institute (SEIRI). In this position, I design and conduct research and evaluation projects on STEM (Science, Technology, Engineering, and Mathematics) Education topics/programs. Additionally, I collaborate with other IUPUI faculty to construct grant proposals to fund research/evaluation projects. My appointment requires neither teaching responsibilities nor that I should promote any particular pedagogy. To be clear, I did not actively participate in the *Commercial Construction* course's instructional design or in assigning student grades. I did, however, recommend KI and Big Car to Beth. That said, I have no formal association with the community partners although I had previously interacted personally with their personnel at a couple of community organizing meetings.

For this doctoral project, I designed and conducted particular research methods to trace the relationships, interdependencies, and affective forces of human and more-than-human actants – their credits and debts – across the iterations of student architectural designs. I have briefly demonstrated this in the vignette above. Although in a different context, I also explored the circulation of credits and debts by tracking the changes, and the causes of those changes, in the design of Beth's course from semester to semester. By analyzing these design artifacts, whether they detail students' architectural drawings or the constitution of Beth's course assessments, it is possible to first identify what changes actually occurred and then to determine the subtle causes (the "silent things" or "silenced relations" that I am interested in locating) of those changes. Throughout, I have sought to uncover the relationships that flow and exert influence throughout the design process and to inquire how these relationships

suggest expressions of ethical life that are concealed or taken for granted. Which expressions of ethical life are captured by capitalism? Which are not? What does the processive actualization of a design reveal about an otherwise – a mode of becoming not entirely consumed by the production of neoliberal subjects (i.e., *homo economicus*) and capitalist modes of valuation? How, if at all, were my student interlocutors simultaneously both creators of new, ethical and aesthetic forms of subjectivity and reproducers of *homo economicus*?

In this section, I explain the methods by which I sought to answer these questions. While I do not regard my research as exemplifying Actor Network Theory (ANT), I do draw inspiration from that source. Simply put, I am intrigued at the possibilities that may flow from my efforts, as Latour (2005: 179) puts it, to "follow the connections, 'follow the actors themselves.'" By doing so, I aim to interrogate the iterations of students' architectural designs as maps of circulating relationships. In addition, I consider how, if at all, ethical thought and practice – including the sense-making work done by students – pertain to the relational interactions that constitute such maps.

In order to uncover the relationships influencing the lines of students' architectural drawings, it has been necessary to have a research design that provides space for students to ascribe meaning to their designs. Here, I find another connection between my research and ANT. Latour (2005: 23) states:

> It's as if we were saying to the actors: 'We won't try to discipline you, to make you fit into our categories; we will let you deploy your own worlds, and only later will we ask you to explain how you came about settling them.' The task of defining and ordering the social should be left to the actors themselves, not taken up by the analyst.

In a general sense, this extended quote captures much of what I tried to do with my research methods. While I, of course, could never enter an interaction without my theoretical convictions and biases, I strove to restrain myself from prematurely trying to explain and categorize why students designed what they designed. It was by letting them "deploy their own worlds" (i.e., create designs) and then asking them to explain how they created those "worlds" that I have sought to trace the relationships circulating as students learned about and legitimately and peripherally participated in – à la Lave and Wenger (1991) – design

processes. It was only after learning of their explanations and the complex relationships contributing to their design creation that I began to be able to unpack the subtle ways that capitalist modernity and potential alternatives to it were present within the designs.

But I am getting ahead of myself – how does one follow the connections within these designs, these maps of circulating relationships? I argue that it cannot be done without triangulating multiple types of data. Since this thesis is based on an ethnographic research project, I am concerned almost exclusively with types of qualitative data.

Participant Observation

Participant observation was a key method. The participant element most often took the form of my attempts to learn how to create architectural documents using Revit software while collaborating with students and considering the reported wants and needs of the course's client/community partner. Following DeWalt and DeWalt (2002: 20), I practiced a kind of "active participation" as opposed to characteristically more distant or hands-off approaches.

My participation in the courses as a "student" of architecture and interior design was intended to enable me to gain insight into the implicit ethics embedded in the learning of design processes and how, if at all, students practiced and even grew their ethical capacities.[34] My own design experiences in the courses gave me insight into how students negotiated the exigencies of integrating the learning technical content with caring for client desires and meeting the expectations of professional practice, including the proper utilization of both Zoning Code and the IBC. As stated earlier, students in these courses carried heavy loads which I could not carry in exactly the same way due to the needs of my research project. That said, I experienced enough to recognize the intensive technical challenges of the course, the testing of personal and intellectual limits, and how students filtered their design work through their pasts into the present – all for imagined futures.

Throughout the three semesters, I wrote hundreds of pages of field notes containing much of what I observed and also reflections on my own feelings about what I was experiencing in the class and the relationships I was co-creating. My notes contain, for example, detailed descriptions of many of Beth's Revit demonstrations; interactions between myself and students as we puzzled over how to calculate allowable area increase via the IBC; how to design a roof in Revit; and encounters between students and KI and Big Car

[34] My observation protocol is located in Appendix A.

personnel. When I diarized my own feelings, I most often wrote about how overwhelming it felt to try to learn skills in a discipline with which I had no previous experience.

With students across the cohorts, I found that building rapport and a common language for our interactions occurred with relative ease as we strove to learn the course content and skills and as we shared the struggles we encountered in pursuit of our respective goals. It seemed, at times, that my willingness to share anxieties and my reflections on them helped me to connect to the students: my opening up to them seemed to empower them to open up to me.

For example: during the Fall 2017 semester, I documented my anxiety around having just become a parent, with my spouse, of three adopted siblings, and how I would combine parenthood with my research and my full-time job. I knew that a couple of that semester's students were parents, and I wondered how they were able to do all of the work for the course alongside the work required for four other classes and to be parents.

Janis, a relatively new mother of a barely one year old son, and I bonded over this issue. She said it was necessary that both she and her spouse work and that she wanted what she called "job satisfaction" from her work (see Chapter 4). Her decision to pursue a degree in Interior Design at IUPUI stemmed from that desire. Yet, the degree program kept her very busy, and she now missed spending time with her child. Though unintended, I found that my willingness to be candid with Janis about my uncertainties and anxieties led to conversations in which she shared her dreams and worries with me.

Similar interactions I had with other students helped me to see how the circulation of relationships within economies of neoliberal capitalism (i.e., both spouses must work to make ends meet; pursuit of "job satisfaction" by being entrepreneurial with one's specialized labor power) affect, and are affected by, economies of intimacy (i.e., private interactions and care between oneself and one's loved ones).

Life History Interviews

I conducted life history interviews (60-90 minutes in duration) with students from each semester.[35] They were with four students in Fall 2015, eight in Fall 2017, and six in

[35] The life history and follow-up interview protocols are in Appendix B. Most students participated in two total interviews (occasionally three) but, due to scheduling conflicts, some students in the Fall 2017 and Spring 2018 semesters only participated in one. I did not interview every student in the Fall 2015 semester; rather, it was through my experimentation with the interviews conducted during that semester that I came to formulate the overall method described here. For example, during the Fall 2015 semester, I began experimenting with the idea of exploring with students the transformation of their floor plans throughout the duration of the course.

Spring 2018. When scheduling for a first interview fell through, I typically did an abridged version of the life history interview at the beginning of the second interview (see below). Life history interviews helped me to gain insight into how early experiences shaped each student's educational trajectory and to identify individual student's values. By knowing what they valued and why, I was able later to inquire into how their values and past experiences influenced their design work.

Course Submissions as Design Artifacts

I gathered and analyzed each student's course submissions. Combing through each student's *journal submissions*, I identified themes presented in each entry. That enabled me to examine how students were approaching their interactions with their client, how they configured their design concept, and how they interpreted and applied "client" feedback.

During my analysis of each student's various iterations of the floor plans they designed, I examined every version (each including at least two floors) and identified changes between one version and the next. That included paying very close attention to changes in the design's lines between iterations.

I also spent time with students' Code Studies to gain insight into how the IBC was represented in their floorplans. During the Spring 2018 semester, I identified themes present within mind maps. For the Fall 2017 and Spring 2018 cohorts, I also reviewed the digital stories that the course instructor, Beth, had required of students (see above), to obtain additional information on how students were thinking about and rationalizing their design choices.

Looking at these artifacts together, allowed me also to take notice of how students practiced "improvisation;" or, in other words, how students "respond[ed] with precision to the ever-changing circumstances" (Gatt & Ingold, 2013: 145). Such improvisation is necessary when outcomes are uncertain and one is forced to deal in potentialities and possible futures, which are at least made partially concrete within a design artifact. As Halse (2013: 194) aptly points out, design artifacts, while imagining possible futures, also express "moments of becoming" where the designer's "concerns and aspirations" are projected upon them. Given this theoretical configuration of design artifacts, it becomes possible for a design anthropologist to participate in the co-creation of artifacts that "allow participants to *revitalize their pasts*, *reflect upon the present*, and *extrapolate into possible futures*" (ibid., emphasis added). How students did these three italicized actions is of central concern to my methods, discussion of which culminates in the next subsection.

Final Interview – Unpacking Designs

Informed by Medway's and Clark's (2003) description of a virtual building (i.e., a design) as a palimpsest, Lloyd (2009) argues that a design is "a fluid entity, an agglomeration of thoughts, agreements, and partial visualizations." He goes on to suggest that whatever agreement a design may represent is merely provisional. For Lloyd, a design is thus what I would call a becoming aggregation, constituted by prehended components (i.e., thoughts, agreements, visualizations) that are neither static nor essential. In other words, a design – or perhaps the geometric plane upon which a floor plan is designed – is in some sense like a porous and malleable receptacle containing, absorbing, and changing shape with receipt of each of an emerging multiplicity of components born from countless relationships. It is from that understanding of a design that I wanted to craft a method that enables a thorough unpacking of those multiple shifting components and how each relates to and affects the others.

In addition to life history interviews, I interviewed each student who had consented to participate in the study – save one[36] – at the end of the respective semesters. This was regardless of whether a student had participated in the life history interview.

The structuring of this final interview was inspired by a story detailed by Donald Schön (1987: 142-154) in his book about teaching reflexivity to practitioners. There he describes a long conversation between two professional architects, Dani and Michal, about Michal's architectural designs created eight years prior when Dani was Michal's teacher. Their narrative illustrates a conversational method where each reflects upon their examination of Michal's architectural drawings (for a field school) and their inquiries into the reasoning behind the design choices Michal had made. Of particular interest to the method I have developed here, Dani and Michal at one point discuss in detail how Michal's design is deeply informed by the qualities (i.e., design concept) she would like to see in her design and how her initial iteration did not communicate these qualities. For Schön, detailing this conversation was specifically about describing an educational scenario in which a teacher supports his student in the identification of what she would like to design, and then encourages her to experimentally realize the qualities she wants in her design. This was a conversation Schön observed; it did not arise through a method he had designed. Rather, his description was there to service his inquiry into how to educate reflective practitioners.

[36] The result of a scheduling conflict.

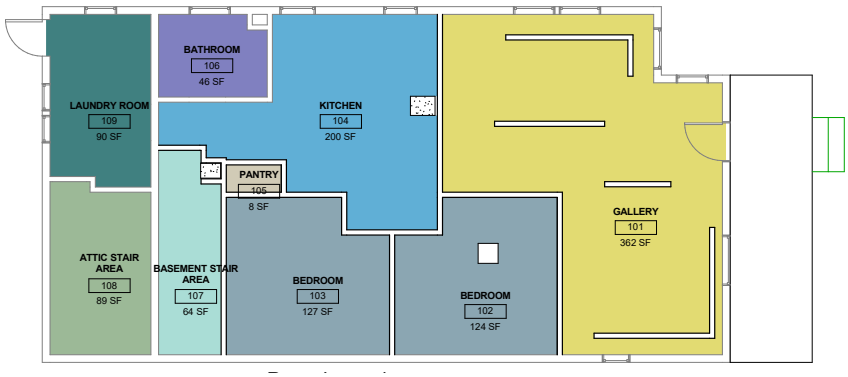
Given that I had a different purpose in my research, I found it useful to ask myself: "how can I operationalize what underlies this informal conversation between Dani and Michal into a more systematic method to collect descriptive data on the meanings of a design's lines?"

For the final interview, I created a personalized interview protocol for each student that facilitated the student's and my co-examination of the trajectory of their designs across the semester. This was a time-intensive process. To create these personalized interviews, I had to triangulate all the data I had gathered through the methods previously described. This means that I had (1) to review my field notes for documentation of events in which the student in question was involved; (2) if applicable, to review the life history interview recording/transcript; (3) to analyze the student's journal entries, code studies, mind maps, and digital stories (if the interview occurred after digital stories were due); and (4) to map my findings from the analysis of each of these data types, along with my questions designed to build upon these findings, in relation to each student's floor plan iterations from color plan to final construction documents. Since this brief description of my method offers a very high-level view of the process, it might help to offer a specific example of how the process actually played out. I use my final interview with Amira (Fall 2017 cohort) as that example.

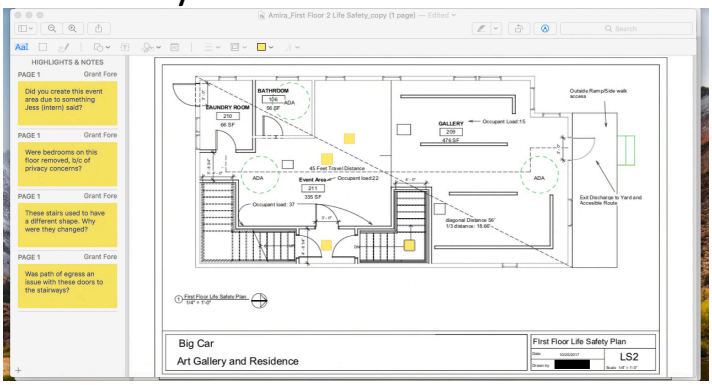
As I constructed Amira's final interview protocol, I first opened the files (using the *Preview* application on my MacBook Pro) for each of her floor plans, from the color plan to the final construction documents. I then created multiple desktops and assigned each design iteration to a desktop in chronological order.[37] This enabled me to easily "swipe" back and forth between Amira's design iterations on their respective desktops. As I swiped between iterations, I noted subtle and not-so-subtle differences between the floor plans. Whenever I located these differences, I added a "Note" box, in which I typed a question inquiring about the reasons for these differences. At times, these notes also included brief descriptions or quotes from other data sources (e.g., life history interviews, other course submissions, fieldnotes), which enabled me to make connections between Amira's design and her personal history, her stated values, and her design concept(s). When it came time for the final interview, I would open all of Amira's designs with my annotations, and we would swipe through them together as I asked the questions and prompts recorded in my notes.

[37] This is similar to how Ingold (2007) characterized – following Gunn (2002: 324-327) – studying the history of architectural designs, particularly those created with design technologies (e.g., CAD, Revit). Ingold (2007: 167) states that "you can only reconstruct the history of a CAD process by stacking a whole pile of sheets in genealogical sequence." In a way, this is what I did.

Color Plan



Life Safety Plan



Final Construction Docs

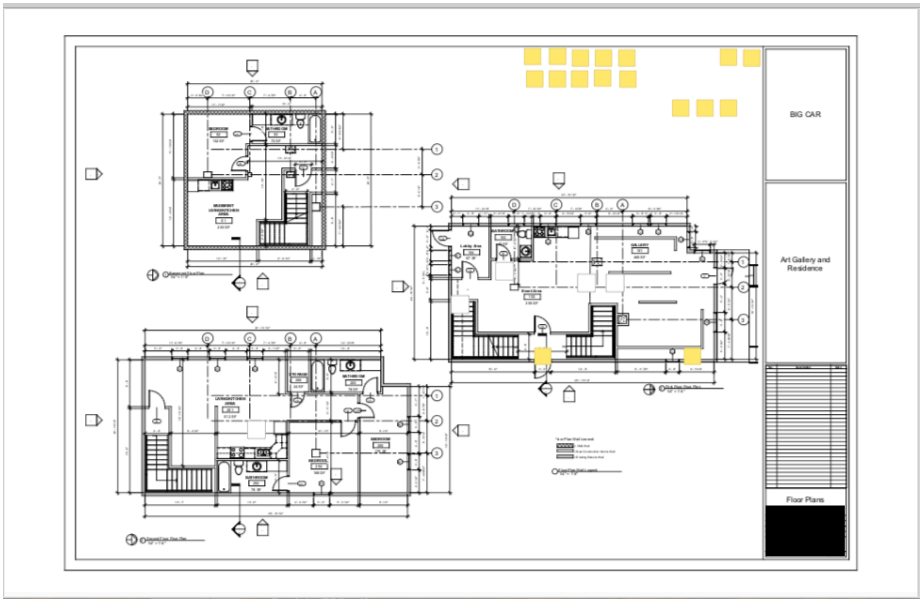


Figure 3: Illustration of the process by which students and I co-interrogated their designs during their final interviews.

Figure 3 illustrates a portion of this overall process. Amira's "Color Plan" for the first floor of Big Car's building is primarily included as a baseline. Notice how in the Life Safety Plan there has been substantial changes – where there were once bedrooms, there is now a double staircase; where there was once a kitchen, there is now a large "event area." The yellow notes I added to the life safety plan inquired into these changes.

When I came to the final construction documents, I identified Amira's additional changes to her floor plan for the first floor and created notes for questions about these changes. The several yellow notes included at the top of final construction documents included several questions and prompts that referred back to personal and conceptual elements. Since I did not know how these personal or conceptual references influenced the lines of the Amira's floor plan, I was unable to map them directly onto the floor plan; rather, identifying how such elements mapped to the floor plan was precisely what my noted questions intended to elucidate. The exact content of these questions will be unclear to the reader at this point, because I have yet to describe the key details from Amira's life (see Chapters 3 and 4) that inspired the questions. Furthermore, not all of the key details referred to in the questions ended up being written about in this thesis. For now, let it suffice to say that the cluster of notes at the top of the final construction documents inquired into (1) how Amira's design concept informed her floor plans; (2) how her complex relationships with her mother, father, and brother influenced her experiences of learning to design; (3) how the recent death of her best friend influenced her design experiences; (4) how her desire to help refugees (like her half-siblings, who at the time had fled Syria and were in German refugee camps) informed her experiences of learning design; and (5) how her moral and religious values influenced her design. It was inquiries such as these that facilitated my identification and description of an otherwise.

Chapter Outline

The relations of design are the "silent things" to which I refer in this chapter's subtitle and epigrams. I seek to explore this silence – this concealment and devaluation – in the following chapters where I consider the diverse influences on students' design process and on how they learn to cognize and listen to the diversity of those often-unheard influences upon them. Silence refers to the many taken-for-granted relations of design that often go unperceived and unvalued. Such relationships haunt every process of what I call becoming, a concept I develop and utilize in the chapters below.

An important pedagogical goal in ethics education must be to encourage students to work reflectively in order to grasp such silences, to become critically aware of them, and to justly value them. With enough effort, one must ask, could students and their instructors learn how to listen to silence and to name the relationships that dwell within it? Would silence then ring out like a cacophony of voices fighting to be heard and harmonized? Listening, acknowledging, and harmonizing are necessary for becoming to be ethical. Silent things are not silent by their very nature; they are made silent by concealing and devaluing their relational contributions, or by seeing them merely as silent *things* instead of as *silenced relations*.

Moving forward, I aim to describe the complex relations that contributed to the constitution of student designs. In doing this, I examine what I call design actants and their affective forces (see Chapter 2). I then describe how students and their designs were affected by their relationships with such design actants (Chapters 2-5) and how, within these relations, students both reproduced the status quo of the interior design profession (Chapters 3 and 4) and, at times, experimented with other modes of creation and valuation (Chapter 5). Such descriptions required me to interrogate how the design of the course and its situatedness in a neoliberal university, undergirded by the beliefs and assumptions of capitalist modernity, affected how students made meaning of their design experiences (see Chapters 3 and 4), as well as how they, at times, subverted such beliefs and assumptions (see Chapter 5). By interrogating student design processes in these ways, I was able to identify a set of theoretical implications (see Chapter 6) that suggest the hauntedness of designs and how such hauntings contribute to the "ethical fetishization" (see Bryant, 2011) of design through which creative relations are concealed and devalued. In doing all of this, I employ the *Commercial Construction* course as a springboard to ask critical questions about the (re)design of ethics education. In the closing chapter, I detail an alternative approach to ethics education (i.e., ethical becoming) based upon my ethnographic evidence.

Interrupting my train of thought
Lines of longitude and latitude
Define and refine
My altitude
-Wire, Map Ref. 41°N 93°W

These pains you feel are messengers.
Listen to them.
-Rumi

Chapter 2

Mapping Relationships and Care: Affective Forces in the Making of Designs

In this chapter, I offer a detailed case study of a second-year student, Carmen, from the Spring 2018 cohort[38] of the Commercial Construction course. I do that as a means to establish this thesis' main themes, as elaborated in subsequent chapters. As introduced in chapter 1, my interest here is in mapping the relationships through which student design iterations were actualized. In other words, I aim to identify what I call *affective forces* and the role they play in the formation of designs and in the constitution of the student as a fluid perpetually becoming subject. I position my conceptualization of affective force within scholarship stemming from Baruch Spinoza's (1677/2000) definition of affect as the capacity of a body "to affect and be affected." I am particularly indebted to – and expound upon below –the mobilization of this concept within Deleuze and Guattari (1987) philosophy and, in turn, that of Brian Massumi (1987; 2015) whose work I find especially salient. Identifying, describing, and examining these affective forces, both peripheral to and within student designs, enables me to explore the relations of design and how Carmen and her peers came to value those relations.

[38] Spring 2018 was my final semester of participant observation. Upon reflection, I concluded that my data from this semester was the most fruitful and that Carmen, amongst others, was an exemplary informant. I think much of this was due to my having had two previous semesters of becoming a participant observer. I cannot say that my method was perfected, but I certainly had a better understanding of what to look for and was, therefore, able to streamline my inquiry.

In part, I have organized this chapter according to the layout of the Commercial Construction course. For example, the unfolding of the chapter aligns with the order in which the Spring 2018 students' assignments were due. This means that I chronologically examine Carmen's color plans, her interim presentation plans, her life safety plans, her "final" floor plans, and her final construction documents.[39] That said, preceding and interspersed between my analysis of Carmen's designs, I present narratives regarding her life, as well as engaging with theoretical works. The personal narratives I describe are designed also to introduce Carmen's personality and values alongside my detailing of the unfolding process of her design. I use such an approach to enable me to deepen my interpretation of how Carmen's unique subjectivity informed how she designed her floor plans. More specifically, my alternating between personal and design-process narratives creates interesting juxtapositions that steadily reveal the presence and affective force of Carmen's experiential history upon the planes of her floor plan designs.

Carmen and Saint Brigid

Carmen was confirmed in the Catholic Church at the request of her mother and godmother (her aunt). She chose the confirmation name Brigid, after Saint Brigid of Ireland. Being ignorant about St. Brigid, I asked Carmen about her, hoping to gather why she had selected the Saint "to follow throughout [her] confirmation journey." She could not tell me anything about St. Brigid. She said that many Saints had been wicked and then later found God. She speculated that perhaps St. Brigid had at one time been a prostitute.

Having conducted ethnographic research with a Catholic NGO in South Africa (Fore, 2015), I have some familiarity with Catholicism. My familiarity, however, does not go far beyond a bit of Liberation Theology, a few encyclicals, and some selections from the Social Teachings of the Catholic Church. I was (and still am) relatively unfamiliar with Saints. So, I looked up Brigid and found the Hearth Keeper Prayer:

> …The Mantle of Brigid about us,
> The Memory of Brigid within us,
> The Protection of Brigid keeping us
> From harm, from ignorance, from heartlessness…

[39] With only one exception, I focus entirely on Carmen's designs for the first- and second-floors. I do this because Carmen did not make any profound changes to the basement plan from one design iteration to the next.

When I read this passage and about Brigid's generosity to the poor, Carmen came to mind.[40] Though she reported having gone through the Confirmation Rite due to a sense of familial obligation, for me she dwelled in the prayer's lines. St. Brigid was many things – a prostitute was not one of them. If "protection…from harm, from ignorance, from heartlessness" is something for which people call on St. Brigid, Carmen had more in common with Brigid than she knew. The name suited her.

Carmen the Boy Scout

On the first day of class, as was typical, Beth went around the room giving each student the opportunity to both introduce and share something interesting about themselves. When Carmen started speaking, she appeared very bubbly and enthusiastic as she shared with the class her passion for working with The Boy Scouts of America as a Troop Leader for a group of boys (ages 5-10-years-old) from socio-economically depressed areas of Indianapolis. She described most of her scouts as students in the Indianapolis Public School system and as "African-American" – a population very similar to many of those served by the students' semester-long client, the Kheprw Institute (KI). Her troop met weekly throughout the academic year after completion of the children's school day.

During our two extended interviews, Carmen expanded upon her work with the Boy Scouts and described her history of volunteerism, something prioritized by her family. With her family, she was involved with doing charity work with Riley's Children's Hospital in Indianapolis. She had a close friend growing up that was a "Riley Kid," meaning that her friend was a patient with a significant health issue at Indianapolis' Riley Children's Hospital. She was also active as a YMCA camp counselor.

Carmen had been introduced to the Boy Scouts' program by one of her IUPUI Sorority sisters. At the time, she stated, she had not been aware that women could serve as Boy Scout Troop Leaders; but, she reported with a smile, she is now "proud to be a Boy Scout." She spoke of her scouts with great fondness and articulated that she wanted the best for them, giving them as many opportunities to grow and develop as she could. These opportunities were important because, according to Carmen, her scouts had "bad home lives." Carmen portrayed the Boy Scout program as a safe place where her scouts temporarily

[40] St Brigid is also the patroness saint of Ireland and, from 2023, her saint's day (1 February) will become the first official public holiday in the Republic of Ireland named for a woman.

escaped from some of the everyday stresses and precarity of their lives. The role she imagined the Boy Scouts playing in their lives had many commonalities with the role that the arts had played in her life (discussed below). Whether in art or with the Boy Scouts, relief could be attained, a balm applied to heal and possibly to grow.

Initial Meetings with KI

During Week 2 of the course, the students had their first meeting with KI personnel. As with previous semesters, this initial meeting's purpose was for students to speak face-to-face with their client and to assess the client's architectural and interior design needs, while doing so in a "professional" way.[41] Beth and I both arrived a little early for the afternoon meeting. As we walked to the front door of KI's building together, we wondered out loud if anyone from KI had arrived yet. In the Fall 2015 semester, we had had a couple of meetings for which KI staff arrived late, so we were both a little concerned that with no KI personnel there we would be starting late. Entering the building, we found many students waiting in the lobby. With no one from KI there, Beth and I led the students over to the open meeting area where we had previously met with Imhotep, Paulette and other KI personnel during the Fall 2015 semester. Students scattered and self-selected seats at one of seven large, circular tables. The building was owned by a neighboring church from which KI rented several offices at that time. KI also had access to a kitchen and the common area. Other renters used spaces in the building, including a children's day care and a barber shop.

Paulette soon arrived for the meeting and while we waited for Imhotep and four other KI members, she stressed the importance of having a "Board of Health" kitchen. By that she meant that she believed KI needed a kitchen large enough to provide culinary training and catering services. Not long after Paulette started describing her kitchen needs, Imhotep and the others joined us, introduced themselves, and asked the students to introduce themselves. Imhotep then began to describe a current project – "Communities Creating Change: Our Choice, Our Voice" (CCC)[42] – for which they welcomed ideas from students regarding the remodeling/renovation of a neighborhood home (i.e., the same house that the Fall 2015 cohort had created designs for) that would be the main project hub. The CCC project was crowdfunded and included $30,000 matching funds from Indiana Housing and Community Development Authority (IHCDA). The money raised was to be used for

[41] The course's treatment of "professionalism" is explored in Chapters 3, 4, and 6.
[42] See https://www.nuvo.net/news/crowdfunding-campaign-aims-to-fight-food-injustice/article_365b0578-d609-11e7-bda5-bff56abfa72a.html for a brief press release about this project.

remodeling/renovating the house and hiring a program manager. According to Imhotep, the purpose of the CCC project was to make "a space to experiment with community food production, distribution, and training." The training he spoke of referred to a culinary program that would educate people who had recently been released from prison.

In addition to designing a new kitchen as the first-floor centerpiece, KI personnel also specified that a library and "multi-use" meeting spaces should be included. They indicated too that the house needed a separation between "public/private" uses. There was consensus amongst them that this could be created through distinct uses for each story of the house. For example, on the second floor, Imhotep and Paulette stressed, there should be ample "dormitory" space (2-3 rooms) with a kitchen/kitchenette and lounge space. After I made a request for him to do so, Imhotep also explained KI's symbol, which was a scarab beetle. He described how the scarab, like KI, "takes what's present and creates opportunities with what's available."

During the next class meeting (Week 2), Beth led the class in a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis of KI and its project, discussed the challenges of working with clients, and facilitated the identification of what needed to be designed and what "themes" might be present. First, on the large white board in the classroom, the students contributed to a shared list of items for the SWOT analysis. The items listed under the "Strengths" and "Opportunities" are most relevant to this chapter because Carmen reportedly valued a number of them, namely "optimistic," "inclusive," and "community involvement."

When discussing the challenges of working professionally with clients, Beth stated that she liked working with KI as a course partner. She said that KI personnel "embody a lot of qualities that are representative of clients." On one hand, she explained, at times clients, like KI personnel, may forget meetings and show up late and be unresponsive. On the other hand, she appreciated how KI personnel consistently showed active interest and engaged with the student designers, giving them feedback on their designs and asking probing questions. For Beth, KI was a good partner for the course precisely because students would be able to experience both the challenging as well as the rewarding aspects of working professionally with clients. She also reasserted a point she had made earlier: that, since she wanted this course to model professional practice in an architecture firm, "[I'm] not going to give the answers, because I want you to figure it out."

Beth also facilitated a discussion around what students had noted KI personnel had said needed to be present in their floor plans. They were able to list all the features I have

listed above – including the kitchen, collaborative/multi-use meeting spaces, dorms, and libraries – whilst also delving into necessities (e.g., water closets) and specifics, such as the particular considerations pertinent to the kitchen (e.g., space for food storage, sanitation, refrigerator, ensuring capacity for catering and for teaching). Beth then asked them to describe relevant "themes," which could be of use when completing their "mind-mapping" assignment and creating their "design concepts." Together, students named several themes, including *rebirth, change, transformation, renewal, sustainability, relationships, community, connections, self-enterprise* and *self-reliance.* As explored below, relationships, community, and connections were particularly powerful for Carmen as she created her designs.

In Week 3, the students participated in a site visit, during which they broke into groups to collect the house's dimensions. The class congregated on the porch of KI's property on a chilly January afternoon. As we waited there, I called Paulette; she greeted me warmly, wished me a good morning, and said she would be right over – her home was located across the street. Paulette squeezed past the crowd on the porch, unlocked the door and ushered us all into the house's front room. She then proceeded to take us on a tour of the first and second floors, leaving the basement to be self-toured by Beth and the most adventurous of the students. After the brief tour, the students divided into teams of two or three and began their measurements. One group went to the basement, another focused on the first floor, another took the second floor, and the last group conducted outside measurements.

I floated around between groups, visiting each floor including the damp dark basement, which now, to my surprise, was accessed by a staircase instead of the ladder I had seen during my 2015 tour of the property. The basement's dampness was exacerbated by a water heater with a significant leak. While there, I watched as Beth and one student, Neil, ventured into the dirt-floor crawl space to get a clear view, and take pictures of the house's foundation. Beneath where Paulette suggested putting the kitchen, I looked up to see what supports were in place. I called Beth and Neil over to show them the thin particle boarding that appeared to be supporting the kitchen's wood flooring and asked if the particle board was the likely cause of the kitchen floor's "springiness" and tendency to dip beneath one's weight. Beth confirmed my suspicions adding that particle board was not typically used in such ways. I expressed concern that a "Board of Health" kitchen with industrial appliances might be too heavy for the floor. Beth agreed.

The first-floor group split up in order to collect all of their measurements. Two of the students used a traditional measuring tape while another utilized a laser distance measure. Regardless of floor, students reported struggling with knowing exactly what to measure and

many commented that they had never before collected such extensive measurements. While on the first floor (see Fig. 4), I spoke with another student, Corrine, who half-jokingly lamented feeling "scarred" by the state of the bathroom, which was in a state of disrepair and not particularly clean on that day. As we stood in the kitchen, Corrine and I discussed the state of the flooring where Paulette was thinking the kitchen should be. Drawing on something she had reported learning during a previous course, Corrine stated that "when a house shakes like this one, it is in need of significant structural work to keep it from collapsing." Later, and curious to know if she agreed with Corrine's dire assessment, I reported this comment to Beth. She reported having structural concerns, but disagreed that the house was in danger of collapsing without structural issues being addressed.

As I walked up the stairs to the second floor (see Fig. 4), I greeted Paulette, who had just finished answering questions and providing additional details to the group working there, Carmen amongst them. This floor was a great deal different than when I had seen it in Fall 2015. Dry walling had recently been installed creating a new room. However, a hole remained in the north side floor. As Carmen and her peers collected measurements, she expressed some difficulty with measuring as the walls were not "straight." She also told me about their group's conversation with Paulette where she had said she thought that the new room should be used as a "dorm room," while the established room, across the hall, would make a good lounge.

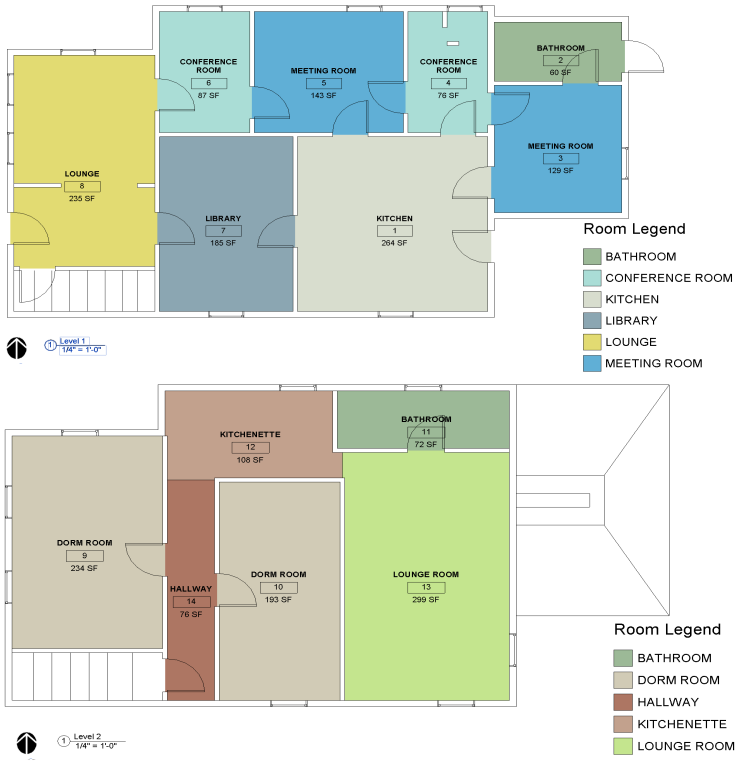


Figure 4: Carmen's first- (top) and second-floor (bottom) color plans. These floor plans closely mirrored the layout of the actual house at the time of the Spring 2018 visit.

Color Plans

Beginning in the latter half of Week 3, and continuing to the beginning of Week 8, Carmen and her peers cultivated their Revit skills and worked on their color plans. Carmen's initial color plans (submitted at the beginning of Week 8), with a few exceptions, mirrored the existing layout of KI's property. She had refrained from removing existing walls from her design, thereby keeping the layout nearly the same as the existing building structure. She explained that that was because she perceived their budget to be tight (~$80,000) and had little confidence that any big change she might propose would align with the International Building Code (IBC), which had yet to be introduced in class.[43]

In his ethnographic study of a firm of UK architects, Yarrow (2019: 128) pointed out that clients "prefigure and configure" designs. That this occurs was evident in Carmen's first floor plans. She included the first-floor kitchen exactly where Paulette had stated that she wanted it, despite in-class conversations pointing out the precarity of placing such a large kitchen on seemingly flimsy flooring. Carmen also included a library for KI's substantial book collection (per Imhotep's request), second-floor dorm rooms for their interns and guests (per Imhotep and Paulette), and a clear public/private distinction between the first and second floors, the latter including a kitchenette (per KI intern Mazie). At this meeting and in the personal moments when she assembled her design, Carmen prehended the interests and desires of her clients. A need for all these inclusions was communicated to the students during the first meeting with KI during Week 2 of the course.

Additionally, Carmen's perception regarding budgetary constraints led her to tell herself: "Let's work with what they already had and then go from there." While Carmen did not explicitly state this connection, her self-talk mimicked KI's philosophy, as identified by Imhotep. Moreover, Carmen reported placing the second-floor bathroom, which included some newly constructed walls, in the northeast corner, because she had identified existing plumbing fixtures there whilst upstairs collecting dimensions during Week 3 of the course. In this case, her interaction with the material structure of the second floor of the building affected her floor-plan design.

[43] Students' budgetary concerns were based upon some misunderstandings. Beth did not require students to include a budget for their designs. Despite Imhotep telling them in the first meeting (Week 2) that "walls can be removed," students were fixated – especially early in the semester – on the approximately $80,000 KI had been awarded through crowdfunding and a match of $30,000 from the Indiana Housing and Community Development Authority (IHCDA). While it was thoughtful for students to consider KI's budgetary constraints and, therefore, to work to avoid proposing an expensive design, it was never something required by Beth or expected by KI personnel.

This description of Carmen's design process begins to highlight how, as Yarrow (2019: 127) found, "clients are made imaginatively present even in the absence of direct interaction." Although Carmen did not have Paulette, Imhotep, or any KI personnel beside her as she created her color plans in Revit, their desires captured her imagination and fed into her color plan design. In other words, there was a force or potency to her experiences interacting with KI personnel around their architectural and interior design needs. These experiences were, in part, the impetus pushing the design choices she made as she worked during and outside of class.

"Shut It Down": Life Experience as Design Actant

Carmen's father's friend had an autistic son, James. Carmen reported that she and her sister had grown up with James and interacted with him often in high school through their volunteer experiences with their school's Best Buddies program. During his senior year, James had had an altercation with a female student, who, said Carmen, had "decided to go at him" and "push his buttons;" being a "bully." Defending James, Carmen characterized his anger in this situation as consistent with how his autism was expressed. Self-control was profoundly difficult when he was angry…once his "button was pushed," it could not be un-pressed. He became enraged and threatened to kill his classmate. Following his threat, the now intimidated student reported James' behavior to school officials. James was forbidden to join the student procession at graduation. To Carmen, and surely to James and his family, this was devastating:

> …that broke my heart, because he didn't know what he was doing, and this girl was just trying to be mean…that was a big accomplishment for him to graduate high school...he wasn't going to get into college. And it's just like that was something you took away from a kid, just because you decided it would be funny.

Carmen could relate to the pain caused by bullying: she said she had herself felt bullied in elementary school and that it was not to be taken lightly. If she ever witnessed it, she said, she would "shut it down immediately." It could not be justified. She admitted that bullies are also hurting, but that converting that hurt into energy directed toward inflicting suffering on

others was always wrong. Carmen had also had to deal with the painful experience of depression and anxiety throughout high school; yet, she said, she "would never want someone to feel that way." Her pain should not be wielded to harm others: "why put that … negativity out into the world?"

As this chapter unfolds, this experience, as well as other personal vignettes about Carmen, are brought to bear on my interpretation of how and why she designed her floor plans as she did. I aim to illustrate how Carmen's experiences with pain and cruelty shaped her desire to include, to protect, and to care for others, as she did for James and the young men in her boy scout troop.

Interim Presentation Plans

With her initial color plans designed and submitted in Week 8, Carmen had one week to prepare for her interim presentation plans (due in Week 9) to KI's staff. Her design changed significantly during that week. The changes appeared to reflect her efforts to manifest the particulars of her one-word design concept (developed in her Week 8 Journal Entry): "community." This concept had gone through a previous iteration on her mind map (see Fig. 5) and, at the time she mapped it, it was intermingled with other themes. In her brief mind map presentation (during Week 7), she had stated that "community," "becoming one,"

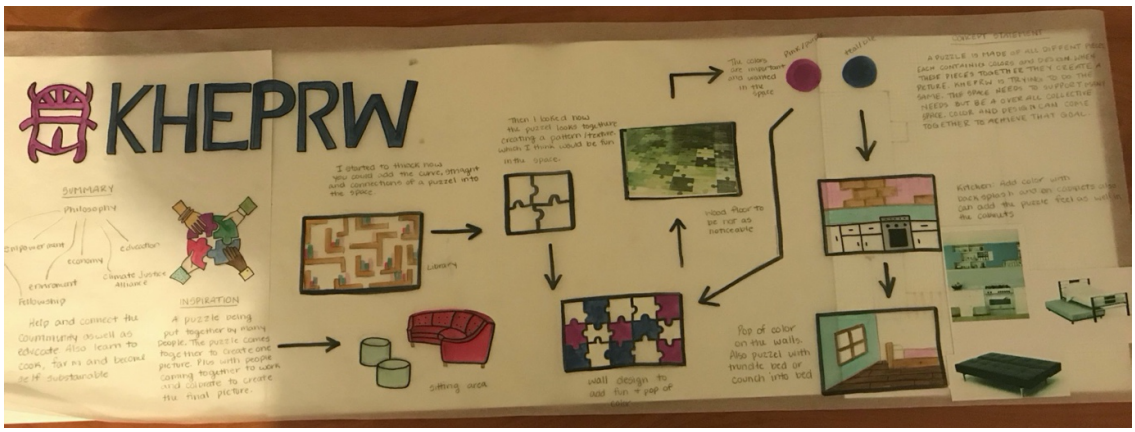


Figure 5: Carmen's mind map

and "sustainability" were important themes she imagined would inspire her developing vision. She also stated that "[jigsaw] puzzle pieces coming together into one" was an image of particular power in her thinking about designing for KI. I explore later in this chapter how this image of a jigsaw puzzle provided a way for Carmen to conceptualize her care and concern for a diverse group of people, in order to prevent harm. Here, I see Carmen's desire to avoid the cruelty of exclusion. Moreover, in her third journal entry (Week 8) regarding her one-word concept she had written:

> Now the question is, how does one incorporate "community" into a space? Well by keeping the space open and inviting will help. So, [a] "no close[d] doors" open concept. Also having spaces for people of the community to come hang and learn. Which I have incorporated lounge rooms for that purpose and meeting rooms for groups to come and work and teach.

Carmen's efforts, in her Week 9 interim presentation plans (see Fig. 6), to make the first-floor plan feel "open and inviting" were evident in her having removed the wall between the "meeting area" and the "conference" room as also most of the hinged doors, thus leaving only open entryways between interior rooms. Her reduction of the "kitchen" space's area, from 264 ft^2 on the color plan to 184 ft^2 on the interim presentation, also spoke to a

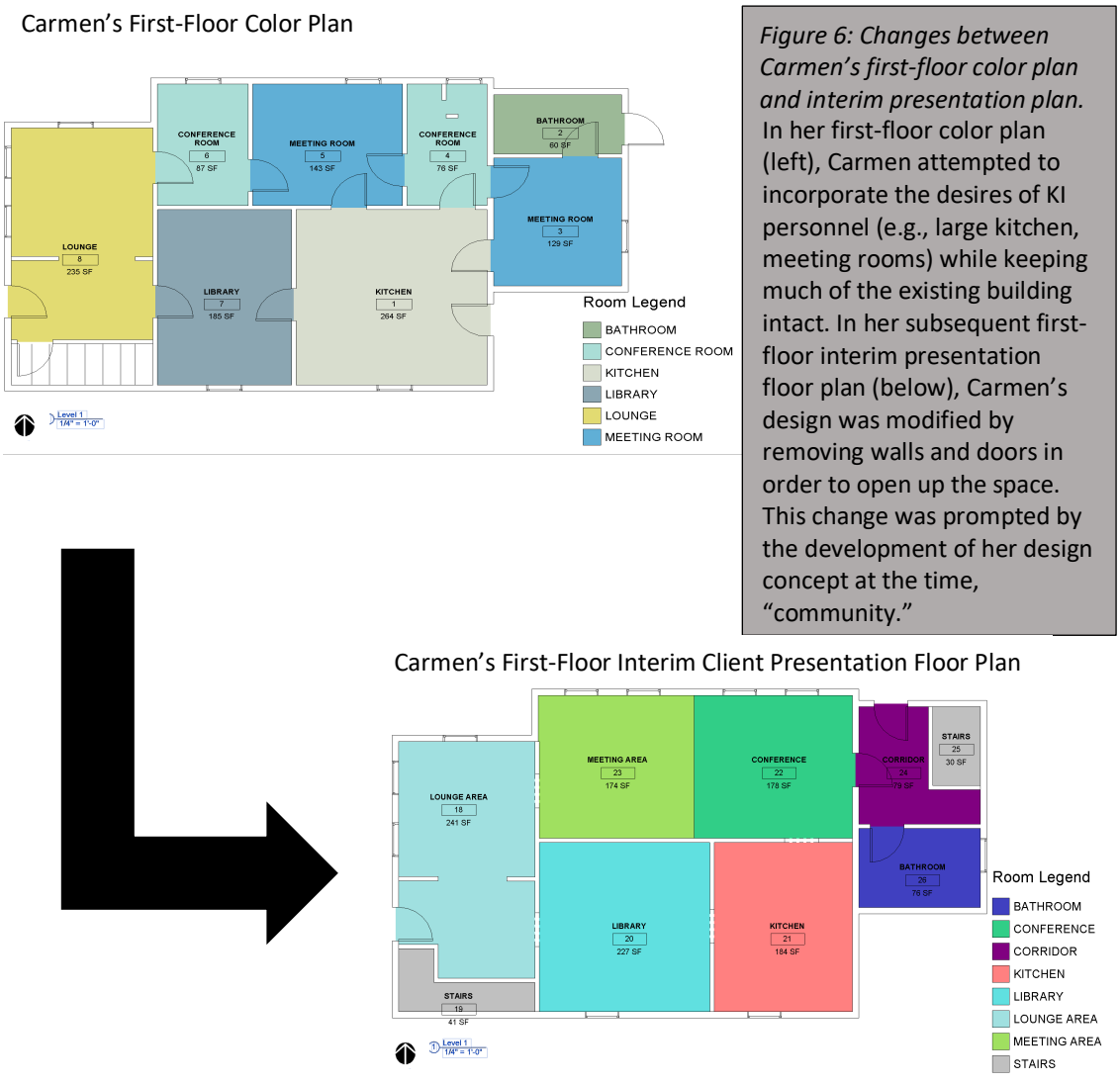


Figure 6: Changes between Carmen's first-floor color plan and interim presentation plan. In her first-floor color plan (left), Carmen attempted to incorporate the desires of KI personnel (e.g., large kitchen, meeting rooms) while keeping much of the existing building intact. In her subsequent first-floor interim presentation floor plan (below), Carmen's design was modified by removing walls and doors in order to open up the space. This change was prompted by the development of her design concept at the time, "community."

privileging of shared public spaces over KI's other significant – and, arguably, core – desire for a large kitchen for teaching.[44] Yet her having joined the "meeting area" and "conference" room did bring in a key piece of KI's organizational history while also embodying her design concept and its call for openness.

> **Carmen**: From what we had talked about, they wanted a place for meeting and conferences, so I decided, why not make one big space for that. So, then you could have the private library and more of a sitting area ["lounge"] and then that whole big space ["meeting area" and "conference"] where they could have their -- um, what is it called? -- their table meetings, or something like that. They said that like twelve of them come in...
> **Grant**: Their founding table?
> **Carmen**: Yeah, the founding table that's what it's called. So, I wanted to have this big area that would be able to suit that many people, and I felt like taking that wall down [walls between conference rooms and meeting rooms on first floor color plan] would create that space [362 ft^2].

Carmen's efforts to secure a space for KI's "Founding Table" speaks to the influence that I had on her design. When the Fall 2015 cohort had worked with KI, Imhotep and Paulette had encouraged the students to try to include space for their 18 foot "Founding Table," around which the first incarnation of their organization had been born. However, during their first meeting with the 2018 cohort, neither Imhotep nor Paulette highlighted the "Founding Table" as something students should to keep in mind while crafting their floor plans. When the class visited KI's property to take measurements of the existing structure, I noticed half of the disassembled "Founding Table" propped up against the inside of the house's north wall and asked Paulette, during a tour of the property, whether they were still interested in including it in the building. She confirmed that they were. What this shows is both that my own prior relational experience with KI had left sufficient impression on me to

[44] In this thesis, I use the imperial system of units, since that was the U.S. standard utilized by the students.

ask what I did, and that my doing so in turn affected the trajectory of Carmen's design as it went through its process of becoming.

In addition to reflecting my impact, the influence of KI staff, and the force of Carmen's own vision, this interim design iteration also displays Carmen's initial negotiation of the International Building Code (IBC). That is evident primarily in her inclusion of an exit from the corridor in the northeast corner of the property. When I asked her why she had included an exit here, she joked, "…because I forgot there was [an existing] door right there [in the kitchen]." After this bit of self-deprecating humor, Carmen elaborated on her rationale behind putting this exit in this "corridor" area:

> **Carmen**: I was able to meet code because, all my doors, they weren't actual doors…they were just openings. Cause this right here was a door so you needed an exit in this space as well.
> **Grant**: Oh, from the conference into the corridor since that is a proper door?
> **Carmen**: Yeah, and these [the other room entries] are just door openings.
> **Grant:** Ok, so [it was] since you had a proper door to the corridor that you needed to add [it].
> **Carmen:** Yeah, cause if you were stuck in there you needed to be able to get out.

Carmen's last statement illustrates Beth's oft-mentioned interpretation of the purpose of the IBC: "mitigating the loss of life." Carmen clearly saw the "corridor" area in her interim presentation first-floor plan as having the potential to violate code and possibly be dangerous for occupants. In fact, despite her concern, the design of the egress door in the corridor in this design iteration was still a code violation given that the door did not flow with the path of egress. Carmen corrected egress issues in later iterations.

Carmen's interim presentation plan's second floor (Fig. 7) shows that she had deleted walls from her design, which, on her earlier color plan, had represented actual walls in KI's building. Within her design of her interim presentation plan's second floor, Carmen also proposed the addition of walls that did not, at the time, exist within the building's material structure. This interim presentation iteration of the second floor retained the dorms and

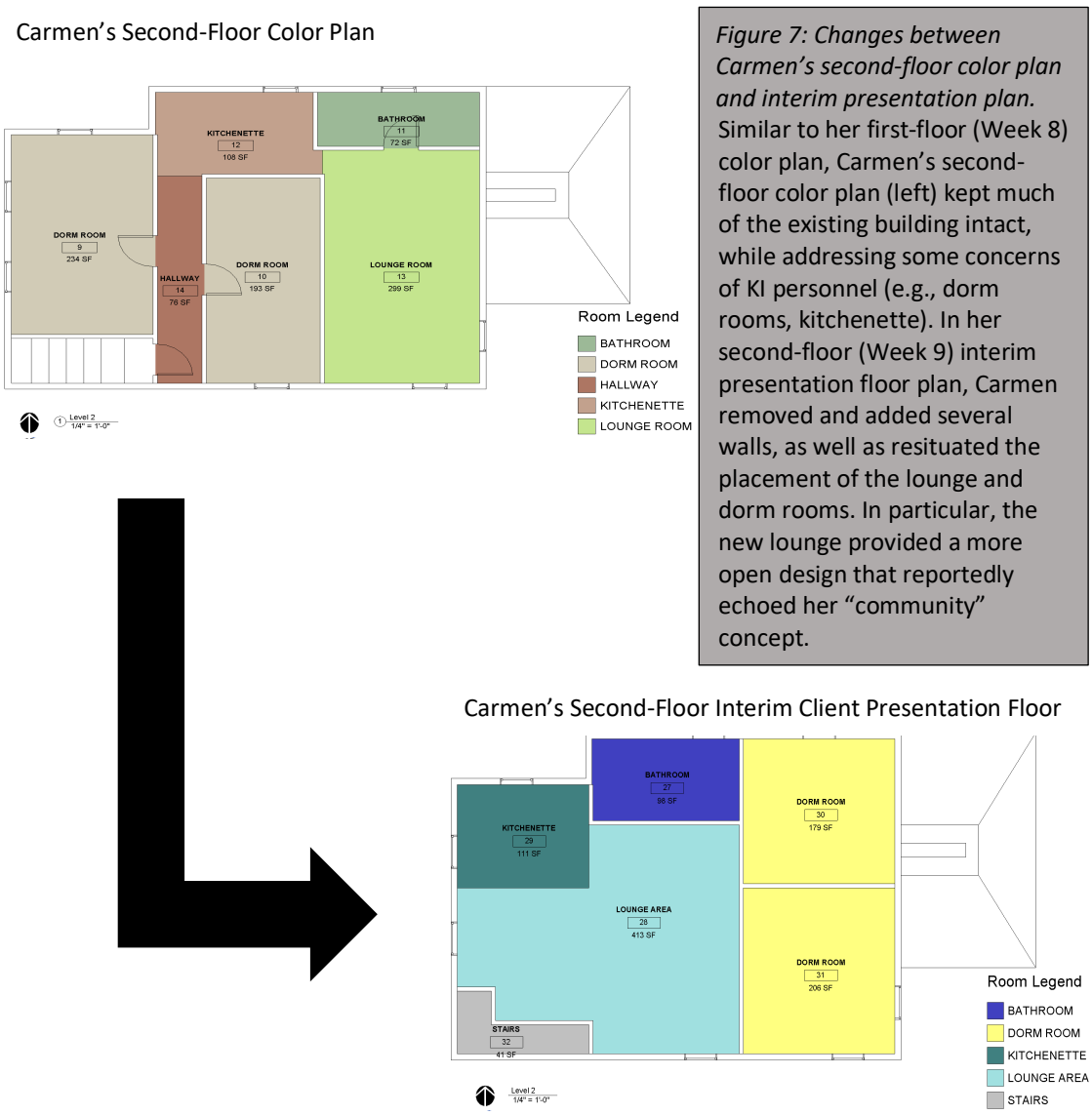


Figure 7: Changes between Carmen's second-floor color plan and interim presentation plan. Similar to her first-floor (Week 8) color plan, Carmen's second-floor color plan (left) kept much of the existing building intact, while addressing some concerns of KI personnel (e.g., dorm rooms, kitchenette). In her second-floor (Week 9) interim presentation floor plan, Carmen removed and added several walls, as well as resituated the placement of the lounge and dorm rooms. In particular, the new lounge provided a more open design that reportedly echoed her "community" concept.

kitchenette as requested by KI staff and designed in her earlier color plan, yet Carmen had opened it up considerably by deleting the walls proposed in the color plan's hallway, thereby producing one giant "Lounge Area" that opened up onto a kitchenette. After presenting her interim plans to KI staff during Week 9, she received and prehended feedback that caused her to make significant further changes to both floors on her next design iteration: the life safety plan.

Affect/Affective Force

For Massumi (2015: 4), an affect forces the crossing of a "threshold" beyond which a transition occurs: "When you affect something, you are at the same time opening yourself up to being affected in turn, and in a slightly different way than you might have been the

moment before." Reflecting upon Carmen's narrative thus far, several affective forces[45] that Carmen prehended have already been introduced. First, Carmen and her design process was significantly impacted by the modifying influence of client desires. As KI personnel made clear the specifics of their architectural and interior design needs, Carmen was affected in ways that her resulting design iterations took on forms that might have been unlikely without engagement with the particularities of KI, its property, and its personnel. Each time (Weeks 9 and 16) Carmen presented her floor plans at KI, she, as well as the design itself, possessed and exercised an affective force that affected KI personnel, prompting their further response, which in turn affected both how Carmen responded in that moment and how she later changed her design in further response (see section on Life Safety Plans below).

For example, as bubbly and enthusiastic as ever – one could easily overlook the slight quiver in her voice, incapable of quenching her apparent confidence – Carmen had presented her interim floor plans during Week 9 to a group of five members of KI. Per Beth's specifications, Carmen highlighted her jigsaw puzzle metaphor, and she described her vision for the kitchen, the bathrooms, meeting spaces, and private living areas. Then the five KI personnel split up to sit at three different tables, one or two at each table; and the students broke into groups that moved from table to table for ten to fifteen minutes at each so that each student group visited all of the tables. During her group's conversations there, Carmen again described her design, affecting KI personnel, who in turn gave Carmen additional detailed feedback regarding her designs, and that further operated as affective forces. Through speaking, Carmen affected; her design also affected KI personnel, in the process of their examining it; KI personnel, whose capacity to affect had by now been modified by Carmen and her design, nonetheless, and through their feedback, further affected Carmen and influenced her future design iterations. From these various conversations – described in a subsequent section entitled "Life Safety Plans" – Carmen learned that KI personnel wanted a more open concept than she had originally thought, that she was free to remove more walls from her design, and that a laundry room and a pantry were "big things" for them.

Second, I have thus far introduced the affective force of people other than KI personnel on Carmen and her designs: namely 1) Beth and her expectations for the course assignments; 2) the ideas that Carmen and her peers crafted during the class's SWOT

[45] I prefer to use the term "affective force" rather than the noun "affect;" however, I see them as equivalent terms and use them interchangeably in this thesis. My preference for "affective force" flows from its ability continuously to evoke the idea that an "affect" is a creative power that plays a causal role in movement from potentiality to actuality (entelechic processes).

analysis and identification of themes; and 3) my influence in the episode involving KI's founding table. Each of these actors unconsciously wielded an affective force over Carmen that, while not determining her subsequent decisions, certainly influenced them.

Third, I have identified two, more-than-human entities that affected Carmen's design. For example, I introduced one way that the egress specifications of the IBC influenced Carmen's inclusion of an exit on the northeast corner of her interim client presentation plans (see Fig. 6). In addition, I described how the actual layout of the property at the time of the site visit, specifically the existing placement of plumbing fixtures, affected Carmen's placement of the second-floor bathroom. Here, it is evident that material things considered to be "non-human," such as texts and plumbing fixtures, have an affective force, or a power to influence what becomes from one moment to the next. Bruno Latour's conceptualization of "actants" is salient here. Latour (2004b: 75) differentiates between the relational impacts of non-human actors versus human agents via his notion of "actants," which are "interveners" capable of "modifying[ing] other actors" within and across various encounters. The IBC text and the existing plumbing fixtures were actants with an affective force capable of modifying what and how Carmen designed.

Fourth, my use of vignettes taken from Carmen's life history interview are intended to introduce persisting affective forces from her past that had significant impact on Carmen, her design process (especially regarding her design concept), and her design iterations. This is explored in greater detail below and, in Chapters 4 and 5, in relation to other students.

Carmen and the Shadow

Carmen had entered university primed to major in Business. Her high school offered select dual credit classes. She took several college-level business courses before matriculating. Yet, she said, she *hated* business because one has to take a lot of tests in Business courses. Carmen "sucked at tests." But she stuck with business in high school because she liked her teachers.

Appreciating her teachers, however, was not enough to fend off the ill effects of her disgust for her disciplinary trajectory. Depression and anxiety were never far away. She claimed that she and her sister inherited their anxiety proclivity from their dad. She lamented her mother having had to live with three anxiety-ridden people. Carmen stated: "You wanna know why Americans are so depressed and have anxiety? It's because of how hard we push each other. Everything is a competition...like on the daily." Her involvement in her high

school's business program exacerbated her depression and anxiety. She experienced nothing "soothing" about business. Competition with her peers for grades and class standing was overwhelming her. It "crushed [her] soul at 15." Laughing, she jokingly added, "You didn't even get me to 20 yet," as if 20 is a culturally sanctioned age of existential collapse. She was stressed out over something she "didn't care about," something with the potential to make her so stressed that she "just shut down." Yet, she wanted so badly to study business at one of her two top-choice universities: Purdue University and Indiana University.

She reported having a "3.7 GPA [grade point average]" in high school and having many college-business credits; But that was not enough to get her into either of her top-choice universities. "Sucking" at tests undermined her competitiveness in university admissions. Her poor SAT (Scholastic Aptitude Test) scores brought her down.

Carmen's mother instilled in her a belief that "what happens is supposed to happen." Reminiscing about her Purdue University rejection, she stated that her mother re-imparted this philosophy to her at that time.

> [My mom's] like, "it's meant to happen; you're supposed to end up where you end up." And I didn't really believe that... "you're just trying to make me not upset right now..." But like honestly, I thought about transferring [from IUPUI to Purdue]. But once I was in [the interior design] program, and the friends I made, I would not be anywhere [else]...I wouldn't be as happy as I [am] if I transferred to Purdue.

Recognizing the wisdom of one's parents is a gargantuan task. I did not believe my parents. My children do not believe me. Wisdom lays dormant; it dwells deeply, becomes entangled with a multitude of experiences, and emerges as if a revelation. Such wisdom speaks of peace, serenity, an acceptance of what is and whatever may come, a refusal to become the slave of expectation. According to Carmen, she may have never even explored interior design had she gone to a different university. She would not have met the same friends on whom she claimed she could "rely." She may not have had the opportunity to explore and network within the "interior [design] world." Yet, although IUPUI was her third option, she was able to do so there.

Neoliberalism and Homo Economicus

In Chapter 3, I explore neoliberalism and its production of subjectivity in detail. However, considering that Carmen's narrative as reported here is referencing such ideas, I offer some initial thoughts. One effect of neoliberal capitalism is the naturalization of the competition which Carmen reported experiencing. As this chapter progresses, I reveal the import of Carmen's struggles with anxiety and depression due, in part, to ubiquitous competition and as formative to the concepts that provided a rationale for her floor-plan designs. Not only does the affective force of neoliberalism impact on why Carmen created her floor-plan designs, but its discourse and ideology significantly impacted on how and why Carmen sought university training. Carmen, like her peers, reported being in pursuit of training that would lead to a career with a good salary. Carmen and her peers, at least in part, enrolled in university as entrepreneurs of the self, seeking to maximize a set of specialized skills, which could later be sold as highly skilled wage labor. Individualism, competition, and entrepreneurialism are each hallmarks of the neoliberal spirit embodied in *homo economicus* subjects (Foucault, 2008; Read, 2009), the kind of subject which Carmen and her peers were becoming, as I argue in Chapter 3, both intentionally and unconsciously.

Life Safety Plans

The next design iteration created by the class members was their life safety plans (due at the end Week 11). According to Beth, these had the primary purpose of acting as the "graphic instructions" of the Code Study submitted during Week 8 (see Chapter 1 for more on Code Studies). From my own observations, it also served as an opportunity for students to include design changes that were affected by the feedback from KI personnel during the interim presentations. Professionally speaking, Beth said, a life safety plan (see Figs. 8 & 9) is intended to "make the job of the municipal authority easier" because it visualizes how the designer has calculated the distances (e.g., between exits) and dimensions (e.g., egress width) pertinent to code compliance. One of Carmen's most obvious code violations – pointed out by Beth as she reviewed a printed (rather than a digital) copy of Carmen's life safety plan during a Week 11 group review session – was that, because both front and back doors opened inwards, neither flowed with the path of emergency egress (see Fig. 9) and to ensure that occupants would not get pinned up against an inward opening door. Beth also encouraged Carmen to revisit the IBC to see if her stairs needed to be enclosed and to calculate the

maximum travel distance to an exit from the 2nd floor dorm in the northeast corner of the building.

Throughout her review of Carmen's life safety plan, Beth also suggested several changes that she jokingly characterized as rather "nit-picky." While her jab at her own "nit-pickiness" amused the students present during the review, Beth's suggestions had the purpose of ensuring student compliance with professional standards for formatting architectural/construction documents. Beth requested that Carmen clarify her labels, remove dimensions (those not needed for life safety plans), and align the west walls of the first and second floors. When I later asked Beth about her alleged "nit-pickiness," she related how one of her mentors had always insisted on the floor plans being "aligned" and how she had thought this practice was "arbitrary" and her mentor unnecessarily picky. But, she added, once she had had more professional experience, she noticed that aligning floor plans made the readability of construction documents significantly easier. Throughout my three semesters of fieldwork, I saw Beth consistently direct students to do little things that could be described

Carmen's Second-Floor Interim Client Presentation Floor

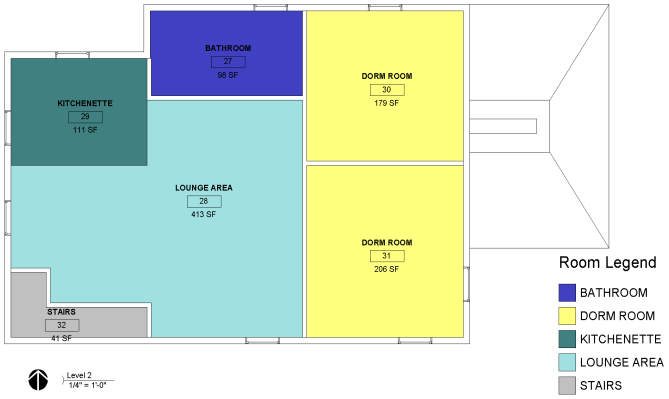
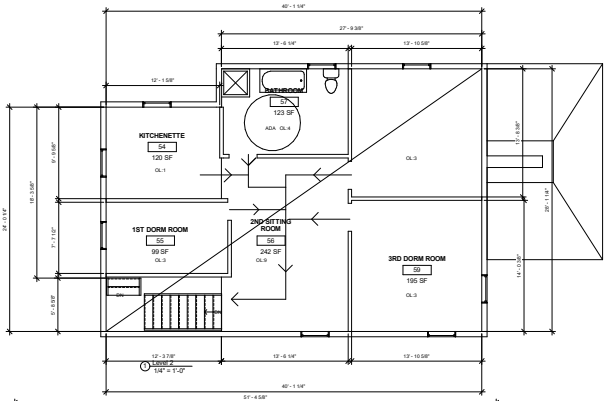


Figure 8: Changes between Carmen's second-floor interim presentation plan and her life safety plan.
In her second-floor life safety plan (below), Carmen drastically reduced the size of the lounge area present in her second-floor interim presentation (left) and renamed it. She credited this change, and the addition of another dorm room, specifically to her interactions during the interim presentation with KI personnel, who suggested that the lounge area was too large and that more private, living space was needed.

Carmen's Second-Floor Life Safety



as professional courtesies, such as minimizing excessive fractions (no contractor wants to measure 3/256ths of an inch), setting dimensions from interior wall faces, and aligning all construction documents/plans to the center or right, since these plans, if printed by contractors, would be bound together on the left side, making anything printed with a left alignment easy to miss.

While the primary purpose of their life safety plan assignment was for students to visualize the building-code study content, they still all reworked their existing designs using feedback provided by KI during the interim presentations two weeks earlier. Carmen's life safety plan illustrated several significant changes that integrated KI staff feedback. When I asked about her having lengthened the second-floor bathroom and the kitchenette and added another dorm room, she walked me through her rationale (see Fig. 8). First, she explained, most of the floor plan changes were influenced by "all of Kheprw" telling her that they felt her proposed second floor "Lounge Area" was too big.

> They were all, like, why is there this extra space when you could add a dorm room… [against the west wall bordering the stairs] and add two more beds there, and then still have a good-sized lounge area for those guests.

She consequently added another dorm room and expanded the kitchenette and bathroom to allow plenty of room for the interns and guests – although at this time she reported being still unsure about how to lay out the bathroom space.

Carmen's life safety plan's first-floor diagram (Fig. 9) also displayed significant changes. Among them were that she incorporated KI staff's request for a pantry near the kitchen. She also returned an exit to the kitchen where there was an existing door. She stated that this door would be useful, especially if KI followed through on their interests around starting a catering enterprise.

During an in-class debrief on the interim presentations, two days before her life safety plan was due, Carmen stated that KI had asked for "a more open concept" than she had originally created. Similarly, during our second interview, near the end of the semester, she animatedly joked that, after the presentations, "everyone [in the class] decided to 'chuck' down walls, because we're all like 'oh, you don't care, K, these walls are comin' down, that wall's comin' down,' making these collaborative spaces."

Carmen's First-Floor Interim Client Presentation Floor

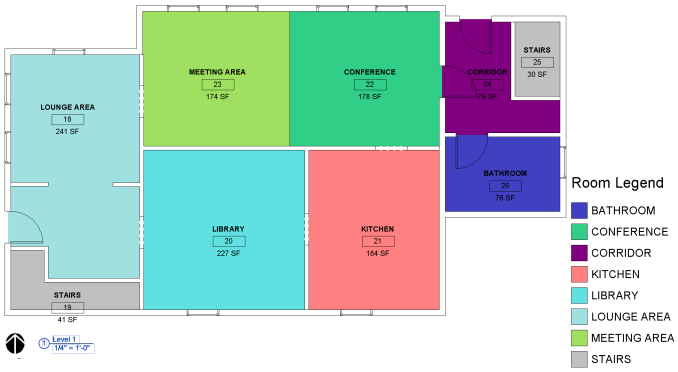
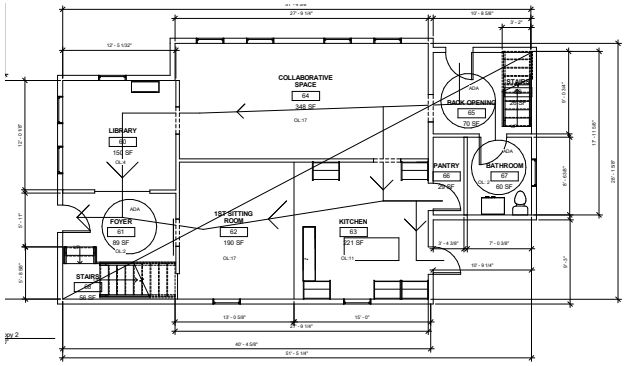


Figure 9: Changes between Carmen's first-floor interim presentation plan and her life safety plan.
In her first-floor Life Safety Plan design (below), Carmen incorporated Ki personnel's feedback given during the interim presentation. This led to Carmen's removal of the wall between the library and the kitchen on the interim presentation floor plan (left), her addition of a pantry, and her increasing of the size of the kitchen.

Carmen's First-Floor Life Safety Plan



Although there is little evidence to suggest that Carmen just "chucked" down walls following KI staff feedback (she had done that already), she did decide to tear down the wall that, on her interim presentation plans, separated the first-floor kitchen from the library, making her already rather open design more so. Additionally, on her life safety plan she re-emphasized the kitchen, making it larger (184ft^2 to 221ft^2). She also stated that key KI feedback regarding a laundry room, a pantry, and the location of the library had influenced her life safety plan first floor layout.

Grant: … somebody told you that they liked the library over [in the Northwest corner] better?

Carmen: It was more as, when [KI staff and I] were talking … about how a pantry needed to be added … we decided to make this a sitting room where it can be conjoined with the kitchen...

Grant: Where the library was earlier?

Carmen: Yeah, so then there you could have your founding table meetings … in the kitchen. 'Cuz they talked about how

when they have their founding table meetings, they will be in the kitchen, talk, make food together. So, I wanted to create that space, and then still have this library kind of off in the corner where it could be quiet, if you need a meeting or if you want to read a book. You're kind of away from the kitchen where there could be noise.

Grant: So, they mentioned that they were seeing the founding table being right here by the kitchen?

Carmen: They could see that happening, having it become like a table area where if they are all just wanting to hang out in the kitchen to cook and have their meeting. So, they wanted a place where they could put up tables and chairs and hang out as they have food for their meeting.

Grant: When you talked to them, did you talk to them about the founding table maybe going in [the 'Collaborative Space']?

Carmen: Yeah, but they didn't like the idea of there being a wall separating them if they were in the kitchen, or something. Because they were talking about how they have meals normally together at the founding table. But then in the end you could use both rooms. You could use the sitting area, or you could use the collaborative space depending on how many people came. 'Cuz then I later put a door right here [between sitting room and collaborative space], so it was more very open, I've added to it.

This exchange between Carmen and me – shared as we reviewed the iterative series of her designs during our second interview – explored and revealed the substantial connectivity, interdependencies and negotiations bundled up in the lines of her life safety plan. Carmen reported that virtual walls were deleted while new ones were imagined and placed as she prehended the affective forces she had encountered throughout the course.[46] KI's historical memory (the founding table), its members' organizational traditions (dinner meetings), their

[46] Carmen's past experiences and her design concept, which reflected many of her past experiences, affected how and what she prehended and chose to include in her design.

future desires and intentions (culinary arts classes for ex-felons) intermingled with her own empathic efforts (including a quiet corner library away from louder meeting spaces) and her own conceptual vision ("community" as "open and inviting") – itself a concoction born of KI's values and her own experiences (more on this below) – to make an assemblage, an expansive unity becoming anew from iteration to iteration.

The exit from the "back opening" had remained on Carmen's Life Safety Plan, in part because she had yet to complete plans for the stairs between the first floor (Fig. 9) and basement (Fig. 10). The delay was reportedly due to trouble with the Revit architectural software program and difficulties she encountered with its stairway commands.

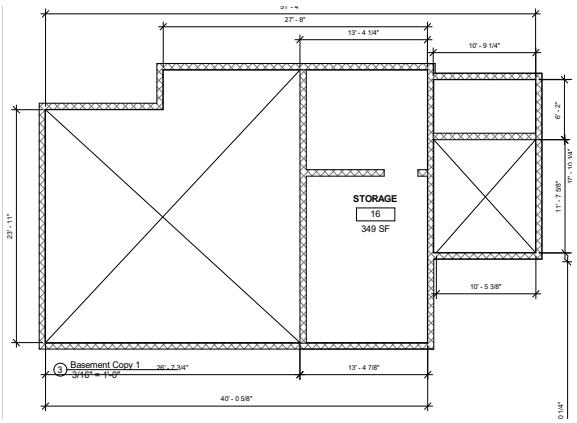


Figure 10: Carmen's basement floor plan (Life Safety Plan)

Following this iteration phase, Carmen thus uninstalled and reinstalled Revit. She explained that a clear manifestation of the problem appears when comparing her first floor and basement plans and finding that the stairs, while present on the first- and second-floor plans, do not appear on the basement plan.

Now, there could be many causes of this problem. One of the first things to check, I learned, is to make sure that the "base level" and the "top level" are accurately designated in Revit. Another likely cause of this problem could also be that it appears that the stairs intended to go to the basement from the first floor were actually designed to go "Up" (see Fig. 5). For Carmen, however, such simple fixes had reportedly been ineffective and reinstallation became necessary. Once done it appeared to resolve Carmen's stairway problem. Once the stairway was placed properly on her Revit file, she completed the basement stairs, widening them sufficiently to meet IBC requirement.

Finding Succor

While she was still in high school, a friend was surprised to learn that Carmen intended to major in business. Her friend thought she would pursue interior design because Carmen was a 'drama kid' focused on costuming and set design. She proudly described to me the top hat she had made for the Mad Hatter in her school's rendition of *Shrek the Musical.* She became increasingly excited when she spoke about the "bone cake' she made for her

school's *Legally Blonde* performance. She had wanted to be a baker up until she was 17 years old. She loved making cupcakes and watching the television program "Ace of Cakes." The "bone cake" broke before the performance. At the time of our final interview, Carmen still had aspirations to someday finish "Pastry School."

When she spoke of her theater experiences, I could feel joy and enthusiasm radiating from her. She evoked similar feelings when she spoke of art. Carmen loved creating with acrylics and clay. Making and creating through artistic processes was "soothing," whereas business simply agitated. She described art as a prime coping mechanism for – or a "getaway" from –anxiety and depression. She took painting lessons from her elementary and junior high art teachers, learning acrylics well and experimenting with water colors. However, clay really stood out as her preferred medium.

> I love the fact that you can just do so many different things and, like, experiment with it. Like, with clay, you can make a cup or you can make, you know, a bowl or you can just make a sculpture in general, and it just be really nice. And you can put it in your own home. And that's like my favorite part.

Art had long soothed Carmen's aching born from the stresses of competition, from the pressure to be a success, and from the tedious tallying of units of finance and capital; and, from that soothing came a created object that was inalienably hers: the product of her relations and her affective force.[47]

As we discussed the therapeutic role that art has played in her life, I was intrigued by the power that the act of creating had over her. As Carmen had with paints and clays, I have similarly found solace in songwriting throughout my life. This shared experience of deliverance through creativity inspired me to inquire further as to whether interior design has come to play a "soothing" role for her. Carmen did not hesitate to make the connection. For her, the "soothing" qualities of making extended beyond traditional artistic mediums and into interior design. Admittedly, she explained, her interior design experiences do produce stress; however, the cause of this stress (design) is also the means of its treatment.

[47] I must also add that any material (e.g., clay and paints) possesses an affective force that contributes to the relations that constitute what is made, just as the Revit software itself limited the design Carmen could make. For example, in the context of Waldorf teacher training, van Alphen (2005) described how the materials used by teachers for water color painting, clay sculpting, and charcoal or pencil sketching all limit what students can do and thus affect what they can produce.

> And as much as [I'm] stressed out about it, I enjoy sitting down and making a floor plan for it. Like, hand-drafting it and making elevations and adding color to it and really making what's in your head come alive. Cuz it's kind of the same thing with art classes, where, yeah, I'm...making something out of clay that I have in my head and bringing it to life. And it's, like, the same with, like, a floor plan or a design. It's like I have this image in my head, but how can I show it off? And so, through an elevation, rendering, floor plans, and all that. And I feel like it's kind of soothing, though you're stressed about it, so it's a good in between.

By having the ability to reveal images within one's head and "bringing [a thing] to life," the stresses of design work are muted. As I reflected upon how Carmen thought about interior design work, I began to see the "interior" of interior design as not merely referring to the virtual representation and subsequent actualization of a material space; it also bore witness to the interior life of the designer – her traumas, her desires, her hopes, her cares.

Final Floor Plan

By the time the "Final Floor Plan" was due (Week 12), Carmen's floor plans were mostly in line with what she eventually submitted as her "Final Construction Documents" in Week 17. Changes represented in her two "final" design assignments were much smaller and subtler than the sweeping changes of her previous iterations. For example, the primary first-floor changes in her Final Floor Plan designs were an additional opening between the "Collaborative Space" and the "1st Sitting Room" (see Figure 9 Life Safety Plan) and her completed basement stairs, which resulted in her removing the exit in the area previously named "back opening." The new opening, between the Collaborative Space and the 1st Sitting Room, Carmen said, reflected KI staff's concern with separating private from public spaces, a concern that had brought Carmen to a paradoxical theme that she described as "privacy but not" – meaning that she wanted to provide spaces for quiet, intimate meetings whilst still including KI's appreciation of "openness," a value which had animated her design concept ("community"). To resolve the public/private dichotomy, Carmen explained, she had added

door-less doorways “cuz, then, it just kind of flows together, but there [are] still full walls making it private.” She thus imagined the first floor as containing a flowing togetherness that is regularly interrupted by constraints designed to ensure freedom from disturbance. Outside of laying out some of the fixtures for the bathroom and kitchenette, and finally being able to add an intended closet in “1st Dorm Room” (now that Carmen’s Revit stair issue had been resolved), there were very few significant changes to the 2nd floor of the “Final Floor Plan.” However, during our second (and final) interview – one week after the course ended – Carmen and I began exploring how her own experiences as an undergraduate student living in dormitories affected the final details she had added to the second floor throughout the final iterations of her floor plans. On her “Final Floor Plans,” Carmen, considering her own dorm life experiences, envisioned KI’s dorm rooms as needing to dedicate at least one dorm room to any interns that might be considered long-term residents. For Carmen, these interns needed to have their own private space that would not be disturbed by any other guests staying just briefly in the other dorms which would contain several bunk beds. In drawing this conclusion, Carmen did not need to necessarily change her second-floor design in Revit by adding more dorm rooms. Rather, she modified how she thought about the potential use of the three dorm rooms she had already designed. She communicated how she imagined the use of these dorm rooms to KI through her final presentation and in her digital story (see Chapter 1).

Design Concepts

> **Grant**: What's the theme that you chose for your design for KI?
> **Carmen**: Uh, puzzles. So, coming together and building an image of some sort...
> **Grant**: Ah, what image?...
> **Carmen**: For me, I found this really cool image of … different ethnicities building ... pieces together [in] a circle that represent[s], like, the globe. So, basically, coming together to build, like, peace between one another; building a place of positivity, a place where they connect and there isn't

> difference...like, yes, you're different but we're also the same kind of feeling.

When Carmen had first formalized her design concept in her third journal entry (Week 8), her concept was stated as "community." Before this, however, her mind-map (Week 4) had focused primarily on jigsaw puzzles as the essential concept to her design for KI. In our final interview, Carmen revisited the importance of her "puzzles" concept (see the above dialogue) whilst also retaining the concept of "community" to create a dual design concept of community and puzzles. For me this appeared to suggest that Carmen was vacillating between "community" and "puzzles" as her design concept. However, that was not due to indecisiveness but because, for Carmen, the two concepts were intimately entangled: the puzzle *was* the piecing together of "community" from the multiplicity of those it comprises. For Carmen, community was something assembled through "openness" and participants' efforts to be inclusive.

When I asked how she had located herself in her design, she stated that she had done that when visualizing how the space would be utilized and, therefore, how it needed to be laid out. For this process of visualization, she had followed the same process she had used in her attempts to empathize with her young scouts and had tried to imagine the space by "looking through their eyes." She stated, "How would I want my boys to feel in that space? I feel that [question] represents me [in the design], cuz if it was okay for my boys, then it's okay for my client." Prior to having said this, Carmen had relayed a story to me about one of her scouts who said that he did not want the scouts to break for the summer, because "he didn't like being at home." Carmen reported that he had said that, without the scouts program, he would be unable to read – he reportedly had few books available at home – or visit his friends. Carmen said that she imagined the building she was designing for KI to be a potential reprieve for him and others in similar situations; it would, after all, have a library and numerous social gathering spaces. Extending upon the aforementioned values of openness and being inclusive, this "home away from home" needed to be fun, but "still have [a] coziness and safe feel."

Designing an open floor plan did not merely address the organizational norms and exigencies of the client as Carmen prehended them; its openness mirrored her own experiences and values. Present in both "community" and "puzzles," I see Carmen's care for her friend James and her desire to have him included; I see her empathy for her scouts and the "Riley Kids;" I see her own desire to belong to something she perceived as fulfilling,

something meaningful, something decidedly not Business School; I see her own drive to be artistic, to create, in pursuit of a more positive and affirming world. With her design concept, Carmen weaved the values mined from her own experiences and merged them with what she understood to be KI's values. Her dual design concept of "puzzles" and "community" is saturated with components of her subjectivity just as it is compatible with KI's organizational philosophy and community-building efforts.

Realizing community, for Carmen, required openness. Reconsider the Life Safety plan in Figure 9. Openness is at least partially achieved by the door-lessness of the "Collaborative Room" and the lack of a wall separating the "1st Sitting Room" from the "Kitchen." Openness is inclusive; it mediates an assemblage of difference (e.g., a jigsaw puzzle) into a coherent image of a peaceful and positive community. As already explained, the lines of Carmen's design were intended to produce a space capable of accomplishing those lofty aims. Within that value of openness, so inextricably entwined with the concepts of community and jigsaw puzzles, were reverberations of Carmen's life experiences from which, I have suggested, those design concepts were, in part, derived. Her experiences informed the design concepts that inspired her design.

Put differently, Carmen's past experiences hold an affective force capable of transforming her experience of and interaction with the present and the future. Returning to Massumi (2015: 4), an affect is experienced as a "doubling". This means that one experiences a change associated with the force of the affect and has "an experience of the experience" (ibid.) In other words, one experiences actual change in the present and experiences the experience itself as an object within what becomes one's past. According to Massumi (2015: 5), the latter is stored "in potential" within oneself, for example, in one's memories. Affective force, then, accumulates within one's past and the virtual potentialities that past holds for actualization in a given present moment. It is here that Dewey's (1938/1998) conceptualization of an "experiential continuum" is particular relevant.

According to Dewey (ibid.), experience flows from two related principles: continuity and interaction. The experiential continuum, for Dewey, is the expanding sequence of one's collective experience. There is continuity between these experiences, especially when in relation to adjacent experiences that build upon each other and inform – or, following Massumi (1987), have an affective force over – new experiences. Dewey's principle of interaction asserts that, in each present moment, one's relevant past experiences interact with other subjects and objects, each having its own experiential continuum. As a result, new

experiences – containing affective force – are formed, objectified, stored, and mined within one's experiential continuum.

It is easy to see openness and relatively easy to see community or even jigsaw puzzles represented in an open floor plan. It is more difficult to reveal the concealed histories of the designer, and the potentialities of the affective forces held within those histories, as represented within a floor plan or even within mediating design concepts. Carmen's lines – as well as her guiding conceptualizations of puzzles and community – echo her empathy for her autistic friend, James, her anger toward his accuser/bully, and her compassion for and desire for her scouts to be happy, safe, and developing.[48] As someone who has struggled with anxiety and depression, Carmen desired positivity in the world and did not want to impose any of her negative feelings on others. She wanted positivity in the world; she wanted others to feel as if they belonged; she wanted to be actively involved in assembling the puzzle that inspired her design. She communicated her desire further when she spoke about her friend Maram in our second (and final) interview.

Maram was Carmen's best friend through Junior High and High School. Maram was a Muslim and, as Carmen implied in her telling of the story, she felt rather alienated from her classmates in post-9/11 America. In 7th grade, Carmen "wanted to be her friend so badly." She implied that this was due to her strong desire to build peace and positivity between people, especially with those who were typically "othered" in the United States. According to Carmen, Maram felt "bullied" at school because of her faith and the color of her skin, which were two things Carmen reportedly "didn't care" about. She stated: "The more understanding you [have] of other people's backgrounds and where they come from and religious or cultural [histories], you get more of an understanding [of others]." Her desire to be "understanding" of difference is easily connected to the project of assembling a diverse community through openness and inclusivity. Like the other narratives she shared, her story about Maram traces a line between the affective force of Carmen's past experiences and the consolidation of her habituated values within the driving theme of her design for KI.

[48] This point is reminiscent of how Ingold (2007: 117) – in drawing on Bergson (1911) – describes the person "as instantiated in the world not as a bounded entity but as a thoroughfare, along the line of its own movement and activity." This also echoes Whitehead (1978), particularly his insights into process, becoming, and prehension of the past.

Final Construction Drawings

Carmen's own student dorm room experiences came up again as she prepared the truly "final" iterations of her floor plans: the "Final Construction Drawings." The biggest change between these floor plans and their previous incarnations was in the second-floor bathroom which was divided into two separate facilities. Carmen reported that she "didn't really want to make it like a college dorm room where you'd have to have your [portable shower] caddy or something." She stated that this dual bathroom setup increased the "privacy factor." As an example, she proposed a scenario where someone needed to use the toilet when someone else was showering. Instead of adding stalls (like those in her dormitory's bathroom), she thought having two separate rooms thereby to eliminate the dormitory "feel" and increase privacy.

Trauma/Suffering – Becoming "Soothed"

In sum, through her focus on openness and inclusivity, Carmen prehended events from her "experiential continuum" (see Dewey, 1938/1998) – along with concerns for the constraints of building codes, client requests, teacher expectations, and peer perspectives – and blended them into the lines of her building designs and of herself as designer. What deserves particular consideration, however, are the sufferings, the traumas, of depression and anxiety reverberating throughout her design's lines. Her design's historical becoming reportedly contained moments, even periods, of stress within the lines that constitute Carmen's own becoming. Such stressors included, she said, juggling course requirements, most especially the learning of Revit which, she reported to KI personnel during her final presentation, was her "biggest challenge" and "greatest learning." Yet, for her, this stress did not plunge her into the depths of depression and anxiety which business and finance had been known to evoke in her.

The act of designing was, in this instance, her own pursuit of attaining positivity and expelling the negativity of stress, anxiety, and depression. What she made mirrored that internal process of deliverance from negativity. The space she designed was animated by her idea that it could create an inclusive, positive, and peaceful actualization of a diverse unity. As I have argued, Carmen's design represented her attempt to remake the world as a place of positivity and togetherness; the virtual symbol of a remedy for the persistent ills that bedeviled her. Yet, more than a mere symbol, the act of its creation was like a serum against

negativity and suffering. The act of designing was a small, personal salvation; her design, and its conceptualization, reflected that hope.

Propagation of positivity had great import for Carmen. Her aim could be described as practicing openness and inclusivity toward the creation of heterogenous communities, and her vehicle for actualizing this potential was art. Design is an artform. The doing and making of a design, as in Carmen's case, can be the means through which one is released from stress, anxiety, and depression and, as a result, returned to peacefulness. Carmen greatly valued peacefulness and positivity – themselves buttressed by the suffering stored within her shared experiences of bullying, negativity, and neoliberal stressors. It was a feeling fundamental to the concepts animating her design, namely assembling a diverse community through openness and inclusion.

Three Affective Forces

As indicated thus far, my general focus is on affective forces and their presence/influence in the design process. I use that as a central theme with three sub-themes, each of which is considered in the chapters that follow. In Chapter 3, I focus on how and in what ways neoliberal discourses in students' environments act as affective forces on their design processes. I explore how powerful and ubiquitous principles and values of capitalist modernity influence the kinds of subject students, as well as their designs, become. I focus specifically on the role of the neoliberal university in the becoming of students as exemplars of *homo economicus*. In Chapter 4, I consider design actants – "modifiers" (Latour, 2004b) that intervene in how and why a design is constituted in particular ways – and how, as already briefly illustrated in Carmen's case, the lines of students' designs reverberate with the animating force of client desires and feedback, the IBC, the existing built structures, and their interactions with peers and the course instructor. In doing so, I aim to reveal the fundamental relationality undergirding the design process in order to explore how students think about and rationalize their engagement within the relations of design. My third subtheme is what I call, following Dewey (1938/1998), the experiential continuum – the expansive aggregation of students' past experiences and the potentialities, or affective force held in those experiences and reflected in their design decisions. This is my concern in Chapter 5 where I consider how students' experiences – whether ordinary, traumatic, aesthetic, or something else entirely – have led to production of their personal values; personal values that, in turn, may have informed how and why students designed in the ways they did. By examining how students

value the actants and affective forces that influence their designs, it becomes possible to identify modes of valuation that may provide alternatives to those of neoliberal capitalism.

Throughout this thesis, I argue that as student designers negotiate and value the affective forces influencing the constitution of a design, they are engaging in a potentially ethical process. I build on that argument to support another: that, if design processes are potentially also ethical processes, then new theoretical framings and pedagogical approaches that foreground particular kinds of ethical thought and practice are necessary if educators are to ensure that their students become ethical subjects. Furthermore, understanding the formation of students, specifically their ethical subjectivity, demands a reconsideration of how students are taught various expressions of architectural (and engineering) design. In the closing chapter, I utilize a new framework developed from this research – which I have named "ethical becoming" (Fore & Hess, 2020) – to explore specific ways that architectural/engineering design could be taught in ways that encourage students' ethical growth.

The sun shone, having no alternative, on the nothing new.
-Samuel Beckett, *Murphy*

There is no real alternative.
-Margaret Thatcher

I ain't gonna work on Maggie's farm no more.
-Bob Dylan, *Maggie's Farm*

Chapter 3

Educating *Homo Economicus*: Modernity and Neoliberalism in an American University

In this chapter, I am concerned with two overarching questions: (1) how have the values and beliefs of capitalist modernity come to be structured into the U.S. university system? and (2) how, and to what extent, does each individual human subject within that university system come to fashion him/herself in this image? To address these questions, I present this chapter in three parts. In Part I, I explore the role played by ontological dualisms in the establishment of "self-evident" ways of being and knowing, which contribute to the rationalities of capitalist modernity and the structural systems that reproduce particular expressions of human life in the U.S. and that stymie alternatives. Specifically, I describe the design logic of capitalist modernity, starting from (Cartesian) ontological dualisms and what Escobar (2018) has identified as the four beliefs of modernity. In Part II, I examine the idiosyncratic manifestations of capitalist modernity, such as liberalism and, most importantly, neoliberalism. I then seek to explore how, if at all, this design logic and its affiliated ideologies percolate from the capitalist state – via federal agencies that fund academic research projects, such as the National Science Foundation (NSF) – to corporatized universities, such as IUPUI, where research related to the conduct of what Lucena (2005) calls the "defense of the nation" occurs. In this thesis, "defense of the nation" refers to military defense as well as defense of public health and, especially, of the economy. In considering that downward percolation, I explore how the onto-epistemic framework of capitalist modernity informs the U.S.'s current political economic rationality (i.e.,

neoliberalism), as well as its prevalent cultural aspirations; and how it thereby designates a vision of unrestrained progress whilst simultaneously promoting the neoliberal economization of life, particularly in the image of a *homo economicus* subjectivity. This is a process that IUPUI, along with many other U.S. universities, works to reproduce. In Part III, I examine how the design logic of capitalist modernity is articulated through the myth of the American Dream, particularly as presented by IUPUI. I also consider the ideology of professionalism to describe how, if at all, Beth and her *Commercial Construction* students reproduced the values and beliefs of capitalist modernity through their teaching and learning of interior design and architectural technology.

I do all of this neither to condemn IUPUI and its students as complicit in the reproduction and reification of such logic, nor to portray them as victims of a false consciousness. Ultimately, I aim to defend the idea that, as students like Carmen (Chapter 2) sought to fulfill the design requirements of the Commercial Construction course, they did so in ways that both perpetuated the values of capitalist modernity and expressed what Escobar (2018) called "alternatives" – or what Povinelli (2011) called an "otherwise" to such a status quo. I argue, much as Guattari (1995) did when he proposed his "ethico-aesthetic paradigm," that potentialities for a new paradigm already exist within our current capitalist assemblage. In no way do I seek to argue that Beth or her students held some key to global harmony or world peace. Rather, my goal is to support and substantiate ethnographically the idea that the seeds of an otherwise are present within the work the students did and, having noted the presence of these seeds, to identify where they represent potentialities for working with and nurturing alternatives within U.S. higher education. Building on that, I ask: (1) how can students and educators be guided to identify and actualize these potentialities? and (2) how, if at all, can one avoid capital's appropriation or capture of such alternatives? In my closing chapters, I hope to provide some answers, however incomplete, to such questions. For now, I turn my attention to the notion of capitalist modernity and the governmental rationalities of neoliberalism before utilizing such concepts to examine how IUPUI and my student interlocutors were subject to them.

Part I: Capitalist Modernity – Designing Civilizational Progress and Governable Subjects

Much has already been said about the rationalities behind modernity (Giddens, 1991; Latour, 2012). However, it is upon Escobar's (2018) recent work theorizing modernity that I

ground my discussion in this part of the chapter. My focus on Escobar here is due to his particular conceptualization of modernity as a significant piece of the design logic of the Global North. Following Escobar, it is a design logic that undergirds not just the (re)fashioning of cultural modes of life and human subjectivity in the Global North, but also the historical – and often violent – interventions (i.e., imperialism, colonialism, development) experienced by populations subjected to those interventions. Given the focus of this thesis on design education, Escobar's assertion that modernity and capitalism (as well as patriarchy) are powerful constitutive elements of how contemporary humanity designs and produces global and local worlds is salient here. Most importantly, this design logic does not work merely to produce particular kinds of human subjects and formations of socio-cultural order, it also permeates much of the theory and practice of design itself (Escobar, 2018). While he does not utilize the notion of "modernity," design theorist Alain Findeli (2001: 5) has made similar observations about the current design paradigm, arguing that it is characterized by "its materialistic underlying metaphysics; its positivistic methods of inquiry; and its agnosticist, dualistic worldview."

Cartesian Dualisms and Four Beliefs of Modernity

Space constraints preclude me from providing a comprehensive survey of the relationship between modernity and capitalism here.[49] I thus focus on two elements – Cartesian dualisms and what Escobar describes as four beliefs in modernity – comprising a design logic unique to the Global North. I do that because that is the context of IUPUI and my student interlocutors. Doing it requires a review of at least a piece of Escobar's (2018) argument. Before proceeding, I first offer a brief history of the rationality of modernity.

While there are disputes as to when modernity begins, I associate the birth of modernity with the philosophy of Rene Descartes and the 17th century commencement of the Age of Enlightenment. This period saw the rise, spread, and naturalization of ontological dualisms (i.e., Cartesianism) that undergirded the notion of "progress" and the instruments designed to ensure said progress, such as imperialism, colonialism, development, and globalization.

Drawing on Latour (2012) and Blaser (2010), Escobar (2018: 93) identifies three fundamental dualisms: nature/culture; us/them; and subject/object. First, a nature/culture

[49] Escobar (2018) provides a good survey of the relationship between modernity and capitalism, and I review his efforts here (also see Echeverría, 2005; Illich, 1973; Sayer, 2002; von Werlhof, 2013).

dualism separates nature from culture in a way that the interconnectivity and relationality of humans with the rest of the natural world – of which they are a part – is significantly unraveled so that humans are seen as entirely disconnected and set apart from nature. This enables visions of human mastery and supremacy over the "natural world." Second, an us/them dualism divides and categorizes humanity through imagining a zero-sum game in which the interests associated with those who are more powerful are privileged over those of the weaker. Even more than the nature/culture dualism, us/them enables a reification of a hierarchy capable of justifying the exploitation and domination of others whom dominators deem inferior. This hierarchization contributes to a spirit of coloniality – oppressive, hierarchical, and naturalized ideologies and structures undergirding Western systems that persist as hegemonic forces, whether in 19th and 20th century colonial contexts or in those where that hierarchization is based directly on class differentiation (Escobar, 2018: 94). Third, a subject/object dualism, arguably providing the rationality for the others, represents a dichotomization of mind and body and thereby produces an idea of an external, physical, objective world that is already there for the mind of an individual – a kind of human subject that is essentialized as autonomous, complete, consistent and independent – to discover. A slew of other dualisms cum binaries (e.g., human/non-human, life/non-life, reason/emotion, individual/collective, secular/spiritual) follow in the wake of these three. For Escobar (2018: 83-91), these three dualisms contribute to what he calls modernity's "four beliefs": in the individual, in the real, in science, and in the economy. And he argues that each of these four beliefs informs the design logic (re)producing everyday life and structures in the Global North (ibid.). Those include the theory and practices of design itself which is also informed by the four beliefs.

According to Escobar (2018), *belief in the individual* is a commitment to a notion that there is an essential self that is an external observer of the "natural" world. This individual is an autonomous subject – possessing rights and free will – that is rational, independent, and "complete" as Nyamnjoh (2017a) has so aptly described it. This sense of "completeness" is possible only by erasing the experience of relationality with its circulating credits and debts[50] that interconnect entities and set obligations and responsibilities for sociality. The notion of an individual sets the self apart from the relations that produce it, undermining and undervaluing the communal, the collective and even the local (Escobar, 2018: 83). As I

[50] Here, credits and debts are not to be taken as rigidly associated with economic exchange, since I am primarily interested in intimate and affective credits and debts.

indicate below, numerous systems and structures (e.g., the capitalist state and U.S. higher education) operate in ways that etch – or perhaps, more precisely, that discipline the individual to etch – the values and beliefs of modernity upon the body of such an individual. However, due to their self-perceived sense of completeness, such an individual may struggle immensely to recognize and account for the relations that affect their constitution, thereby making it difficult for them to be critically engaged in their own fashioning. Influenced by these hegemonic systems and structures, each disconnected individual (e.g., a post-secondary student) exerts considerable effort to fashion him/herself in ways that increase his/her capacity to sustain, and find pleasure in, his/her "modern" life. When this process of self-fashioning is dominated by the beliefs and values of modernity, the status quo of the individual is often reproduced. As I explore in later chapters, this domination of the process of self-fashioning was not absolute for my student interlocutors.

Considering the *belief in the real*: an individual holding a *belief in the real* tenaciously clings to an idea that reality comprises and is in the external, objective world, a world which exists "prior to…the multiplicity of interactions that produce it" (Escobar, 2018: 85). In this view, the "real" world is singular; there is just one real world, and elite modernists have a disproportionate say over how that "real world" is defined. As a consequence, others' ontological understandings are relegated to the background; they are subjugated by the modernist vision of a single nature[51] just as they are stratified and arbitrarily valued by extension of the hierarchical logic of subject over object – in this case resting upon an us/them dualism. The modernist belief in a singular real contributes to a hierarchical structuring of the cosmos, a structuring which is reified via hegemonic power relations within human systems. It additionally undermines any potential for a kind of "participation" (Escobar, 2018: 87) that crosses borders and operates at frontiers where, according to Nyamnjoh (2017), "conviviality" must animate the relational becoming of worlds.[52] It is this convivial, pluralistic, border-crossing participation that a belief in a singular real undermines and, as Escobar (2018) has illustrated, conceals the relationality that constructs our worlds.

If belief in a singular real undergirds the ontology of modernity, it is *belief in science* that facilitates discovery – as opposed to a relational construction – of purportedly *valid* knowledge about an external, objective, and real world. In other words, science is the

[51] Law (2011) refers to this as the "One-World World" (OWW), the universalizing ontology of modernity/coloniality.
[52] Regarding conviviality, also see Illich (1973).

epistemological side of modernity's die. It is the presently dominant way in which humans come to understand the world as something separate, something "out there," susceptible to being disinterestedly observed. As Foucault (1977, 1990) has demonstrated, such scientific, disciplinary knowledge is mobilized via power relations in ways that those with "valid" truth claims often wield their knowledge/power in ways that subdue and control the bodies of those who do not. A concomitant result of this relation between knowledge and power is concealment, perhaps erasure, of other ways of being, doing, and knowing. Alternatives, or the potentialities for the actualization of something otherwise, are preemptively quashed as individuals claiming truth strive to fashion themselves as autonomous and essential selves in the shadow of a real world that is external, stratified, and known exclusively via scientific practice, and of which one's mastery is achieved most often within the bounds of the degree-granting university system.

Escobar (2018) describes the last of his four modernist beliefs as *the belief in the economy*. Here, capitalism becomes part of the real, and economics arises as a scientific discipline capable of producing knowledge about capitalism's realness/naturalness. In that respect it gives an image of legitimacy to a neoliberal reading of the values and assumptions of liberalism from which ideas of an utterly "free" market could be said to have been born. Imagined as real/natural and thus scientifically discoverable, capitalism and the market are theorized and analytically interacted with as if they were not the product of social relations and history. Doing that also loses sight of Polanyi's (1944) substantivist notion of a political economy built on relationships and adaptation; and it genuflects to the naturalisms of a formalist position (i.e., rational, profit-seeking, self-maximization) of neoclassical economics. Capitalism and the market are reified and become like non-human living things that must be understood as externalized realities that dictate many, if not all, aspects of human life.

A consequence of this belief, as of the others, is foreclosure of alternatives. Here, capitalism exists prior to relationships. It is natural. Its operation's values and qualities are part of the facet of nature described as human nature and is treated as an inescapable characteristic of being human. Denying capitalism becomes a denial of reality, a denial of what one simply *is*. As expounded upon below, such beliefs, about an overlap between human nature and capitalism, contribute to the commoditization of life and the production of human subjects as *homo economicus.*

To briefly summarize, the primary consequence of the four beliefs of modernity identified by Escobar (2018) is that, once operationalized, Cartesian ontological dualisms

produce an onto-epistemic framework embedded in the consciousness of Global North/Western elites – one disciplined into their subjects – that justifies assertions of ontological, epistemological, and physical dominion over an external world by autonomous and complete individuals engaged in a patriarchal and hierarchical ordering of being. That framework places humans above nature whilst simultaneously stratifying humanity to privilege Global North/Western elites. Exemplifying values of occidental rationality and of productivity (e.g., entrepreneurship, aggression, competition, and dominance), this privileged category rests at the top of the hierarchy and makes all others distinct and external – according to class, race, gender, geography and various other contingent criteria – and places them across the bottom rungs of the hierarchy. This results in ultimate understandings of reality being under the purview of those balancing up on the top and who, as elite individuals within institutionalized systems, work generatively to reproduce these beliefs and the values they engender.

Part II: From the Cold War University to the Neoliberal University

The preceding points about modernity constitute what Escobar (2018) calls a design logic through which the modern world and its subjects are developed. In this part of the chapter, I conduct a general and historical exploration of how the U.S. higher education system has been impacted by the design logic of capitalist modernity being articulated and rearticulated from the period of "classical liberalism's" political rationalities (i.e., ideologies) prior to the Great Depression through to the "social liberalism" of post-WWII reconstruction and the Cold War and on to the present-day neoliberalism that undergirds the U.S.'s post-Cold War pursuit of global market dominance. In Part III, I examine how these histories and political rationalities play out in the context of IUPUI.

I begin with an abbreviated history of liberalism and its current articulation, neoliberalism. To preface this, I must assert, for clarity's sake, that I situate the political and economic thought and practices of liberalism beneath the umbrella of modernity. As a movement, liberalism – from the Latin *liber* meaning "free" – began during the Age of Enlightenment, particularly with the political philosophy of John Locke (Godwin & Kemerer, 2010). Historical events, such as the American and French Revolutions further marked the ascendancy of liberalism as a powerful political rationality, which, over time, contributed greatly to the widespread establishment of constitutional forms of governance in the West (Gould, 1999).

According to Foucault (2008), questions regarding the governance of populations (i.e. biopolitics) – and the governmental practices designed to govern bodies within those populations – arose and were prioritized through the political rationality of liberalism which, in its "classical" form, values the autonomy and liberty of the individual, consent of the governed, free markets, and minimization of the state. This "classical" form, however, fell out of fashion as historical events, such as the Great Depression, exposed the flaws associated with the idea of the "invisible hand" of laissez-faire capitalism and gave way to "social liberalism" which advocated social interventionist economic policies that were designed with the intention of supporting and, where deemed necessary, correcting the effect of the market.

What is now called neoliberalism began as a reaction to post-WWII social interventionist policies, such as the Bretton Woods agreement and system which were highly influenced by the value placed on public spending and state sovereignty in Keynesian economics (Edelman & Haugerud, 2005). At the time, the most prevalent rationality of liberalism (i.e., social liberalism) advocated for more state intervention – via increased taxes and public spending – as a means to maintain demand. In brief, the Bretton Woods agreement established both an international currency system after WWII – led by the newly formed International Monetary Fund (IMF) – and an international bank (i.e. International Bank for Reconstruction and Development – "World Bank") to provide loans for rebuilding post-war Europe.

What is most important for my purposes here is that these social interventionist policies were also employed in the U.S. as a means to shore up its own power and progress throughout the Cold War. As I explore in the following section, starting with the Cold War, the U.S. university system came to receive significant federal government funding in order to defend the nation through academic efforts that promoted scientific and technological progress, especially in relation to the well-being of the U.S. economy, its military, and the health of the U.S. public (Bush, 1945/1995; Lucena, 2005). Before unpacking this further, however, more should be said about neoliberalism.

As the Cold War moved toward its conclusion in the early 1990s, neoliberal beliefs and practices had already found purchase in the Western powers of the United States and the United Kingdom. Under neoliberalism, the role of the state shifted from, at times, being a kind of arbiter between labor and capital to becoming more of a nursemaid for capital, believing that a share of any profit attained would eventually "trickle down" to the working class. With this redirection of the state's role under a neoliberal economic model came increasingly growing wealth of elites – in part, through privatization of public goods – and

reducing capacity to accumulate, among others. It also led to increasing precarity for workers who now had to navigate risk with fewer social safety nets while being heavily surveilled and disciplined, both via external audits and metrics and through their own efforts to fashion themselves in the image of the independent, autonomous, and responsible individual – a "free" entrepreneur of self whose successes and failures were of their own making. From a neoliberal perspective, the market is not perceived as tenuous and in need of protection through state policies (although actual practice contradicts this, e.g., "too big to fail"). Rather, the rationality of the market – including its fundamental driver which is competition – is perceived to be so natural that it extends beyond the scope of the economy and can be appropriately used to analyze, explain, and govern the behaviors and decisions of the individual human subjects making up any population (Foucault, 2008).

The National Interest and the University

I now turn to a close examination of the relationship between the U.S. federal government and its university system from the Cold War period through to that of contemporary neoliberalism. In his call for a critical ethnography of the university, Gusterson (2017) critiqued the anthropological literature on the university and argued that what exists (at least in monograph form) primarily comprises ethnographies of undergraduate life. According to Gusterson (2017), within anthropology, there appears to be a hesitancy to commit to a thorough examination of the institutions that sustain it.[53] While this thesis admittedly also adds to the small pile of higher education ethnographies focused on undergraduates (for example, see Abelmann, 2009; Mir, 2014), I hope, in this section, to make a contribution to the important efforts to consider ethnographically the political economy of the present-day neoliberal university, particularly regarding the beliefs and values of capitalist modernity that are expressed and reproduced in its operation. I do that in the interest of a holistic exploration of my field site, to acknowledge the forces instrumental in its fashioning and to consider to what extent they both percolate down to undergraduate programs and already dwell within students' desires.[54]

Gusterson (2017) argued, following approaches developed by scholars studying the role of the U.S. university during the Cold War (see D. H. Price, 2016; Solovey, 2013), that pursuing such an ethnography of the university requires one to begin by considering its

[53] Notable exceptions include Strathern (2000), Shore and Wright (2000), and Shear and Hyatt (2013).
[54] The task of producing a thorough institutional ethnography of IUPUI perforce must await another study.

funding – its origins, purposes, and intentions. During WWII, U.S. universities played a significant role in promoting national security and U.S. interests by contributing to scientific and technological advancements (e.g., radar, jet engines, nuclear power, rapid progress in computing, penicillin), all particularly related to the military's wartime efforts. With the end of WWII, the postwar landscape gave way to the sustained tensions of the Cold War (1947-1991).

1950 saw the establishment of the National Science Foundation (NSF), one of the U.S.'s key federal funding agencies for scientific research. Five years prior, and coinciding with the end of WWII, Vannevar Bush had planted the seed for the NSF in a report to then President Harry S. Truman. Bush (1945/1995) stressed the need for federal mechanisms to financially support the American scientific endeavor.[55] Knowing the significant role science research had played in WWII, his fundamental argument was that in order to "insure our health, prosperity, and security as a nation in the modern world" the U.S. government must invest in "scientific progress" (Bush, 1945/1995: 5). Bush's argument was well-received and contributed, alongside growing Cold War anxieties, a rationale for the establishment of the NSF.

During the Cold War, this aggressive shift in the federal government's role in the U.S. university system made unambiguous the mission and vision of universities as handmaidens to the nation's interests. Moreover, as Gusterson (2017: 438) showed, the funding-strategy shift reframed many disciplines[56] in relation to national defense concerns and put universities that assimilated into "the defense science paradigm" at an advantage through their ability to attract graduate student labor and to collect overhead costs that supported development of their respective built environments. Said differently, it was precisely this commitment to the image of the U.S. as a "nation under threat" that facilitated the expansion of universities and their research programs (Lucena, 2005: 2).

As Cold War competition between capitalism and communism began to wane during the 1980s, the neoliberal economic model established a dominant foothold in the global

[55] Examples of Bush's (1945/1995: 2) appeals to a nationalist (and corporatist) effort include his assertion that to reach the goal of "full employment" after the war, "the full creative and productive energies of the American people must be released. To create more jobs we must make new and better and cheaper products." Bush (1945/1995: 4) also conveyed the importance of "developing talent in American youth." Through such reasoning, Bush argued for federal subsidies for scientific work.

[56] Gusterson (2017: 437-438) points to several disciplines that shifted into the defense-science paradigm, particularly related to the development of military technology. Physics, cybernetics, and artificial intelligence were significant contributors. The social sciences were also affected to the extent that they adopted what Gusterson (2017: 438) called "Pentagon epistemology" which focused on "measurability, predictability, or controllability of human behavior."

economy and contributed to shifting the U.S.'s national emphasis from a competition with the Soviet Union for global geopolitical, economic, and ideological control to a competition with Japan for global market domination (Downey & Lucena, 2003; Lucena, 2005).[57] The advent of neoliberalism ushered in not only new economic practices but, following Foucault (2008), a new "governmentality" in which, at a macro-level, the role of the state was to be minimized – at least regarding the public services of the "welfare state" (à la Margaret Thatcher and Ronald Reagan). The state was now redirected toward the establishment, management, and sustainability of global markets and national competitiveness within those markets (Ward, 2012). Accomplishing such a feat of course still required substantial national investment in economic security, military defense, and public health; and these in turn remained (and remain) the primary rationalities behind U.S. scientific progress (Lucena, 2005).

Scientific progress and global market competitiveness cannot, however, be understood merely as or achieved through the production of new knowledge and new technologies. Such progress relies upon the (re)production of expertise as embodied by trained workers possessing specialized labor power capable of being the engine of innovation. According to Lucena (2005), training PhD students and ensuring a "flexible" workforce of STEM professionals, inter alia through postdoctoral fellowships, is a key NSF objective. Regardless of what historical threat has faced the U.S. at different times, funding the training of scientists and engineers for a variety of industries has always been a key piece of the NSF's role in the defense of the nation (ibid.).

One salient example is the NSF's Improving Undergraduate STEM Education (IUSE) program. This program funds projects that design, implement, and research STEM-education innovations. The program's logic is simply to ensure a technically capable labor pool for the national economy to progress. As its solicitation states: [58]

> The fields of science, technology, engineering, and mathematics (STEM) hold much promise as sectors of the economy where we can expect to see continuous vigorous growth in the coming decades. STEM job creation is expected to outpace non-STEM job creation significantly, according to the Commerce Department, reflecting the importance of STEM

[57] As of 2022, it appears that this competition – particularly as it pertains to technology – is less between the U.S. and Japan than between the U.S. and China.
[58] NSF program solicitations are documents containing information about focused grant competitions.

> knowledge to the US economy (NSF, 2019, pg. 2); [and] By improving the quality and effectiveness of undergraduate education in all STEM fields, IUSE investments enable NSF to lead national progress toward a diverse and innovative workforce and a STEM-literate public (NSF, 2019, pg. 5). [59]

This shows that today's NSF mission and vision continues to echo Bush's (1945/1995) original concerns to fund scientific pursuits relevant to public health, economic progress, and national defense.[60] Moreover, it is difficult to find any NSF material that does not emphasize one of those three foci, whether in program solicitations (like that for the IUSE described above) or in agency level reports such as strategic plans.[61]

Saliently, principal investigators are arguably required to incorporate this ubiquitous discourse into their proposal applications which are submitted to the NSF's competitive grant programs. Moreover, funded projects are expected to produce "broader impacts" that need to relate the potential scientific progress presented in the research proposal to matters of relevance to public health, national defense, or economic well-being and/or progress (Mathieu, Pfund, & Gillian-Daniel, 2009). "Broader Impacts" sections require completion for all NSF funding applications.[62]

Through participating, for whatever reason, in these funding application processes, principal investigators effectively commit themselves, their research, and their universities to the defense of the nation. More often than not, in my experience, these commitments are enforced on them subtly through their having been co-opted unthinkingly into such a mindset. As of the beginning of 2022, after nearly 10 years of working in research and research development at IUPUI, I have *never* witnessed a STEM faculty member critically

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[59] Such language is common in NSF STEM education-program solicitations. Through my position as a Research Associate at IUPUI, I have had significant experience with NSF proposal preparation for a number of programs. Several of these grants have been awarded. I have also served as senior personnel/education researcher on six of these NSF grants, including two IUSE projects. I am currently a Co-PI on a third IUSE project. PIs and co-PIs, like myself, as well as research and proposal development professionals, often think it necessary, or required, to conform to the NSF's mission and vision's discursive conventions, in order to receive funding. The wording of NSF solicitations fosters such a perception.

[60] The U.S. federal government also oversees the National Institute of Health's (NIH) and the Department of Defense's funding missions. These funding agencies specialize in grant-based subsidies for scientific progress in medical fields and military technologies, respectively.

[61] For the most recent NSF strategic plan for 2022-2026, please see https://www.nsf.gov/pubs/2022/nsf22068/nsf22068.pdf (accessed 18 April 2022).

[62] NSF may refuse to review proposals that fail to include explicit broader impacts. Any faculty member in any U.S. institution of higher education wishing to apply for NSF funding are expected to conform to these requirements.

problematize the aims and agendas of the NSF. These nationalistic and corporatist discourses are taken-for-granted; they are too often accepted as common sense. There is, moreover, a dearth of literature on the topic, and, as Gusterson (2017) has suggested, there is a need for much more.

Also noteworthy is that competition between universities for NSF funding echoes international competition for global market control: the U.S. competes within the global marketplace and universities compete for limited funds[63] to support national interests in that global context. As discussed further below, valorization of competitiveness not only underpins (and thus informs) the U.S. government's relationships to other entities, both international and domestic; it also motivates universities' internal and external relationships and directs how faculty and students fashion their own self and others' selves. Before examining such effects on student subjectivities, I turn to an exploration of how one university system, IUPUI, has been affected by contemporary modalities of funding and by the beliefs and values of capitalist modernity. I do so not to suggest that IUPUI is representative of all U.S. universities, but rather to describe the ways these discourses, rationalities, and ideologies manifest in a particular context.

Part III: U.S. Higher Education, IUPUI, and Interior Design Students

Since at least WWII, the pursuit of scientific progress in the U.S. has been dominated by an overarching concern for the defense and security of the nation, a byproduct of the us/them dualism of capitalist modernity. While the previous section considered some of the more ideological, historical, and discursive elements of this phenomenon, this section unpacks some concrete consequences of federal government funding of higher education, particularly with the transition from the Cold War to the context of neoliberalism. With many U.S. universities taking advantage of these funding models during the Cold War period, not only did universities expand; they also began a trajectory toward becoming institutions that eschewed risk and that, in doing so, promoted a federally-supported (and industry-supported) status quo (Stephan, 2013). Those universities and departments most successful at winning competitive grants grew in prestige and attracted graduate students, training them from within a "defense science paradigm" (Gusterson, 2017: 438). Under such conditions, U.S. graduate

[63] According to the NSF's *FY 2022 Budget Request to Congress* (https://www.nsf.gov/about/budget/fy2022/pdf/fy2022budget.pdf, accessed 18 April 2022), federal investment in scientific progress through NSF programs continues at a rate of more than US $9 billion.

students were, and remain, exploited as a means to immediately meet the pressing research needs of the present (Stephan, 2013).

During the Cold War, an assumption that the U.S. needed an abundance of expert scientists and engineers to win the Cold War resulted in more and more PhDs being produced (Lucena, 2005). Yet, the Cold War's end and a shift to a neoliberal rationality did not stem this unbridled production of PhDs[64] (Lucena, 2005). That was despite there being few academic job prospects for these students after graduation other than in an increasingly precarious reality produced by the casualization of academic labor (Gusterson, 2017).[65] Nonetheless, many in adjunct faculty positions and thus coping with employment uncertainty are subjected to "audit cultures" that mobilize managerial technologies for perpetual evaluation of individuals – ostensibly to ensure accountability, fidelity to university-sanctioned standards of practice, and achievement, by the university, of high rankings in prestigious national and international higher education polls (Shear & Hyatt, 2013; Shore & Wright, 2000; Strathern, 2000).

Whether within academia or outside, the shift toward a neoliberal rationality also generates problems relating the student loan trap faced by many U.S. graduates (Shear & Hyatt, 2013). For my purposes here, however, it is insufficient only to acknowledge the neoliberal university-system's role in creating precarity; one needs also to examine how the university system has come to contribute to that situation. One reason for U.S. student debt arises from a neoliberal push against seeing higher education as a public good. Starting in the Reagan era when the Cold War was drawing to a close, this has led to a general decrease in public funding for universities.[66] Consequently, many U.S. public universities have increased tuition fees whilst also seeking to recruit higher fee-paying out-of-state and international students (Giroux, 2014; Shear & Hyatt, 2013). In other words, a tactic to address budgetary planning gaps has been for U.S. universities to place their funding burden on domestic and international students, making U.S. higher education even more expensive than immediately previously. Students have thus needed to take on substantial student-loan debt.

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[64] Lucena (2005) provides a thorough history and problematizes the notion of a "pipeline" through which PhD students go.

[65] Most often expressed in the form of non-tenure track (adjunct) faculty on short-term contracts.

[66] IUPUI itself has not been affected by the most severe forms of imposed austerity. The state of Indiana has managed to keep funding for public universities constant from the time of the 2008 recession to 2018. According to Atkinson (2019), Indiana state spending per higher education student dropped by only 1.2% (inflation adjusted) during that period. According to IUPUI's 2018-2019 Annual Report (https://strategicplan.iupui.edu/StratPlanContent/Html/Media/StrategicPlanContent/CampusAnnualReports/2019/PDFs/IUPUI_Annual_Report_2019_Final.pdf, accessed 17 September 2020), 237.8 million USD of IUPUI's fiscal year 2019-2020 budget – totaling 1.6 billion USD – was to come from state appropriations.

The decrease in universities' public funding has also impacted the responsibilities required of faculty whom institutions expect to obtain external research funding. Both tenure-track and non-tenure track faculty are now burdened, in already uncertain conditions, by having to compete for limited external awards which, if received, are then top-sliced to cover overhead costs alongside covering the costs of their research – all in order simultaneously to support the nation's defense. Even faculty at IUPUI, which has not experienced sharp decreases in public funding, have significant pressure to attain external funding.[67] This in turn leads to an almost imperceptible but widespread dissemination of the values and missions of funding agencies such as the NSF.

While my IUPUI undergraduate interlocutors were not part of an NSF-funded STEM education innovation,[68] my data below shows that they were still ensnared in the logic of defending a nation under threat, in two key ways.

Firstly, IUPUI's STEM schools – Science; Informatics and Computing; Engineering and Technology (where my student interlocutors were enrolled) – have received a great deal of NSF funding between 2015-2020, all in order to innovate in their STEM-education efforts. Accounting for just the NSF projects with which I am involved, IUPUI has been awarded more than $3 million over that time. It has also received millions of dollars more for STEM-education projects awarded to other faculty. Significantly, 58.5% of these received funds are immediately top-sliced for university overhead costs, with a percentage of that percolating down to the school and department of the awarded faculty member. What this means is that, although my student interlocutors were not directly involved in an NSF grant-funded project, the education they received in IUPUI's School of Engineering and Technology, which operates at the level it does, is in part, due to federal investments in IUPUI's STEM-education efforts. Simply put, the federal government, which desires well-trained, STEM graduates, a category to which the *Commercial Construction* students belong, effectively helps fund their education.

Secondly, students enter into university already indoctrinated into the American Dream (more on this below). They are, in other words, in pursuit of middle-class livelihoods and career development. Arguably, through their future specialized labor, they will defend

[67] This is exacerbated for those seeking job mobility by their having to demonstrate that they have successfully attracted grant funding.
[68] Indeed, my student interlocutors were not *directly* part of an NSF project. However, some of my thesis project's early research findings informed an NSF-funded project under its Cultivating Cultures for Ethical STEM mechanism.

the nation against the threat of losing out in a global competition for market dominance and, in return, they will earn a living (wage).

The phenomena seen here are, I would argue, as much about the defense of the nation – particularly its ascendancy in global markets – as about the naturalization of a neoliberal form of capitalism that has been fused with the operational logic of U.S. higher education. Underlying all of this are beliefs, values, and practices that constitute the design logic of capitalist modernity. Not only are universities often steered into helping the U.S. compete against other nations for domination of a reified global market, they also privatize much of the risk to which they are institutionally exposed[69] and they compete amongst themselves. Students are in a similar situation since they must, in the absence of a state supportive of the public good, be responsible for their own being and their becoming something of value (i.e. an in-demand product) within the market.

The preceding sections and paragraphs reflect how ontological dualisms and modern beliefs in the individual, in the real, in science, and in the economy can be seen to underlie the political rationality of neoliberalism and, in turn, how the higher education system has come to be structured around those beliefs. As I show below, IUPUI is not immune to these *en vogue* neoliberal articulations, which are actualized in many ways. This thesis, however, cannot aspire to interrogate each of these[70] so, for my present purposes, I limit my focus to the discourse of IUPUI's marketing strategies for attracting students and the ideology of professionalism.

In the sections comprising the remainder of Part III of this chapter, I first explore how my student interlocutors perceived their reasons for pursuing their education at IUPUI and how these reasons aligned with their vision of the American Dream. Using a conceptualization of *homo economicus*, I examine how students pursued aspects of the American Dream and strove to enhance their specialized labor power. I then examine IUPUI's marketing campaign, titled "Fulfilling the Promise" as adjacent to my interlocutors' articulations of the American Dream. Second, I examine the idea of professionalism,

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[69] The privatized risks of higher education do not, however, stop at financial implications. There are also reputational implications, particularly the risk associated with an institution being held accountable for unethical research behavior by its researchers. IRB is used to limit such risk.

[70] IUPUI utilizes a "responsibility-centered management (RCM)" budgetary model. Under RCM, revenue generated by units on campus (i.e., "schools") is managed directly by those units. For example, IUPUI's School of Engineering and Technology's revenue (e.g., tuition fees) remains with and is managed by the school, as opposed to a centralized office collecting and redistributing such revenue across the university. The university does appropriate some revenue from these units through a kind of "taxing." While I do not explore RCM further in this thesis, I find it important to acknowledge it as one relevant neoliberal articulation at play in IUPUI's structure.

particularly the ways in which it appeared to act as a kind of disciplinary technology in the *Commercial Construction* course.

The American Dream and Interior Design Students

Lawrence Samuel has described the American Dream as "the mythology in our [i.e., the U.S.'s] cultural DNA" (Samuel, 2012: 196). It is not hyperbole to present the American Dream as the nation's sacred narrative. As a child in primary school (in the mid-1980s and early 1990s), I learned of the first Thanksgiving – a supposedly "multicultural" feast shared between Native Americans and early pilgrim settlers who came to North America searching for "freedom," particularly religious freedom. The story was never sullied by mention of the actual historical violence of Europeans' settlement and expansion in the Americas. No smallpox blankets. No manifest destiny. No "Indian Wars." No resettlements. No genocide. I suppose those things were introduced later, in secondary school; but, at least for me, that was only as partial historical retellings that were never critically examined. There was no sitting with the shame of this history, no pondering about accountability, no consideration of reconciliation and amends – that is, unless one entertained such thoughts in one's free time. To critique the American Dream, the belief that this land – at least for those of European descent – held an almost supernatural potential for a better life, felt somewhat heretical to me as a youth.

I was born a white male to educated middle class parents, so it is unsurprising that the myth made sense to me as a child. The American Dream seemed accessible for me, in large part because my parents were daily models of it. Of course, America was "the land of opportunity." I was told that here I had freedom; I could grow up to be anything I wanted; I could make the world a better place; I could live comfortably, own a house and a car, have a rewarding career, and build wealth and opportunity for my family. There was also the possibility that I could one day be counted amongst the wealthy of this country, that is, if I worked hard enough and got a good education (or became a celebrity, in my case, a rock star). According to Samuel (2012: 7):

> … upward mobility has served as the heart and soul of the American Dream, the prospect of "betterment" and to "improve one's lot" for oneself and one's children [are] much of what this country is all about. "Work hard, save a little, send the kids to

> college so they can do better than you did, and retire happily to a warmer climate" has been the script we have all been handed.

More specifically, it is a script providing a charter for the individual of capitalist modernity. While such an individual may be imagined in the image of the European white male, the values and beliefs of capitalist modernity are powerful appendages of the consciousnesses of the colonized, making the script of the American Dream not just a white male imaginary, but a modern imaginary.

Following this script means working hard, embracing independence, navigating pressure from family and friends, and shaping oneself into something highly valued so that one can be competitive in the labor market. In that context, the U.S. university system becomes similar to a factory where the raw material of the individual is shaped into a valuable form of specialized labor power. Selling this labor power is key to achieving the American Dream. But first, one's value must be translatable in the labor market. This is where the U.S. university system enters the script.

Each year, millions of Americans seek to achieve the goals of the American Dream by entering the university system. The reasons that students pursue higher education has been the subject of many statistical studies. While there are nuances – too numerous to relate here – pursuit of a career or a better job is always prevalent among those reasons, if not the most important (Balloo, Pauli, & Worrell, 2017). Career preparation is a key function of the university in the cultural myth. Each of my student interlocutors reported that they, in some way, imagined their time spent at university as a time of preparation for their future job prospects or careers (see examples below).

That said, each student's personal reasons behind their educational pursuits and corresponding career aspirations were unique. For some, they were returning to higher education after time spent as a stay-at-home parent and/or after a brief stint in the professional world and seeking further education in the hope that it could enable "job satisfaction" or "a decent paycheck." Many described a satisfying job as one that allowed some freedom to use one's design talents in ways one found interesting. The following brief case studies illustrate the diversity of motivations students told me had brought them into the IUPUI course.

Janis and the Search for Job Satisfaction

Janis, a student in the Fall 2017 cohort, reported seeking "job satisfaction" when she returned to university after nine years in the workforce following her first bachelor's degree in the fine arts, specifically textile design. Janis described working for a few companies during those nine years. First, she had worked for a textile manufacturer in Cincinnati for a couple of years before the 2008 recession left her and several of her co-workers unemployed. She then moved to Indianapolis where she had worked as an account manager for a commercial building maintenance business for nearly three years. She added that, with this job, she "made a lot of money…but did not enjoy it." She explained that she had wanted to again work for a company that was connected to the arts and had accepted employment at a business that designed and built parade floats, as well as other "one-off sculptural pieces." Whilst Janis was involved primarily in sales she also worked closely with a group of interior designers. Working with them, she reported, helped her realize that she "wanted to be doing what they were doing" And so she decided to enroll for a degree in interior design at IUPUI. After having experienced nine years of unfulfilling jobs, Janis deeply desired job satisfaction. She stated: "I know I need to work, probably for most of my [if not] the rest of my life. And…I want to be somewhere where I'm happy." IUPUI's interior design program was, she reported, a way for her to actualize this desire.

As evident in the above brief case study, Janis' pursuit of job satisfaction was arguably a piece of her American Dream. Her efforts to attain another degree and potentially to find job satisfaction was clearly connected to Samuel's (2012) characterization of the American Dream as concerned with personal "betterment" and "improving one's lot."

Amira: Family and the American Dream

Amira, also in the Fall 2017 cohort, was similarly in pursuit of a better life albeit with a slightly different focus. Whilst she also expressed interest in job satisfaction, her purposes in being in the interior design program were overwhelmingly focused on her complex familial relationships. At many points during our conversations, Amira stated: "my family is my drive." During my initial interview with her, Amira painted herself as a young, devout Muslim woman of Syrian descent – she was born in Idlib, Syria – committed to the upliftment of women in "Arab culture." Many of her concerns around women in "Arab culture" derived from her having heard about and witnessed her mother's struggles. After having been widowed and left with three children whilst still in Syria, Amira's mother was

pressured by family to marry another man. This marriage produced Amira and her two older brothers. Their father migrated to the U.S. with their mother and his three young children, leaving his by then adult step children behind in Syria – something that Amira lamented about since, as of 2017, they were living in a refugee camp in Germany.

Amira was hyper-vigilant to avoid speaking ill of her father. But I still got a sense that her father was not entirely reliable and that that may have been why her parents' marriage ended in divorce, an event which again left her mother alone and having to take care of three young children. Amira reported that much hardship had followed for their single parent household with her mother working many jobs "just trying to make things work out." Eventually, through the local mosque, Amira's mother was set up with an "American" man, who eventually became her husband and Amira's stepfather. Throughout their adolescence, she reported, her brothers struggled behaviorally; she portrayed them as "not the best role models" who "went up and down in their li[ves]." A consequence, said Amira, was that she felt as if she was "the last one; my family are relying on me" – a feeling, she added that brought tremendous pressure. "At this point, I don't have the chance to kind of do what I want to do. It's more like I have to do what is best and what will get me to a point where I could treat myself, as well as my family."

Amira expanded considerably on the notion of "reliance" in our interviews. While, for her, reliance had underlying material aspects, it was perhaps even more about Amira having to strive to be the kind of person her parents could count on to not be a disappointment, one who could give them the "assurance" that "[she] will be OK" and able to take care of herself. In her earnest and heartfelt speech, she communicated to me a deep desire to become the best she could be and, in doing so, become a boon to both herself and her family. While she joked that she did not aspire to be a "millionaire" – just a "decent paycheck" – she wanted to be seen as a success, almost as if she needed to succeed where her brothers had failed.

Amira's story illustrates that the American Dream of personal "betterment" and "improving one's lot" is as much about finding job satisfaction and a decent pay check as it is about overcoming precarity and disappointments in one's personal and family life. It shows how, to do that, students recognize a need for knowledge and skills that makes them competitive on the job market. Additionally, according to Amira, her success was what her mother and stepfather wanted as part of their own American Dream. The language Amira used to describe her reasons for entering university, and for working toward an interior design degree, also reveal the tremendous pressure on students such as she to be successful.

Neil: In Pursuit of Success

Neil, a student in the Spring 2018 cohort, was in pursuit of success at IUPUI. He reported that he wanted, upon graduation, to work in residential interior design studio. Neil was a very outgoing student and well-liked by his peers in the class. Beth sometimes used him as an assistant, particularly during Revit training sessions, because he had a bit more experience in Revit than many of his peers. When, during our first interview, I asked Neil about his personal values, he stated:

> **Neil**: I want to be a success, I guess.
> **Grant**: What does that look like for you?
> **Neil**: [Being] successful I would say is obtaining, well, definitely more knowledge, I think. I think knowledge is power. That's why I want a lot of certificates and a couple of degrees, if I can…I want people to think that I know what I'm talking about.
> **Grant**: So, being successful is having the knowledge that gives you some authority?
> **Neil**: Mm-hm [affirmative]. And obviously, maybe see it about me…the successfulness. Like, I buy the house I have one day. I don't know. I like, I guess you could say, nice things [laughs].
> **Grant**: [laughs] Expensive taste?
> **Neil**: Expensive taste. Yes. I guess you could say that's why I like [residential interior design] as well. I think it all goes together kind of.

For Neil, IUPUI was a place he had come to for knowledge, knowledge that would give him some kind of power over how others saw him. His education could both make him successful and give him the appearance of success. From Neil's perspective, it seemed as if knowledge was a kind of commodity – one that could also be seen as the means for him to generate the income needed to conspicuously consume the kinds of products that exhibited success to others.

Subjectivity and Homo Economicus

The American Dream looked different for Janis, Amira, and Neil. However, the myth of personal and familial betterment that American life promised loomed large over their educational efforts. Put differently, each, as well as their Commercial Construction peers, pursued a degree at IUPUI as a form of investment in the self toward the end of personal

and/or material benefit in the future. This aligns with the idea of a particular kind of human subject: *homo economicus,* which, it could be argued, is the neoliberal subject *par excellence.*

Before unpacking the many notions that are wrapped up in the subjectivity of *homo economicus*, it is necessary first to briefly define what I mean by subject, subjectivity, and the French concept subjectivation. To preface, my conceptualizations of these terms are distinct from the conceptualizations these terms may be given within the onto-epistemic framework of capitalist modernity, which reifies the notion of complete, essential individuals. Were I to hold tightly to such a vision of the individual subject, there would be little opportunity to theorize change. My conceptualizations of the human subject are, rather, indebted to post-structuralism and, even more, to Alfred North Whitehead's process philosophy on which I draw in later chapters. For now, I focus on post-structural conceptualizations of the subject, conceptualizations which reject those of capitalist modernity whilst providing a way of thinking about the human subject that facilitates both problematizing the subject of capitalist modernity and imagining the possibility of a dynamic becoming subject.

The word "subject" is typically associated, and sometimes equated, with the word "self." Both words bring to mind other related words, such as "I", "person", and "ego." However, the word "subject" is much more associated than the word "self" with persons being affected by socio-political power. Mansfield (2000: 2) aptly distinguishes the often-interchanged concepts of "self" and "subject" by asserting that the concept "subject" implies socio-cultural "entanglement" that the "self" concept fails to express. While it is admittedly difficult to imagine a "self" divorced from all relations, the "subject" concept immediately harkens to its embeddedness in relational webs of interconnectivity, where power and affective force are always at play. Therefore, I use the idea of a human "subject" to refer to a socio-culturally embedded self.

It is, moreover, important to stress that a subject has no essence; it is always in flux, emerging and re-emerging as an assemblage of related components inherited from its own expanding experiential history. No subject is a pre-existing given. Rather, it is formed and constituted through an interconnectivity of relations. "Subjectivity", on the other hand, refers to the *experience* of being a relationally created self – one always in flux. "Subjectivity" refers to how a self – comprising its emergent truths, desires, affects, and practices (the becoming aggregate of one's past) – relates to its self, to others, and to structural/discursive power where each of those is embedded within a specific and compelling present moment that is always hurtling toward a future of seemingly infinite potentialities. In other words, a

subject cannot help but be immersed in relations; its subjectivity informs the specific ways in which it goes about relating to the affective forces it encounters.

The componential constitution of any given subject is constantly exposed to potential forces of (dis)integration as components, such as knowledge, are brought to bear on present events that challenge continued acceptance of any given component and/or offer alternative understandings. Either way, a new subjective configuration, a new subject, appears at the end of each such encounter. In this framework, one which has it that there is no static essential self, the subject is productively conceived of as "non-unitary" (Braidotti, 2006). In other words, the subject is not an unchanging unity, but a unity that is (re)made through the relational multiplicity within any given event.

Subjectivation signifies the process by which the subject becomes (Deleuze, 1988; Foucault, 1990; Guattari, 1995; Rabinow, 1997). More specifically, subjectivation is a process of becoming by which the components of one's subjectivity are modified, reinforced, or potentially switched for new components through one's reflective and/or subconscious experience of continuous events (Fore et al, 2015; Guattari, 1995). Finding much of its origin in Foucault's analyses of Greek, Christian, and sexual subjectivities, subjectivation has been described as a "self-fashioning," or, according to Braidotti (2006: 124), as a "self-styling."

Arguably developing Foucault's work on subjectivation, Guattari (1995) introduced a typology of three "assemblages" that impact modes of subjectivation: pre-capitalist, capitalist, and post-capitalist (see O'Sullivan, 2010: 259-263). While admittedly an oversimplification, what is important here is that the idea of aesthetics – first present, suggests Guattari, within the pre-capitalist assemblage, is then mostly abandoned in the capitalist assemblage and then, only later, reemerges in the post-capitalist assemblage. The capitalist assemblage is one of fixity, categorization, control and transcendent aspiration. It is one that provides a milieu for modes of subjectivation that give rise to subjectivities that Foucault described as neoliberalism's *homo economicus*: an entrepreneurial subjectivity that, in subjecting *life* to economistic analysis, finds pleasure in financial self-advancement, competition, convenience and security (Foucault, 2008; Read, 2009). According to Guattari, as I show in later chapters, a nascent but budding ethico-aesthetic paradigm of mutual implication and creation across multiplicity also resides within this capitalist assemblage. Rather than the mode of subjectivation being fixed in terms of a transcendent form, that nascency expedites a tendency towards fluid and nomadic subjectivation that involves self-fashioning through engagement with the totality of difference each self immanently encounters in continuous present events.

Before working with these ideas, however, I now further explore the neoliberal articulation of *homo economicus.* I then move onto other affective forces that challenge my student interlocutors' purely neoliberal formulation of their subjectivity.

The political rationality of neoliberalism leads individual human subjects to fashion themselves precisely in ways that reflect/rehearse the discourse of the economy being entangled with individuals' living in all aspects of their respective lives. Hence, each neoliberal subject tends, predominantly, to self-fashion according to supposed "common sense" notions, such as that humans are rational, profit-seeking individuals each striving for maximum return with minimal investment. Consequently, each one appreciably, but not entirely, embodies the values of *homo economicus* through undertaking self-fashioning work as a kind of entrepreneur (Read, 2009).

According to Read (2009: 28), this entrepreneurial ideal reflects a facilitated acceptance of a configuration of the worker as "human capital." From such a perspective, such "human capital" – whether conceived of as one's outward appearance, biological potentials, or intellectual talents and capacities – must be invested, and, as with any "good investment," should produce additional capital capable of being further invested or sold, perhaps eventually as labor power. For example, a university student invests their personal "human capital" in order, hopefully, to become something more skilled and knowledgeable. This transformed capital can then be "reinvested" or else commoditized by being sold to employers seeking the labor power of those appropriately skilled.[71]

The above arguably illustrates a common trajectory for the fulfillment of the American Dream. My own educational history and present – like those of my student interlocutors – is very much grounded in the logic of "human capital." In fact, my drive to write this thesis is, on some level, fueled by a desire to realize "profit" (e.g., job satisfaction and advancement).[72] This is unsurprising considering the political economy and broader societal discourse around higher education which is fundamentally concerned with training

[71] The concept of "human capital" is not without its problems. The very idea that "I am human capital" seems contingent upon neoliberal forms of sense-making that makes capitalists of us all. What the "human capital" concept misses is that the Marxian concept of capital is a relation – an exploitative one between owners of the means of production and wage laborers – and not a thing. "Human capital" removes class from the economic equation and reframes one's specialized labor power as wealth thereby concealing the actual relations of capitalism that make specialized labor power a commodity to exploit for profit. For a more detailed critique of "human capital," see Bowles and Gintis (1975).

[72] I was driven to complete this thesis by more than just job satisfaction and advancement. I have a deep passion for the teaching and learning of ethics, especially as regard the potential for ethical thought and action to challenge the reproduction of capitalist modernity and to create something new. Moreover, I cannot deny this complexity to my student interlocutors; later chapters reveal alternative affective forces that influence their design processes.

middle class students to potentially, though not always actually, catapult them into a pool of highly specialized (professional) labor. Moreover, STEM education – of which architectural technology and interior design are a part – has arguably become a hegemonic goal for U.S. higher education, affecting policy and praxis in order to mold students to meet STEM labor market needs (Ellison & Allen, 2016). Here, we again witness echoes of the role the U.S. university system plays in the defense of a nation constantly under some kind of threat.

The dehumanizing perspective of "human capital" considered above is, however, less an explanation of social reality than a form of governmentality, a term referring to a pervasive mentality that influences how one is governed by macro structures, such as the state and the market; and how one, in turn, governs (or fashions) one's self and others in everyday contexts (Foucault, 2008). It appears that it is in the mold of *homo economicus* that many people – myself and my student interlocutors alike – are, at least in part, (self-) fashioned into subjects under neoliberalism. Below I explore how IUPUI and the *Commercial Construction* course itself contributes to the production of *homo economicus*.

Summarizing this chapter's argument thus far: I am using the term *homo economicus* to refer to the self-fashioned form a subject takes (at least in the U.S.) to realize the promises of the American Dream, itself a cultural myth expressing the political rationality of liberalism that, in turn, is made possible by the onto-epistemic framework of capitalist modernity. While this summary addresses how human subjects, such as the students in *Commercial Construction*, respond to the affective forces that flow from Eurocentric ontology, discourse/ideology, and cultural myth-making, it fails to account adequately for the larger political economic purposes and consequences of the cultural myth. It is, therefore, important to return to the political economic role of the university and the university system in which it is ensconced. I do this specifically by exploring how, in taking a role in the defense of the nation, IUPUI – like its peer institutions – serves the interests of the capitalist state. Below, I examine how, if at all, IUPUI (1) reified the cultural myth of the American Dream, along with that dream's neoliberal baggage; and (2) facilitated student actualization of personal betterment. The broader question is thus: *how, if at all, did IUPUI as a prominent, local institution of higher education, recognize and perhaps harness the power of the cultural myth that is the American Dream?*

"Fulfilling the Promise": The American Dream and IUPUI

Coinciding with the beginning of my ethnographic research in 2015, Indiana University (IU) began a new marketing campaign that adopted as its tagline, "Fulfilling the

Promise." All IUPUI's marketing endeavors had to have this tagline present: to be "on brand." The tagline was present on billboards around the state, since IU operated eight satellite campuses distributed across Indiana. Driving in Indianapolis one frequently saw multiple advertisements –on city buses and billboards – asserting that IUPUI fulfills "the promise." The advertisements drove me crazy as I travelled through the city. Without any supporting description of the promise hinted at in the tagline, the advertisements came off as rather nebulous. What was *the* promise? Was it the unique promise of the capacities within every individual? Could it have been the promise of the American Dream?

By seeking out more IUPUI Public Relations material, I discovered that "the promise" was actually a series of promises that IU and IUPUI sought to fulfill. IUPUI's internal messaging (e.g., newsletters, bulletins, reports) between 2015-2020 (the tagline began being phased out in June 2019), commonly mentioned multiple promises that a school, department, institute, or center was working to fulfill. This multi-promise focus was most evident in three IU/IUPUI marketing videos produced from 2015. The marketing videos –which I call "promise" videos – contained triumphant music and images of a joyful and diverse student body participating in exciting educational and extracurricular activities. Each of them also made many claims about promise fulfillment.

The earliest "promise" video I could find was posted to YouTube on January 30, 2015 (see https://www.youtube.com/watch?v=VSL55uE8aGA&feature=emb_logo). Attributed to Indiana University, it featured all of its satellite campuses and was backgrounded by triumphant music. Its main content revolved around a series of promises that Indiana University claimed to offer to "students of all backgrounds."[73] In the following order, these promises were identified:

1. The promise of the dream
2. The promise of a lifetime of success
3. The promise of a community where you belong
4. The promise of faculty who inspire
5. The promise of degrees for dreamers, doers, & leaders
6. The promise of an education that works anywhere
7. The promise of helping Indiana thrive
8. The promise of an environment of endless curiosity

[73] IUPUI's version of this video changes this language to "students as diverse as the city's skyline" (https://www.youtube.com/watch?v=1ahX9X-5PsY)

9. The promise of friendships that never fade
10. The promise of something bigger than yourself
11. The promise of preparation for whatever comes next

Figure 11: Screen capture of an image from IUPUI's first "promise" video

Each promise gives insight into IUPUI's institutional intentions toward its students and into its public purposes at the time of my fieldwork. Most telling was its immediate focus on "the dream" (see Fig. 11) and on "a lifetime of success." Taken together, these two promises associated the service/product IUPUI was offering – a university education – with realization of the American Dream. These were huge promises that were arguably impossible to fulfill. However, the final promise (#11) tempered the first two: IUPUI offered "the promise of *preparation* for whatever comes next" and perhaps that preparation would lead to the fulfillment of the promise of the American Dream and a lifetime of success. While I could further unpack the video's cultural messaging, doing that here would distract from my main concern with representations of the American Dream and of neoliberal values. I therefore move on to IUPUI's other two "promise" videos to explore those concerns.

The second "promise" video attributed to IUPUI was posted to YouTube on March 5, 2015 (see https://www.youtube.com/watch?v=1ahX9X-5PsY). While it had the same format as the first video, its music, while still dramatically moving, was different, as were some of the images. There was also a slight variation in "the promises" it offered. For example, its first mentioned promise was "the promise of Indiana University and Purdue University degrees" while the first video's most prominent "the promise of the dream" (#1) was curiously absent. However, the second video included promises of "preparation" and "a

lifetime of success" thereby still offering a sense that an IUPUI degree provides personal and material betterment, as present in the American Dream.

The promise of "the dream" (#1) reappeared in the third "promise" video, posted to YouTube on July 6, 2015 and also attributed exclusively to IUPUI (see https://www.youtube.com/watch?v=O6_Vs1bLWzY). Not only did this third video once again explicitly reference "the dream", it also rehearsed the triumphant music of the first video. In addition, it articulated new promises including "the promise of a chance to reinvent yourself" and a somewhat nebulous "the promise of a legacy of strength" which seemed to replace the first video's "the promise of preparation for whatever comes next" (#11) With no emphasis on "preparation," the huge promises of "the dream" and "a lifetime of success," which bookended this video, seemed to stand alone. Strikingly, the third video's "the promise of a chance to reinvent yourself" is likely, in part, to refer to IUPUI's history as a university that caters to "non-traditional" students who return to higher education after a stint in the professional workforce. However, one might also interpret the hearkening to "reinvention" of the self as revealing a neoliberal perspective with its subjectivity of *homo economicus* and emphasis on the pursuit of specialized labor power. As such, there are more discernible connections being made in this video than in the other two between the role of the university, the embodiment of the entrepreneurial values of neoliberalism, and the fulfillment of the American Dream.

IUPUI's marketing department appeared to believe that the myth of the American Dream, including the beliefs and values of neoliberalism it contains, inspired IUPUI's prospective student clients to justify their using it as a means to attract them to IUPUI programs. What the above shows is that *IUPUI's marketing materials were designed as promises that students would secure an opportunity to fulfill their American Dream through self-improvement*.

I have found Louis Althusser's (2014) theorization of ideological state apparatuses (ISA), of which educational institutions are part, useful for my analysis of the role of universities vis a vis the state. Althusser conceptualizes ISAs in relation to repressive state apparatuses (RSA) that comprise systems and institutions like government, the military, and the police. As he argues, while RSAs secure hegemony via law and order (including violent coercion), ISAs deliver ideologies that contribute to the state's sustainment in generally non-violent ways. As I have illustrated thus far in this section, IUPUI, and the U.S. university system writ large, acts as such an ISA by grounding its services in the fulfillment of the American Dream and in promises of a lifetime of success.

Ideology is not, as Marx put it, a "false consciousness" beyond which lies some concealed universal truth. Rather, ideology operates in ways that contribute to the (re)production of "cultural hegemony," referring to the violent and coercive structures, practices, and ideas by which the state and ruling elite maintain control (Gramsci, 1971). As Althusser (2014) has convincingly argued, there is materiality to such ideologies. In this chapter, I have illustrated this through explorations of (1) the historical fashioning of the U.S. university system as comprising institutions disseminating capitalist state ideologies and defending the nation from various perceived threats; (2) the reasons animating student pursuit of higher education; and (3) the ideological messaging present in the marketing videos produced by IU/IUPUI. Ideologies are made concrete in institutions and through practices. Both affect human subjects who, in turn, iteratively affect those institutions and sets of practices. In other words, ideologies possess affective force that influences – without determining – how and what human subjects become, whilst also contributing to the becoming of institutions and practices.

In agreement with Althusser (ibid.), the role of RSAs and ISAs is to reproduce the existing relations of production, which, as circumstances stand now, take a form in accordance with neoliberal capitalism. Universities seek federal funding to maintain their operations and, in doing so, commit to the defense of a nation under threat of not achieving global market domination. The funding also serves to train students to possess the specialized labor-power to fight such a threat. Students thereby intentionally pursue the development of their own labor-market potential at universities in order, eventually, to provide their labor-power and contribute to that fight even as they realize their American Dream. Ideology – of which the values and beliefs of capitalist modernity and neoliberalism are a part – makes this engine run without resorting to overt, repressive state violence.

Along with its reliance upon state and federal funding, IUPUI's "promises" point toward its operation being in concert with the interests of the capitalist state. Students in the Commercial Construction course – exemplified here by Janis, Amira, and Neil – desired the realization of their own American Dream and sought out a university education to facilitate their pursuit. In doing so, however, these students were unknowingly drawn into an ongoing national strategy to defend a nation perceived to be under threat of losing the war for domination of the global market. Through the myth of the American Dream, many university students, like my interlocutors, have been partly, and subtly, co-opted into working toward the interests of the capitalist state. However, as I aim to show as this thesis progresses, this is not absolute, as some thought and practice evades this capture.

In the next section, I turn to an examination of the discourse of professionalism, particularly how it was presented in the Commercial Construction course where I was a participant observer, and how some students valued and embodied it. By taking this approach, I aim to examine how, if at all, professionalism – as a particular set of practices – contributes to the development of students as *homo economicus*.

Instruction for the Becoming Designer: The Discourse and Embodiment of Professionalism

During Week 7, the Fall 2017 student cohort met at Big Car's main building, called the "Tube Factory," to present their interim floor plan designs to Big Car's personnel. To review, in this semester of the *Commercial Construction* course, students were working to create designs for Big Car's house renovation project which aimed to convert an old house into an artists' residency with living quarters and art-gallery space. The main contact at Big Car was Amber, an intern who currently lived in the house for which the students were creating their floor plans.

Arriving at the Tube Factory –a former manufacturing building that had been renovated to become an art gallery and community center – Amber greeted us and led us to a small (standing room only) workroom toward the back of the building. The students, Beth and I were all disappointed to discover that the students would be presenting their initial ideas to Amber alone with no other Big Car personnel attending. Beth and I leaned against a counter toward the back of the room leaving space around a large working table for the student presenters and Amber.

While the first presenter was setting up their poster board displaying their initial designs, three students walked in – about 15 minutes late. As we cycled through the students' designs, Amber gave sparse feedback, much of it appearing to reflect her personal perspective – as a resident intern – rather than the organization's. Amber thus provided nothing of Big Car's strategic planning as a non-profit organization. As the presentations proceeded, two students presented clearly incomplete floor plans that they did not meet the full expectations of the assignment (e.g., they had unmarked rooms or lacked a floor plan for one floor of the two-story building). After each student had presented, they were each meant to put additional questions to Amber. But she cut the meeting short to attend another meeting.

At the next class meeting, two days later (Week 7), Beth prompted the students to reflect upon their experiences presenting their interim floor plans to Amber. Amira, who had a habit of being unnecessarily hard on herself, began by lamenting that she wished she had been "better prepared" – she was in fact plenty prepared – for the "scary" presentation. The

tone of the conversation shifted rather suddenly when another student – Melanie, who at the time was a second year, interior design major and later became Beth's Spring 2018 teaching assistant – began reprimanding several of her peers albeit not by name. Melanie's discontent revolved around some students having come to the "client presentation" late, unprepared, and "dressed unprofessionally." She listed their wearing of sandals and of pants with holes in the legs to be the worst offenses of improper dress. She matter-of-factly asserted that if any of them "don't appear professional or prepared," then "it reflects poorly on all of us."

In the moment, I was surprised by Melanie's expressed frustration and am certain that my jaw dropped when she uttered her criticisms. During the meeting at Big Car, I had of course noticed the late arrivals, the lack of preparation and the casual dress; but I had thought little of it. I was also surprised that this critique was coming from a student and not from Beth, although she did add her own reprimand immediately after Melanie's.

In retrospect, I should not have been surprised by Melanie's impassioned reaction, given what I had heard during a class conversation on the first day of the semester. At the start of that class, Beth had posted five topics for discussion on the board. One was "[The] most frustrating behaviors [of] classmates [and] faculty." Under the "classmates" column, Melanie had written: "When things are explained multiple times (constantly throughout the class)." She then elaborated that she became frustrated when her peers asked questions about material already covered during the course. In an interview four weeks after Melanie's outburst, she and I further discussed her feelings around professionalism:

> **Melanie**: …so sometimes people, like, come in with their work not done. And I'm just, like, "Okay…" And it gets really frustrating; like having to go back and explain things over and over and over again…But then on the day after the presentations…
> **Grant**: You call that professionalism?
> **Melanie**: Yeah. I said, it's not like you're going into class, like, you're going to a client…Like, that's embarrassing…It looks bad on them. It looks bad on us. It looks bad on Beth. And it looks bad on, like, the whole school. It's like you don't know who you're going to run into when you're in the real world. And they're probably going to remember you as person who never

> had their work done, and everyone else was farther ahead of them.

For Melanie, professionalism was largely about preparation and consideration of the time and needs of others, particularly the time and needs of one's client. She also held an interesting belief that one's unprofessional behavior during university could haunt one once one enters the professional or "real" world, of which the university is seemingly not a part. It was as if unprofessional actions during one's education could leave one with a mark of shame – a shame that Melanie projected onto her peers during the class reflection.

Focusing again on occurrences during the Week 7 class: after Beth had given other students an opportunity to reflect upon what they had learned from the presentation experience, she proceeded to an extensive, uninterrupted speech on the importance of professionalism when they interacted with Big Car personnel. Beginning by asserting that Melanie's critique was "appropriate," she then reiterated that her intention was to run the course as a simulation of practice in an actual architectural firm. She told the students that she "would prefer they didn't show up at all" to presentations if their floor plans were incomplete or if their appearance was "disheveled;" and added that she felt she "needed to apologize" to Amber for some of the students' "lack of professionalism."

Beth's perspective here is unsurprising, for three key reasons. First, Beth was very passionate about preparing students for the professional world. When introducing herself on the first day of class, she had discussed her experiences in the architecture industry and how what she had learned from those experiences inspired her to become a university instructor. She told the students that she had left her career as a full-time architect to become an educator because she wanted "to ensure that students are better prepared for the industry." She reported that, when she had first started her career, she had felt unprepared for the world of professional architecture and that, having learned much from her formative experiences, she now desired to pass this wisdom on to the next generation of architects/interior designers.

Second, being employed in IUPUI's School of Engineering and Technology, Beth had to align what she was teaching with various criteria, including the student "outcomes" set forth by the Accreditation Board for Engineering and Technology (ABET). In her *Commercial Construction* syllabus, Beth paraphrased and retooled, for her course context, five ABET criteria/outcomes.[74] She articulated these as:

[74] See ABET (2017) for the original criteria and outcomes for 2017-2018.

- Apply creativity in the design of systems, components or processes appropriate to program objectives
- Function effectively in teams
- Identify, analyze and solve technical problems
- Communicate effectively
- Have a commitment to quality, timeliness and continuous improvement

While she interestingly neglected to include an explicit version of ABET (2017) outcome 3.f, which refers to "an understanding of professional and ethical responsibility," the outcomes she crafted still spoke to how Beth – and Melanie – thought about professionalism. In Beth's ABET-inspired list, the final outcome about having a "commitment to quality, timeliness and continuous improvement," was clearly echoed in Melanie's critique of some of her peers and Beth's critique of these same students, especially as it concerned the "quality" and "timeliness" of their work.

Third, Beth had dedicated a full page of her syllabus to "professionalism development," by which she meant "professional business skills." According to the syllabus, *Commercial Construction* students were expected to use the course as an opportunity for "practicing behaviors… considered acceptable in most work environments," as it was such practices that would "smooth the impending transition" from university to professional life. Beth also documented both her "expectations" and examples of "violations of professionalism" in the syllabus. Examples of the former included being "prepared" and "proactive," especially regarding how one engages in the design process, as well as observing a "courteous demeanor." As for the violations, Beth listed several, including tardiness, undocumented absences and multiple ways of "exhibiting disrespect" (e.g., occupying class time with unrelated activities, being disruptive and/or rude in emails/conversations). She ensured that the class reviewed the syllabus in its entirety on the first day of class in the semester.

To unpack the role and importance of professionalism further, I now briefly turn to an examination of distinctions between profession, professionalization and professionalism. First, professions are a "knowledge-based category of service occupations" (Evetts, 2013: 781). Professions – particularly those that involve significant risk so that specialized knowledge (and competence in that knowledge) is necessary – are perceived as needed to

reduce risk and to fortify public trust in the service (Evetts, 2013). Professions appear to form at the intersections of knowledgeable service, risk, and public trust. Second, the formation of an occupational group into a profession is characterized as professionalization. According to Evetts (2013: 782), professionalization involves the boundaries of such a group being drawn and then policed as a way to safeguard professional status and interests. Third, and building on Foucault's notion of governmentality, Fournier (1999: 281) describes professionalism as "a disciplinary regime of autonomous professional labor." As such, professionalism could be seen as a system of discursive practices designed to govern the conduct of autonomous professionals "at a distance" (Miller & Rose, 1990). While normative expectations of professionalism can come "from the top," such a characterization neglects the important role played by a profession's subject who works to fashion him/herself into a highly competent professional. Professionalism is then seen as a regulating "value system" that governs autonomous, flexible laborers who deliver professional services (Evetts, 2013). Since such autonomous laborers are not always under some sovereign body's direct surveillance, they must be able (and willing) to discipline themselves.

Beth exerted significant effort and forethought to bring elements of the "professional" world into her classroom in order to develop professionalism in students. This is evident in her appeals to professionalism and her inclusion of the ABET professional standards in her syllabus as well as in how she disciplined her students to manifest proper professional comportment. Beth's students, not unlike other U.S. university students, were being prepared to maintain existing relations of production – à la Althusser (2014). Professionalism was an important component needing articulation into the students' development of their specialized labor-power. Beth's class, however, was not simply subjecting students to this ideology. Students were pursuing it through potentially paying large sums of money to, at least in part, fashion themselves into something of value to the market and the interests of the capitalist state. In doing so, they were also working toward achieving the American Dream and, with each successful credit hour passed, IUPUI was getting closer and closer to fulfilling another of its promises.

Conclusion

I have argued and, illustrating with examples from the *Commercial Construction* course, here demonstrated that the dualisms, beliefs, values, and practices of capitalist modernity's design logic subtly affect the higher education offered by IUPUI. I have also

indicated that, as components of capitalist modernity, they articulate the political rationality of neoliberalism as well as its corresponding ideologies and technologies (e.g., professionalism) that are disseminated through ideological state apparatuses, which, according to Althusser, include universities. The U.S. federal government – through its funding of scientific and technological programs – produces, promotes, and implements strategies aimed to achieve and maintain global market dominance. Universities such as IUPUI must then adopt these very strategies as part of their mission in order to sustain their own operations. In doing so, they promote these strategies and the values of neoliberal capitalist modernity in various ways. One is that they often act as "factories" producing specialized, professional laborers. Another is that they provide a key service to multiple generations of Americans, all of whom have been socialized to believe and value an external and objective real, as well as their and others' individuality, their "well-trained" expertise, and their capacity for self-improvement toward desired ends that are theirs if they just work hard enough – high wages, comfort, convenience, (generational) wealth development, and life/work satisfaction. The *Commercial Construction* students pursued the American Dream, and, in doing so, they, probably unconsciously, sought a role in a society that utilized their labor in pursuit of global market dominance. IUPUI obliged their entrepreneurial verve and provided them with training; and state and federal governments have funded universities like IUPUI to do just that – as well as to contribute to the science and technology of innovation – all toward the state's economic progress.

Much of life is captured by these systemic mechanisms, but much – including encounters within these mechanisms – avoids apprehension. Using the *Commercial Construction* students as an example, my goal in Chapters 4 and 5 is to explore how, if at all, student designs reflected or revealed the plurality of relationships that constituted them. I do that by describing how students mapped out the lines of their design and considered the influences on them as they did that. The point of my doing that is to be able to assess how, if at all, a critical awareness of relationality's creative influence might provide means to problematize the neoliberal *homo economicus* whilst simultaneously establishing an alternative set of beliefs, values, and practices that promote relationality, interconnectivity, ecology, conviviality, care, and indebtedness. Subsequent chapters aim ethnographically to expand the above problematization of capitalist modernity's effects on students in higher education, to explore how students embodied alternatives, to identify an outline of an alternative onto-epistemic framework, and to suggest a pedagogical theory and the praxis needed to actualize worlds otherwise. Ethnography is a useful tool for revealing how

capitalist modernity and alternatives to it are both present in student designs and design processes, specifically because, as Shear and Hyatt (2013: 5) have pointed out, ethnography provides a way to "explore both the local manifestation of broader processes as well as to uncover areas of slippage, discontinuity and surprise."

You can go home again, the General Temporal Theory asserts, so long as you understand that home is a place where you have never been.
-Ursula K. Le Guin, The Dispossessed

Any form of art is a form of power; it has impact, it can affect change - it can not only move us, it makes us move.
-Ossie Davis

Chapter 4

'Once You Change One Thing, It Can Change Everything Else': Mapping the Affective Forces of Design Actants

This chapter's title chapter features a quote from Scarlett, a student in the Spring 2018 cohort that worked with personnel from the Kheprw Institute (KI). During each students' final presentation (Week 16), a member of KI asked: "What was your biggest challenge and greatest learning?" The quote in the title refers to Scarlett's expression of her biggest challenge throughout the design project.

Scarlett was a sophomore interior design student and a recent transfer student from Ivy Tech Community College. Like many other IUPUI students, Scarlett attended Ivy Tech to fulfill the general requirements for her bachelor's degree before transferring to IUPUI.[75] Before that, she briefly majored in criminology at Ball State University in nearby Muncie, Indiana. She offhandedly remarked, during our first interview, that she chose criminology because her "brother [was] a criminal." She spoke candidly of struggles growing up, including her father passing away when she was five and her brother's legal issues. Although she reported having few memories of her father, she proudly stated that he was an "overachiever" and had a "hard drive," both of which she claimed to have inherited from him. She reported that this competitive drive served her well in sports (e.g., gymnastics) and was evident in how she approached design work (see below). As regards her mother who

[75] Fulfilling one's general requirements at Ivy Tech is a common practice of post-secondary, working students in Indianapolis. This is because Ivy Tech's tuition fees are cheaper than IUPUI's. Moreover, a long-standing agreement with Ivy Tech means IUPUI accepts most transfer credits between the schools. As an Indianapolis native, I also attended Ivy Tech – where I earned an associate's degree – before transferring to IUPUI briefly in 2006.

raised her and her three brothers, she claimed to have inherited her creative spirit which was nurtured from an early age through her mother's many arts and crafts projects.

After abandoning criminology as a major and leaving Ball State, Scarlett returned to live with her mother. During this time, she stated that she was financially "broke" and reported "not lik[ing] that feeling." Though she worked as many as three simultaneous jobs, she found time to rekindle her love for drawing and began to experiment with interior design projects which she described as "redoing" both her bedroom and her neighbor's bedroom. It was her neighbor that suggested she return to school for interior design.

During our final interview, I asked Scarlett to provide some concrete examples of how changing one thing can change everything else. Considering Scarlett's specific responses, it appears that, for her, it happened in three ways. First, in seeking to include her perceptions of KI personnel's needs and desires, Scarlett had to change her design at different points in the design process. For example, in her color plans, Scarlett reporting feeling as if she had "built" all new walls for her design and excluded "existing walls." After designing her floor plan in this way, she discovered a note she had written stating that she should try to "keep existing materials" in her design. She stated, "I was like 'crap, okay, gotta go back. I gotta change all that'…and that changes all your dimensions for everything." The reasons Scarlett and many of her peers had for trying to keep as many existing materials as possible was connected to an overarching concern to align one's design with some of KI's core principles (e.g., "creating from waste"), as well as KI's budgetary concerns. While Scarlett ultimately retained minimal existing materials, her efforts to include at least one existing wall in her first-floor floor plans did require shifting the walls she had designed in her color plans. Those shifts, in turn, affected wall dimensions, room sizes, and door and window placements. Once something new took up space previously reserved for a different purpose, a chain reaction unfolded that demanded reimagining the spaces affected and, at times, code recalculations too.

Second, the International Building Code (IBC) dictated changes that she ultimately made to her design. Scarlett explained that on her first-floor floor plan she initially had no egress doors in her enclosed stairways. During Week 13, Beth had a scheduled meeting with each student during which she offered feedback on their Life Safety Plans. Beth informed Scarlett that she needed an egress door in the enclosed staircase located at the back of the house. Beth also encouraged Scarlett to "check stair enclosure requirements" to see if an egress door would also be needed at the front of the house. By working with Beth and the IBC, Scarlett reported, she had realized that her enclosed stairways required those egress

doors based upon the Occupancy Type – "Business" – that she had assigned to the space (see section below on IBC). She reported feeling that it was "not a huge deal" to have to add egress doors to her enclosed stairways, but she still felt a need to mention that these changes slightly "threw off the placing of things," particularly in the back enclosed stairway.

Third, Scarlett described how, when changes were made to the material makeup of a specific design element (e.g., a single door), Revit would automatically change the constitution of entire "groups" or "families" (e.g., windows, walls, roofs, etc.). She described this as "Revit changing stuff." According to her, this would occur if the internal materials assigned to a designed wall were changed. If she changed one wall, it changed the whole "family" of walls. Then, she lamented, if such a change occurred by accident, it was likely that she had no idea exactly when the change had occurred; therefore, simply undoing her actions would remove all her work done between her making the mistake and noticing it. She stated, "Then you lose everything, so it was kind of just going with it." Experiencing a state of resignation and "just going with it," drew laughs from us both. Similar to Scarlett's experience, these user-error chain reactions affected me on several occasions as I sought to learn how to use Revit. In those moments, it was easy to believe that Revit – like other technologies – actually wished one psychological harm.

Defining Design Actants

This chapter is concerned with what I have called *design actants*, which, following Latour (2004b: 75), are any entities capable of intervening and affecting change within an emergent design. Latour (ibid.) distinguishes actants from actors to avoid "anthropomorphism." In seeking to avoid modern dualistic binaries (e.g., human/non-human, life/non-life, subject/object), I avoid such a distinction. Rather, I use the word "actant" to refer to all entities possessing affective force within the moments of design experienced by students. I do that because I am concerned with all things (including humans) that have affective force. The design actants described in this chapter include anything that my student interlocutors said had a direct and obvious impact on the constitution of their design iterations. They could be human, as in the case of the feedback provided by KI or Big Car personnel, or they could be more-than-human (e.g., IBC and built environments). All actants have affective force and all affective force holds potential.

I include particular design actants here when an actant's effect can be clearly traced through design iterations. In other words, I am concerned only with design actants to which

one can assign some responsibility for a given design feature or a design change across a design's various iterations. However, I do not explore Revit as a design actant. No student ever told me that they had designed something a certain way because of Revit "not working," or that they changed a floor layout because Revit made it (im)possible to do so. While the Revit software certainly caused great frustrations for the learning students, the "buggy-ness" they described of Revit is not easily observed in the design artifacts. Nor did students describe its effect on their design choices when they reflected upon the process. Rather, students articulated their struggles with Revit as a part of their own design and learning narratives throughout the course. Revit was the means of their designing and, as such, students' knowledge of Revit, or their lack thereof, impacted what they could design – and their overall design experience – just as much as any reported flaws in the software. Revit undoubtedly affected every aspect of students' designs because it was the sole way in the *Commercial Construction* course that students actualized their design ideas. Yet, while Revit certainly is a design actant, its affective force is far too generalized for the particularistic examination I am concerned with here.

As entities possessing affective force, I conceive of design actants as the persistent modifiers undergirding Scarlett's epiphany that "once you change one thing, it can change everything else." While the three examples taken from Scarlett's experiences are illustrative, they are not exhaustive. In this chapter, I unpack the relational complexity of the design processes in which students were immersed. By describing the relationships etched into design iterations, I explore, in this chapter and the next, how, if at all, through participating in the design process, the *Commercial Construction* design(er)s were becoming subjects via relationality – a relationality that included more than the mere components of neoliberal subjectivities documented in Chapter 3. How, if at all, did students demonstrate care and concern for these design actants? If care was provided, how, if at all, did students rationalize such care practices? Did they do all of this *ethically*?

Notes on Design Artifacts

As described in Chapter 1, student design artifacts were the key bits of empirical data for this study. As such, participant observation notes, interview data, and other student assignments were triangulated in order to reveal the relationships that constituted the student design(er)s. As also described in Chapter 1, for each student's end-of-semester interview, I designed a personalized interview protocol after analyzing relevant field notes, life history

interviews, and student assignments. I then used that to facilitate a co-interrogation between the student designers and me of each iteration of their design. I identified design actants and saw their relations revealed through this process. However, in order to clearly present these design actant themes, it is necessary to be clear about the design artifacts and their categories (see Table 1 in Chapter 1): color plans, interim client presentation plans, life safety plans, final floor plans, and final construction documents.

The **color plans** were the first version of a student's floor plan. At this point, all students had had at least one visit with their "client" and had toured and taken measurements of the building they would be redesigning. In the classroom, students were just getting acclimated to the Revit software. According to Beth, color plans were to be used to convey design ideas to clients who likely lacked architectural expertise and did not need all the dimensions, elevations, wall section details, and ceiling plans, which required Revit competency the students did not yet have. Color plan creation provided a practical introduction to some of Revit's basic functions (or a refresher for students with some prior classroom exposure to Revit). To complete a color plan, Beth and her teaching assistants walked the students through drawing walls, placing doors and windows, naming rooms, assigning colors to different rooms, creating a room legend, and calculating each room's area.

Following the design of the initial color plans, the Fall 2015 and Spring 2018 cohort revised them. These revised color plans were then presented to KI personnel. Beth and the students described these as **interim client presentations**.[76] The revisions comprising these floor plans were constituted through a growing familiarity with Revit, the IBC, the client's desires, Beth's comments, and the students' "design concepts." According to Beth, the required one-word design concepts were needed to "reinforce our client's values and mission" in the students' minds. Throughout each semester, Beth repeatedly set the expectation that each design must "reflect" the designer's design concept, and that the student designer must be able to explain how their design concept informed their design.

The third iteration of the student designs was their **life safety plans**. In Chapter 2, I quoted Beth describing the life safety plans as the "graphic instructions" of the code study which was to be included as a supplementary document with all life safety plan submissions. So, as students created their life safety plans, they were expected to critically consider and explicitly outline criteria of the IBC to which any design would need to conform. For

[76] Since meetings with Big Car fell a little later in the semester than in the Fall 2015 and Spring 2018 semesters, the Fall 2017 cohort that worked with Big Car just presented their initial color plans. Therefore, there were no interim client presentation designs from the Fall 2017 cohort.

example, students were graded on how well they – as stated in the assignment instructions – "graphically illustrated" essential IBC criteria, such as fire ratings, maximum travel distance to each exit, occupant loads, accessibility, and restrooms. With the life safety plans, students' designs were expected to explicitly reflect professional safety standards. This pursuit of safety was the most direct and obvious way that ethical considerations were etched into the design.

The fourth and fifth iterations were the **final floor plans** and the **final construction documents**. As the names suggest, the former was to be the floor plan designs in their fully realized form, and the latter was to compile all floor plans (with precise dimensions), revised life safety plans, external elevations, ceiling plans, and wall sections.[77] In other words, the final construction documents contained all final revisions, as well as the specific information required to guide those who would construct the building. It was most often the case that the floor plans submitted for the "final floor plans" assignment were identical to the layout of the floor plans submitted for the "final construction documents" assignment. There were some exceptions, but even when layout changes were made, they were very minor and at times seemingly imperceptible.

In addition to these design iterations, I also examined students' **journal entries** and **code studies** each semester and students' **mind maps** during the Spring 2018 semester. Students were prompted to complete several journal entries each semester. These entries typically focused on students' reflections on their experiences working with their clients and on their design concepts. Code studies included all of the features students had to consider to ensure that their design met all relevant safety requirements. Created early in the semester, mind maps provided a visual representation of students' design ideas and concepts (see examples in Chapters 1 and 2).

Notes on Chapter Structure

Fundamental to my arguments in this thesis is the assertion that designs comprise concatenations, meaning that there are multiple links interconnecting design actants and their affective forces within a single floor plan. I have already partially demonstrated this in

[77] I am concerned in this thesis only with floor plan designs because (1) the floor plans alone went through many iterations throughout the semester and (2) it is their respective iterations that best reveal the multiple, complex relationships through which they were constituted. I therefore do not examine external elevation, ceiling or wall section plans which did not go through multiple iterations.

previous chapters (see Chapter 2) and continue to reveal the complexity of the interactions between design actants and affective forces here and in Chapter 5.

In this chapter, however, I first focus on specific types of design actants (e.g., client desires, IBC, material structures, and peers) and consider in detail how they affect student design(er)s. The data in this chapter, therefore, are presented according to category of design actant. I do this with the understanding that design actants and the affective force they wield do not respect such categorical parameters as the actual relational process of design unfolds. Rather, design actants are complexly entangled, and any attempt to disentangle them into discrete categories is often frustrated by their interactions. Thus, in each section dedicated to a particular design actant, it is likely that readers will notice design actants impeding upon the space dedicated to others. In each section, I have also attempted to utilize data that vividly describes the affective force of the design actant being immediately discussed. However, I cannot always avoid other design actants announcing their presence in sections not specifically dedicated to them. When such insistent design actants reveal themselves, I still point them out, but I strive to maintain focus on the primary design actant under examination in the section in question. By doing so, I hope to provide additional description and insight into how design actants affect student design(er)s.

The first design actant section – focused on community partners and clients – is further divided according to semester. I do that because each semester had its own unique context and idiosyncrasies and because using discrete sub-sections for each semester helps readers to be mindful of the ethnographic context of the vignettes presented. Due to how they affected the actualization of student design(er)s, I found that the affective forces of the clients were the most complex and variable of the various affective forces I considered. More description is thus needed for this design actant set than for the others – the IBC, material structure, and peer/instructor influence – each of which can be sufficiently illustrated with fewer examples.

For ease of communication, I now briefly repeat descriptions, provided in Chapter 1, of each semester cohort's context.

- Fall 2015: The student cohort worked with the Kheprw Institute (KI). At this time, KI's senior leadership was interested in converting a dilapidated house into KI's "permanent" headquarters. From this headquarters, KI aimed to serve the community in various ways as part of their efforts to support their clientele's realization of "self-mastery." KI wanted the student designers to include adequate space for their aquaponics operation, which, at the time, was a significant organizational focus.

Students were also to include an expanded dormitory space, which would also serve an "exchange student," because KI was, at least at the time, working with a partnering organization in Ghana.

- Fall 2017: This student cohort worked with Big Car, a nonprofit art collaborative operating within Indianapolis' Garfield Park neighborhood. Big Car's efforts were focused on building community through the arts, as a kind of "placemaking and placekeeping," meaning that Big Car personnel conceived of their work as being about connecting and partnering with neighborhood residents to preclude gentrification displacing people. Students were tasked with redesigning a house owned by Big Car. The goal was to make the house compatible with a local artist's placemaking work. Big Car's Artist and Public Life Residency (APLR) program (see Chapter 1) aimed to enable to own the house. This placemaking work required a dedicated first floor gallery space, visible from the street, to display the artist's works and where visitors during Big Car events could view the artworks without encroaching on private living spaces.
- Spring 2018: KI was again the students' client. The cohort was assigned to create designs for the same KI property as the Fall 2015 cohort had been. However, KI personnel's vision for the house had changed during the intervening two and a half years from wanting a headquarters with dormitory space and facilities for an aquaponics system to wanting a community center used to house interns (several were already living there in 2018), and that included ample meeting space for community organizing and entrepreneurial ventures, as well as a large kitchen area for training reformed prisoners in culinary arts.

Design Actant 1: Community Partners/Clients

As clients, KI and Big Car personnel communicated their design needs in person and gave feedback during students' interim and final floor plan presentations. Student designers also gathered important information about organizational missions, visions, and projects from the KI and Big Car web pages. Here, I explore how this exchange of information and perspectives had significant impact on the constitution of student designs.

I also use the section to consider how community partners affected students' design concepts and how those design concepts influenced student design processes. Beth required students each to create a unique design concept that reflected the values and mission of the

client and then to "reflect" that design concept in their respective designs. Design concepts therefore provided some insight into how students were affected by their clients, as well as how they mobilized the affective force of their clients to rationalize and justify their own design choices.

Practically speaking, as Yarrow (2019: 189) explains, design concepts can provide a suitably broad and coherent idea through which one's design process can play out. IBC requirements and client feedback, for example, were quite disruptive of students' designs as they evolved; however, their own respective overarching design concept – which was affected by the values of their respective clients – helped them to center the design process on a central theme or themes. Yet, as shown in my description of Carmen's use of her design concepts (Chapter 2), and as I illustrate below in relation to Jakub, Amira, Baheera, and Scarlett, a design concept is neither fixed nor complete. As Drazin (2013: 42) has argued, design concepts are themselves iterative since they are subject to the social encounters and individual reflection experienced throughout one's design process. Design concepts also often had personal meanings for the student designers – something already explored in Chapter 2 and that is examined further in Chapter 5.

KI's Aquaponics Project and Its Relation to Self-mastery – Fall 2015

This subsection focuses on how KI personnel's interest in aquaponics and the value they placed on the notion of "self-mastery" uniquely affected the floor plans of Jakub, one student in the Fall 2015 cohort. After the class's first week meeting with KI personnel, Jakub reported being moved by the origin narrative of KI's aquaponics system, as well as by how excited KI personnel, particularly Imhotep, were about aquaponics. During our first interview, Jakub briefly reminded me about how a youth working with KI was the initiator of the aquaponics project: "They had a kid…who did some research. From that research, they were able to create that entire system that they are very passionate about. Like, every time anyone says anything 'aquaponic,' their eyes light up. They are intrigued, mainly Im[hotep]…he really seems to go for it."

Also, during the students' first meeting with KI, Imhotep described what was meant by self-mastery. He explained that it was "master[ing] self through the context of a skill." Imhotep also added that KI's activities depended on "who walks through the door and what their talents are." And he gave the youth who initiated KI's aquaponics project as one example of what KI personnel meant by self-mastery during their first meeting with the Fall 2015 cohort. Jakub reportedly perceived the aquaponics project as a source of pride for KI, as

it was an exemplar of self-mastery in that the youth pursued their own interest in aquaponics and built their capacity to create their own system.

The aquaponics system had great meaning for KI, in part, because it so clearly connected with a key piece of their mission: supporting self-mastery. Jakub recognized the importance of self-mastery to KI personnel, was affected by it, and, as a result, folded it into his floor plan designs. In many of his semester assignments, particularly in his journal entries and with his design concept, as well as in our interviews, Jakub expressed a great deal of interest in, and personal overlap with, KI's value of self-mastery. Jakub chose "internal growth" as his design concept. He included in his final construction documents a statement describing how internal growth was present in his design:

> This space embodies the idea of internal growth. The overall exterior structure did not change much while the interior received a whole new look. The spaces are now laid out in such a way that allows for flexibility of use and for all of their projects to have a… space designed to enhance and grow their work. In other terms, the house itself has reached a point of self-mastery.

Taken in concert with Jakub's extensive design work to accommodate KI's aquaponics project (see below), his description here evokes a connection between the growth and cultivation of plants and the inner growth of the self. At the same time, Jakub is also asserting that the house itself has reached a form of internal self-mastery through the intended functionality of his flexible floor plans.

Following the class's first meeting with KI, Jakub had begun researching aquaponics systems with the intention of building his own miniature, one-plant, aquaponics prototype. While KI's concept of self-mastery and Imhotep's evident passion for the project certainly affected Jakub's willingness to create his own aquaponics prototype, Jakub also had a rather pragmatic reason for doing this work. Jakub reported that he wanted to better understand aquaponics – to "wrap his head around it" – in order to design its placement to maximize the system's efficiency.[78] Jakub described himself as "a problem-solver" and, for him, the

[78] In coming to an understanding of aquaponics system through the making of a prototype, Jakub was reportedly able to draw conclusions on how to design for such a system. Since Jakub's design was affected by his aquaponics prototype, I argue that the prototype was a design actant.

inclusion of aquaponics in KI's new headquarters was a problem that needed extra care and consideration. His prototype was the first step to caring for this problem.[79]

During the semester's third week, Jakub excitedly told me during a class break that he had just completed his miniature aquaponic prototype. At my request, he walked me through the work he had done and explained that his next step was to start with seedlings while "the necessary nitrates [fertilizer]" develop within the system. He expressed uncertainty about where he should get seeds, so I offered him some organic basil seeds from my home garden which I brought to the next class. Jakub ended up using them in his aquaponics prototype. As Jakub researched and learned more about aquaponics systems, he gained greater insight into how they operate and, therefore, how the aquaponics system should be situated within KI's house to ensure maximum efficiency.

The affective force of KI's passion for aquaponics was evident in Jakub's early designs in the amount of space he reserved for the system. His first-floor color plan, for example, had two rooms set aside for it. He was the only student in his cohort with that much dedicated aquaponics space.[80] His Week 5 color plan submission did not include a basement floor plan. However, when he presented his color plans to KI (also in week 5), he made it clear that he intended using the basement for the aquaponics "grow beds." Later, when starting with his life safety plans, Jakub began to provide floor plans for the basement and explicitly detailed his vision for the aquaponics system.

His earliest rationale for using the basement – one that he articulated during his color plan presentation – was to protect the home and aquaponics system from "passersby" who might be attracted by the bright grow lights. Given many students' shared perception was that KI's property was in a socioeconomically depressed part of town, "security" to prevent petty crime was a stated concern throughout the semester. As Jakub deepened his understanding of aquaponics, his rationale for using the basement became more complex.

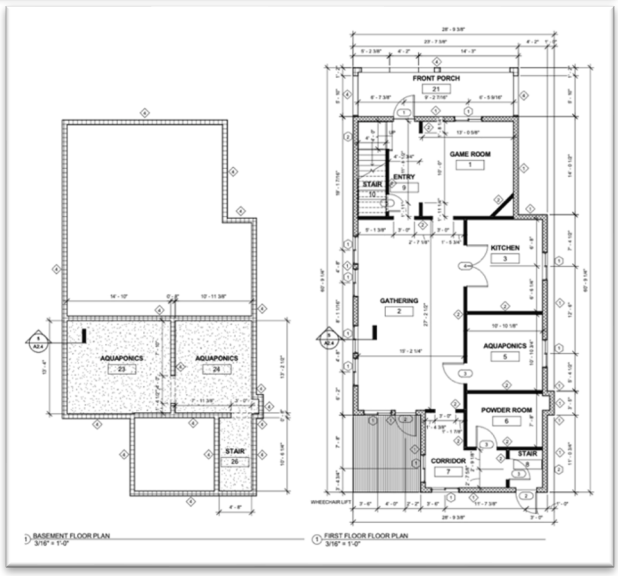
The sophistication of Jakub's aquaponics research culminated in his "custom" design, as he described it (see Fig. 12), of "a system that would work on separate floors and take advantage of that special space [KI had] for it." He reported that his multi-floor aquaponics system would include up to four fish tanks in one room on the first floor (see Fig 13). Then,

[79] Students often performed care practices in their design work. I examine how and why they provided such care in the final section of this chapter and in Chapter 5. In Chapter 7, I detail how an ethic of care is a key component of what I call ethical becoming.

[80] With the exception of one student's color plans, everyone included space for the aquaponics system. It is noteworthy that another student included an addition off the back of the house – "an outside space like a shed area" –that was to be used exclusively for the aquaponics system. However, upon revisiting the house, she reportedly came to the conclusion that there was insufficient space for the addition.

Figure 13: (Top Right): Jakub's Aquaponics System as detailed in his final construction documents

Figure 12 (Bottom Right): Basement and First Floor plans from Jakub's final construction documents



using gravity, fish waste water would flow through filters down to the sump tank in the basement. The nitrate-rich water would then be pumped from the sump tank to the grow beds in the basement.

In his final construction documents, Jakub finalized the first floor and basement floor plans in conversation with the desires and interests of KI personnel and the knowledge he had gained on aquaponics throughout the semester. The designated aquaponics space on the first floor was directly above where the sump tank and the grow beds were to be situated in the basement. This arrangement enabled gravity to be utilized in Jakub's multi-floor aquaponics system.

Jakub did a significant amount of additional research to satisfy what he perceived to be KI's architectural and interior design needs. However, it would be misleading to suggest that his work was the sole product of a hard-working independent individual. Rather, in Jakub's description of his design process, it was evident that his relationships with KI personnel profoundly affected how and why he approached KI's aquaponics needs with great care. Jakub maintained dialogue with KI personnel about aquaponics throughout the semester. During the first meeting with KI in Week 1, I participated in a conversation between Jakub, Imhotep, and a KI intern following a tour of their existing aquaponics system. It was during this initial tour and conversation that the intricacies and problems of aquaponics, as well as possible solutions – including tiered systems – was first introduced. From such conversations, Jakub reported having gained insight into a technical problem KI personnel were facing (i.e., fluctuating fish tank water levels). As he sought to deepen his own understanding of

aquaponics systems, he explained, he had encountered a potential solution to this problem and had shared that solution with KI:

> I remembered when I was doing my research … their problem [was] with their fish tank levels fluctuating. It's a very simple way of fixing it, where you keep the water level constant. I was kind of proud that I had included that in my design and they were like: "yes, this is a really big problem for us. We always have to check it because, if we miss checking it for a period of time, our fish could die." They kind of made me happy that I was able to solve something. Regardless of [whether] my design works for them, that knowledge can help them.

Jakub was so affected by KI's interest in aquaponics that his floor plans throughout the semester were refined in conversation with his budding knowledge of aquaponics and KI's aquaponics needs. Jakub reportedly went so far as to suggest a redesign of parts of KI's aquaponics system, and then he designed his floor plans in such a way that his "custom" aquaponics system could be installed and operated efficiently. The affective force wielded by KI personnel had a significant impact on the layout of Jakub's final floor plans and the aquaponics schematic presented in his final construction documents, as well as on how and why Jakub engaged in the process of design.

Big Car's APLR Program: A Commitment to Placemaking and Privacy – Fall 2017

The Fall 2017 student cohort experienced a much different design context than the Fall 2015 cohort primarily due to there being a different client – Big Car – for the *Commercial Construction* course. In this section, I focus my descriptions on how Big Car's personnel tempered passion for "placemaking" with concerns for privacy in their Artist and Public Life Residency (APLR) program and how it all affected Amira and her floor plan designs. The students were tasked with redesigning the existing Big Car-owned house that was likely to be used in the APLR program. Since the house was to be both a private residence and a hub for community placemaking, privacy (i.e., through a clear public/private distinction) was an overarching concern to Big Car, as well as to Jess, a Big Car intern who, at the time, happened to live in the house. This concern for privacy was a consideration amongst all the semester's students. It was important because Big Car personnel requested that designs

should have a dedicated first-floor gallery space visible from the street and capable of displaying the resident artist's works that would also be separated from any private living spaces.

While Amira was clear that the purpose of her new designs for the existing house was to make it compatible with the placemaking work to be conducted by an artist who would eventually come to own the house, she became fixated on the fact that Jess currently lived in the house, which, from Amira's perspective, needed some serious upgrades to ensure that Jess was "comfortable." For Amira, ensuring Jess's comfort meant, for example, designing with the intent to safeguard Jess's privacy, especially since she was sharing the house with a roommate who was, in Amira's words, of the "opposite gender" and not Jess's "significant other." While Jess did not explicitly express discomfort with this living arrangement, she did mention during student interim presentations (Week 7) that she appreciated having "private" bathrooms. She also expressed enthusiasm regarding how one student had included a "Jack and Jill bathroom in their design." She stated that she had had such a bathroom when living at a multi-gender residence and had liked the privacy it provided. I return to these ideas about designing for privacy after focusing on the first-floor gallery space.

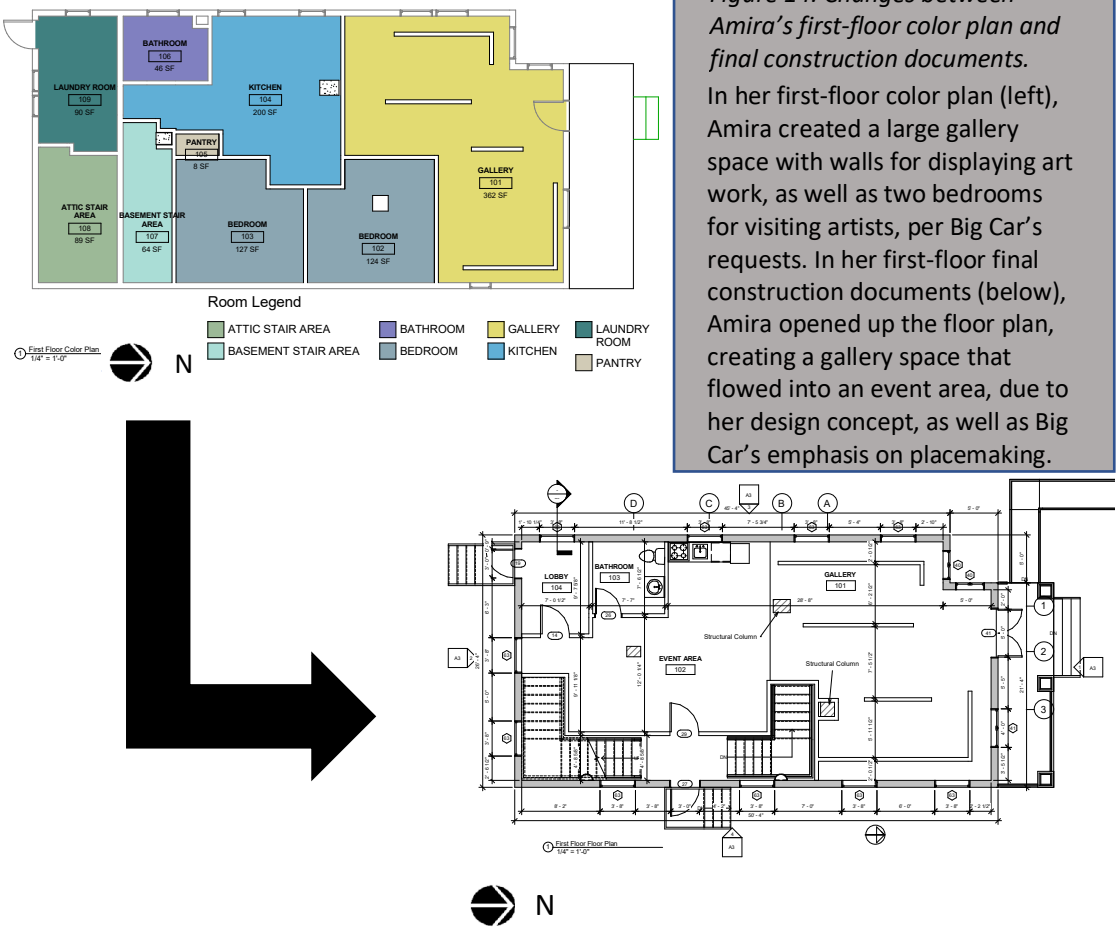


Figure 14: Changes between Amira's first-floor color plan and final construction documents. In her first-floor color plan (left), Amira created a large gallery space with walls for displaying art work, as well as two bedrooms for visiting artists, per Big Car's requests. In her first-floor final construction documents (below), Amira opened up the floor plan, creating a gallery space that flowed into an event area, due to her design concept, as well as Big Car's emphasis on placemaking.

While dimensions differed, how Amira assigned gallery space on her first-floor color plan (Fig. 14 – left image) is very similar to that of most of her classmates. Like them, Amira placed the gallery space at the front of the house, thus aligning it with Jess's recommendations which had been conveyed during a tour of the building (Week 4). Yet Amira's (and one other student's) design included a subtle difference from those of their peers: an outward (street) facing art display area on the north side of the house (see north arrow on plans). On Amira's design this is denoted by a "backwards L-shaped" wall in the front corner of the house (see Fig. 14 – left image). Art placed on this wall would be visible through the windows from the street.

Also, during the tour of the building, Jess had mentioned that the floors of the house might provide a natural separation between public and private spaces. Like many of her peers, Amira reported agreeing with Jess' perspective and sought to make the top (second-story) floor more private than the mostly public-facing first floor. Jess had also specified that space be set aside for short stays by Big Car-sponsored visiting artists. Amira thus placed two bedrooms and a living area for the intended homeowner(s) on the second floor (Fig. 15 – left image) of her color plans and said that visiting artists could stay in the bedrooms on the first

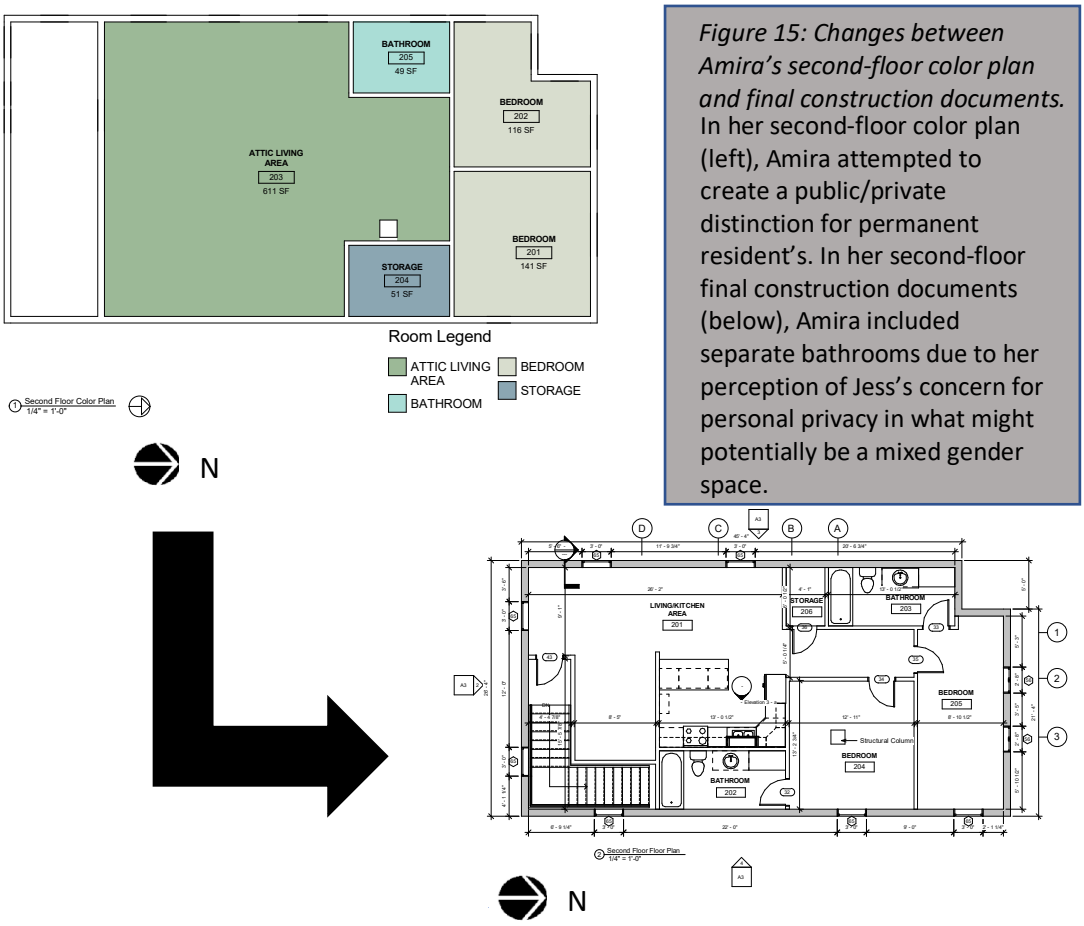


Figure 15: Changes between Amira's second-floor color plan and final construction documents. In her second-floor color plan (left), Amira attempted to create a public/private distinction for permanent resident's. In her second-floor final construction documents (below), Amira included separate bathrooms due to her perception of Jess's concern for personal privacy in what might potentially be a mixed gender space.

floor which was primarily designed for more public purposes than the second floor. All the students shared Amira's public/private distinction according to floor, though some argued that first-floor bedrooms could also be for permanent residents.

In Week 8, just one week after the students' interim presentations, Amira had drastically changed her floor plans. I noticed this during Beth's one-on-one review of the draft version of her life safety plan. Amira unrolled a huge printout of her life safety plans across a table and sat at the opposite end from Beth and me. I could see that where there had once been two bedrooms and a wall separating the kitchen from the first-floor gallery space, none of those features now appeared. In their place, Amira had opened up the floor plan so that the gallery space flowed into an event space. She had also added an enclosed stairwell in the southwest corner, with stairs leading to the second floor and the basement. The main changes to her second-floor designs included rearranging the placement of the bedrooms and giving each of them a private, attached bathroom. These changes persisted and were represented in her final construction documents (Figs 14 & 15 – bottom images).

According to Amira, these design changes coincided with her modification of her one-word design concept from "variety" to "community," which, she reported, was connected to Big Car's community-building work. About her original design concept, Amira wrote in her third journal entry (Week 7) that "variety" was based upon her perception of Big Car's goal for the property (i.e., placemaking and artist residence). She described this goal as "to serve as a place of gathering to look at art and overall [to] come … together as one community or group." She added that "variety" incorporated not just the community-building role the property was to play but also the housing function Big Car intended it to have as a private residence. When we discussed her design concept changes during Week 9, Amira reported that her changes to the first-floor designs (i.e., the gallery and event space) were more aligned with her "community" concept in that her new first-floor design facilitated the "use [of] art to build community." In stating this, Amira was echoing an idea central to placemaking practice and the values identified by Big Car (see https://www.bigcar.org/our-approach/, accessed 23 March 2019). Here one sees how Big Car's mission and vision affected how Amira revised her design concept, which in turn affected how and why Amira designed what she did. Organizational discourse, however, was not the only client-based design actant that affected Amira's design.

More important than the influence of her revised design concept and choice of the word "community" was that Amira directly connected her first-floor modifications to how she was affected by Jess's feedback received during the interim client presentation (Week 7). When

Amira had presented her interim floor plans, Jess had expressed enthusiasm for Amira's design of the gallery space when she said with a big smile and wide eyes, "I like that a lot." Jess's appreciation for Amira's design stuck with Amira, as illustrated below. It also made an impression on me to the extent that I documented Jess's excitement about Amira's gallery space in my fieldnotes. Amira and I discussed this during our first interview at the end of Week 7:

> **Grant**: So, looking at the first floor, you got some nice feedback [from Jess] on these [gallery] walls.
> **Amira**: Thank you.
> **Grant**: Do you remember [Jess's feedback]?
> **Amira**: She said she liked the gallery space, how I put the walls there…She [Jess] was like, "I like that idea." And she showed on her expression that she really liked that idea. Yay! At least she liked one thing [laughs]. You know, it's something I could work off of and work, you know, based on that.

Jess's expressed enthusiasm about Amira's gallery design reverberates throughout the transformations of space illustrated in Figure 14, which also reveals the evolution of Amira's Big Car-inspired design concept. The affective forces of Big Car's placemaking vision, mediated through Amira's "community" design concept pulses within the drawn lines of Amira's first-floor plan designs. This is evident in Amira's first-floor plan revisions (see Fig. 14, bottom right), where she created an open floor plan in which the gallery space flowed into an event space. According to Amira, artists and visitors could "socialize" and "share ideas or opinions" in these open spaces, and thereby contribute to placemaking. Also, by keeping public spaces on the first floor and private spaces on the second floor, Amira demonstrated how she was affected by Big Car's need for a public/private distinction to be incorporated into their APLR program properties. Amira's perception of Jess's concern for privacy is also evident in her designs for her second-floor plans. For example, in our final interview, Amira explained that, in her second-floor final construction design (see Fig. 15, bottom right), her arrangement of the bedrooms was reconfigured to allow room for private, attached bathrooms due to Jess's request for private bathrooms and due to her perceptions of Jess' comfort. When discussing the bathroom situation in a mixed-gender space, she stated empathically that, for Jess, it "must be really difficult."

A Kitchen for KI's Paulette – One Client Representative's Affective Force – Spring 2018

I now return to the Spring 2018 semester in order to focus on KI's Paulette as a design actant, particularly in relation to the affective force of Paulette's desire for a big kitchen to be included in the designs both for the feeding of KI personnel and for skill-building in their culinary program for reformed prisoners. In Chapter 2 where I examined Carmen's design process, I did so to identify and operationalize the actants and affective forces at play as students created their designs with KI personnel. Carmen's Spring 2018 peers and she all approached their floor plan designs similarly. For example, all her Spring 2018 peers included KI's requests for a public/private distinction, their desire – expressed by Paulette – for a big kitchen and for space for KI's extensive book collection. Yet there were some slight differences, especially early on in the semester. Neil (see Chapter 3), for example, had addressed the public/private distinction but had failed to include second-floor dorm spaces. He explained: "I had no idea…I guess it just went over my head that they needed dormitory space." After the interim client presentations, however, KI personnel reminded him that they wanted dorm rooms and he addressed that in his future designs.

Paulette's request for a big kitchen affected all the students. However, five students placed it on the first floor's north side. This was despite Paulette having requested it be on the southeast side where the existing kitchen was situated. My conversations with two students who had placed the kitchen on the north side, Baheera and Scarlett, revealed that their respective decision on kitchen placement reflected their own design choices rather than direct defiance of Paulette's request.

When I visited the property during a follow-up with KI on 1 December 2018, I found that KI personnel had decided to put the kitchen where Baheera and Scarlett had placed it in their color plans. That was because, as a KI intern explained to me during that visit, the first floor's north side flooring was significantly sturdier than that on the southeast side of the building where Paulette had said KI wanted the kitchen and where the floor already bowed when walked upon. Interestingly, the intern gave no explicit credit to any student. Throughout Spring 2018, student repeatedly expressed concern about the southeast side floor being able to support commercial kitchen equipment. During several conversations between Beth and the students early on in the semester I heard deliberations about that area's flooring's suitability for a kitchen (see Chapter 2). Those conversations consistently produced consensuses that, were the kitchen placed on the southeast of the building's first floor, structural reinforcement would be needed to ensure safety. If it was ever really acknowledged

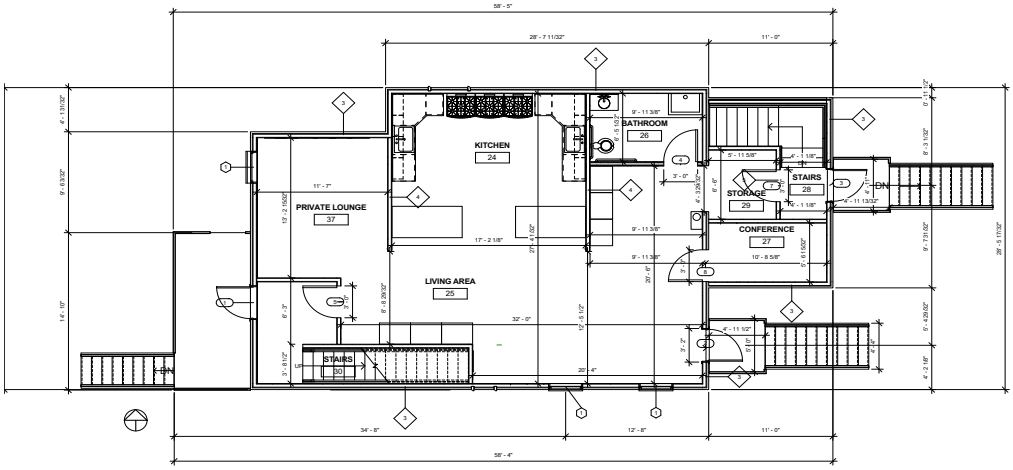


Figure 16: Baheera's first floor design submitted with her final construction documents (week 17). Notice the placement of the kitchen.

by KI's personnel, the *Commercial Construction* course participants' role in addressing this issue had, at this point, been concealed within the everyday decisions of managing the property. It is evident here that some slippage occurred between the affective force of Paulette's desire for a large kitchen and another design actant: the material structure of the house. The affective force of the material structure is discussed further below.

While Baheera ultimately made the choice to put the kitchen someplace other than where Paulette had requested, she did so in a way that was mindful of KI's expressed desires. Since, at this time, KI was wanting to use the kitchen as a space for culinary training for released prisoners, Baheera designed a floor plan, as she reported, to best facilitate those trainings. She built that into her design by making both the "Kitchen" and the "Living Area" "open" areas (Fig. 16) where, as she said, KI personnel could "[re]arrange furniture and have more groups sitting together when they were giving cooking demonstrations." In order to accomplish this, Baheera's design required demolishing existing walls. For Baheera, addressing KI's desires meant that she could not draw lines representing existing walls in the house. In this case, the absence of such lines – and the drawing of lines representing newly built walls – was needed for Baheera to address what she understood to be her client's needs.

After presenting their mind maps in week 4, Baheera and Scarlett began developing their design concepts. Baheera's mind map included reference to several design concepts driving her initial design thought. They were "hope," "comfort," "peaceful," and "calming", concepts she eventually unified into one overarching concept: "peace." In her third journal entry, Baheera argued that "peace" melded well with KI's commitment to "self-mastery." She wrote: "Without peace it is impossible to achieve any goals" since it is needed for

"building [the] supportive relationships" which were important for KI to realize its four main tenets of empowerment, economy, education, and environment. Baheera represented "peace" in her designs through her ample use of the color green – a "soothing" color, she reported, according to her research.

Figure 17: Architect's drawing from Baheera's Final Presentation to KI. Notice the moss wall in the work nook and the pastel green walls.

Drawing on her perception of green's soothing nature, her love for gardening, and KI's interest in aquaponics and urban horticulture, Baheera decided to incorporate a large moss wall into her design (see Fig. 17) that, some eighteen months later, KI's Paulette still said she wanted installed. Baheera designed it to be in the large and open (yet "cozy") first-floor conversation areas and private meeting room that she described as embodying peace – a peace that she believed would be maintained by separate, private second floor rooms (rather than dormitories).

Like Carmen's and Baheera's, Scarlett's design concept was not easily reduced to a single word or idea. Inspired by her interactions with KI staff, Scarlett used her mind map to play with concepts including "transformation," "rebirth," and "communities creating change." However, by her third journal entry (design concept) in week 8, she had shifted to the concept of "reuse" or "reusing" to highlight KI's concern for sustainability, both in an ecological and economic (i.e., affordability) sense. Scarlett's consideration of the importance of "reuse" to her design concept coincided with her transformation of her first-floor plan. In her design iteration for her interim client presentation (Week 9), she had placed the kitchen on the southeast side, where Paulette had said she wanted it kept and not where she had earlier planned it, on the north side. She explained this change to me by stating that she had now decided to stick with the "original" locations of many rooms. Additionally, Scarlett claimed, this solved an "access issue," because it placed the kitchen close to the back door thus facilitating supply deliveries to the kitchen, as well as easy exit for catering services, if KI chose to go that route. Scarlett's emphasis on the two important KI concepts, "reuse" and "sustainability," impacted on her design and appeared to reign in her own desires and personal preferences.

Scarlett's efforts to exert self-control and accept and value the affective force of her client's wishes led to what could be considered rather contradictory perspectives. For example, during our first interview 20 days *after* the interim client presentations, she stated:

> So, I feel like I always just shoot for something super unique and something different that nobody's gonna have … because I want my designs to be something … [that's] completely opposite of whatever everybody in the classroom has. So, if everybody has a kitchen where the [current] kitchen's at, I want to have the kitchen on complete opposite side but make it work to a way that, like, it's still, like, functional.

At the time of this interview, Scarlett had already moved the kitchen back to where Paulette wanted it placed and where her peers, save Baheera, had placed it in their designs. Contrasting her comment and her actual plan at that point reveals Scarlett negotiating between her desire to be a "unique" and "edgy" person and designer and her client's needs, desires, and perspectives." By taking on the client's values in her design concept, Scarlett had to wrestle with her self-image.

In his ethnographic work with professional UK architects, Yarrow (2019, pg. 130) describes his interlocutors characterizing this process as "selfless design," by which he meant less a negation of the self than an "open and receptive" self. Throughout my conversations with students, their need for openness and consideration of clients' perspectives continuously arose, especially as we discussed what it takes to be an ethical interior designer or architect. An example arose in my final interview with Scarlett where we discussed the importance of remaining open:

> **Scarlett**: [You need the] willingness to just, like, I don't know, branch out of, like, your comfort zone and really give it multiple opportunities. Rather than just sticking with the one, you got to be open to taking several different options and working with one and being patient. If that doesn't work out, trying again. Something else.
> **Grant**: As open as the spaces you design? (Laughs)

> **Scarlett**: (Laughs) Yeah, yeah, there you go. As open as the spaces you design.

Being open to being affected by her clients, however, did not decimate Scarlett's efforts to be "unique" and "edgy" in her designs; rather, it contributed to their redirection. While she may have come to the conclusion that the kitchen in her design should not be where she had originally placed it, her self-expression was reportedly released through the colors she chose for the walls, along with a chalkboard and a corkboard wall that could be used for "collaboration" among KI personnel.

To close this section, I must again acknowledge some slippage between design actants. I earlier pointed out how the affective force of the material structure intermingled with the affective force of Paulette's desire for a large kitchen and how, in doing so, both affected students' designs. Now it is important to point out how students had to negotiate a relationship between their own values and experiential history and the affective force of other design actants. This is a key topic of Chapter 5. For now, suffice to say that for a design actant, such as client desires, to affect a student in ways that directly impact their design, the student must be open to it, as Scarlett suggested. If Scarlett's valuing of uniqueness or edginess had affected her design more than Paulette's vision for the kitchen (or practical considerations, such as "access issues"), then her floor plans may have turned out to be quite different. With my student interlocutors, it was evident that they were all profoundly affected by their client's desires and expectations. However, how this affect was captured depended upon how each student interrogated and thought through how to value different design actants in their own idiosyncratic ways.

Design Actant 2: The International Building Code (IBC)

In this section, I examine how the IBC affected student design(er)s. For most students, the *Commercial Construction* course was their first encounter with the IBC, an encounter they had to negotiate independently – though with some support from Beth and each other – and to use to support their reasoning for their floor-plan configurations. As I describe below, students often had to change elements of their floor plans in light of particular codes. I think of the IBC as a rather lengthy set of ideas about safe building standards and practices. The ideas that comprise the IBC need to be combed through. Moreover, doing that combing may send one from a particular section to an entirely different

one that further unpacks a specific scenario. As Amira wrote in an online class-discussion forum: “When you want to understand or get an answer to one question (yes/no type of question), the code just keeps taking you deeper and deeper into other exceptions or ‘if's.’ I wish it would be more straight forward at times, but that's all part of the complexity and beauty of the design process.”

It is easy to miss important information in the IBC, especially for novice designers. I mention this because students often overlooked important parts of the IBC, meaning that they may have prehended some relevant ideas, but they may also have missed others, especially if they neglected to visit additional sections that unpack an idea further. Therefore, when thinking of the IBC as a design actant, I am referring to the many ideas within it that have affective force through the students embracing them in the actualization of their designs, a process that also affected the students as designers.

The affective force of Beth as instructor also played a significant intersecting role in how students conceived of and negotiated the code. The IBC is no mere system of inflexible decrees; rather, according to Beth, much of it is open to designers’ interpretation. Due to the delayed interaction between the students and Big Car during the Fall 2017 semester, that cohort spent more time going over the IBC than did students in the other two cohorts. It was during that semester, therefore, that I gained most insight into the relationship between the IBC and the student designers’ personal interpretations and choices. During week 4, Beth gave an extended lecture on the components of egress systems which need to meet particular requirements to ensure safe exit of building occupants in times of emergency. Her lecture stressed that the IBC may, at times, be insufficient and that students consequently needed to interpret it and make personal design choices that “make sense.”

In one example, Beth discussed how materials could impact one’s measurements and, in turn, affect whether one had met the relevant code requirement or not. She illustrated by considering the IBC requirement that the minimum width of all stairs and corridors be 44 inches, though this varied in terms of a building’s occupancy type[81] and occupant load.[82] Beth reported that her personal minimum is 48 inches, because walls are never at “a perfect

[81] Occupancy type refers to the purpose for which a building is to be used. The IBC has ten occupancy types: assembly, business, educational, factory and industrial, high hazard, institutional, mercantile, residential, storage and utility, and miscellaneous. The occupancy types students in each cohort selected varied between assembly, business, and residential. Each comes with its own distinctive IBC requirements.

[82] Determining the occupant load for a given room requires dividing the square footage of the room by the “occupant load factor,” a number based upon the function of the particular space (see Table 1004.5 in the IBC). For example, designing a room of 100 ft^2 as a dormitory requires dividing that square footage by the occupant load factor (50) for a dormitory (a sub-category of residential) space. Thus, the occupant load for that room is 2.

90º." This is due to variation in materials (e.g., warped boards). Therefore, according to Beth, if students were to plan for the stipulated minimum, the width of their stairwells/corridors could end up being slightly less than 44 inches "due to imperfect materials that don't mirror the precise nature of geometry." She added that a code official would find such a mistake and have you fix it, which could be costly and time consuming. This provides a specific example of how Beth had brought her own interpretation to the code based upon her architectural experiences[83] – and shared it with her students – and how that interpretation impacted the constitution of her own architectural designs.

Beth also discussed a tension arising from the IBC requirement that buildings with high occupant loads should have corridors wider than 44 inches (see calculations in Section 1005 of the IBC). She explained that various architects, arguing that, in any given emergency, a building's entire occupant load is unlikely to exit along the same corridor at one time, have divided a building's overall occupant load according to the number of exits designed for the building, thereby decreasing the required width of corridors in the egress system and freeing up space within the building's overall footprint. Beth closed the lecture with the statement: "The code gives us the bare minimum, but we need to do something that makes sense." What follows explores how, as students made sense of IBC requirements, particularly those requirements related to egress systems, their designs were often (re)configured.

Egress System and Required Number of Water Closets

The IBC requires the enclosure of interior stairways that are a part of the egress system. Creating a code compliant enclosed staircase requires a fair deal of space, largely because top and bottom stairway landings are mandated. Moreover, according to the IBC's "Stairway Landings" subsection (1011.6): "When fully open, the door shall not project more than 7 inches (178 mm) into a landing." This means that allowing for the swing of a door requires designing extra space to preclude the door extending too far into the landing and disrupting the egress path. Accommodating this requirement had led Baheera to reduce other rooms' areas on her interim client presentation design. For example, her kitchen area decreased from 407 ft^2 to 278 ft^2, and one of her bedrooms and her large, second floor open library space decreased from 137 ft^2 to 97 ft^2 and from 322 ft^2 to 297 ft^2 respectively.

[83] This is an example of Beth's past experiences of interpreting the IBC being a design actant on herself that now affects student designs.

Baheera and Scarlett also had to address other requirements specific to the occupancy type of the buildings they were designing. Both selected "business" as the occupancy type that best represented, in their respective opinions, the future use of KI's building. Despite their both having selected the same occupancy type, they utilized the business structure codes pertaining to numbers of plumbing fixtures differently. I bring myself into this particular analysis, because my own misinterpretations of the code led me to rewrite the next few paragraphs multiple times. How Baheera, Scarlett, and I rationalized differently the number of water closets needed for their designs illustrates how subjective and fraught with misunderstanding and mistakes interpreting codes can be.

The IBC's Table 2902.1 specifies the number of water closets (WCs) as follows: "1 [WC] per 25 [people] for the first 50 [people] and 1 [WC] per 50 [people] for the remainder exceeding 50 [people]." As indicated, the IBC refers to the maximum number of people allowable within a given building, without overloading the means of egress, as the occupant load. Baheera and Scarlett respectively calculated occupant loads of 68 and 70 people. Baheera's design included two unisex WCs, one per floor. Given her calculated occupant load of 68 people, I interpreted that code as saying that three total water closets should have been provided (two for the first 50 and one for the remainder, since the code specifies that one always round up – see IBC 2902.1.1 Fixture Calculations). By my interpretation, Baheera's floor plans violated the code, but not to the extent that Scarlett's design and rationale indicated, and which showed me to be wrong.

Scarlett's design had two WCs on each floor (one for each sex). Her code study detailed that all four were "required." However, I disagreed on the basis that the IBC's Table 2902.1 specified the minimum that were required, and that Scarlett, following Beth's suggestion that exceeding the minimum was often sensible, had planned more than what was "required."

When I interviewed Scarlett in Week 16, just two days before she submitted her final construction documents, she insisted that a male and a female WC were required on the first floor. Yet she also seemed very uncertain about her interpretation of the IBC on the matter and reported having had difficulty navigating the IBC overall. When I later noted her uncertainty in my interview transcript, I decided to return to the IBC to examine the business occupancy type again. There I discovered a subsection ("Section 2902.2 Separate facilities") which clearly states: "where plumbing fixtures are required, separate facilities shall be

provided for each sex." So, Scarlett was correct and both Baheera and I had erred through failing to read beyond Table 2902.1.[84]

Another Example of Stairs in an Egress System

As described earlier, Amira had drastically changed her floor plans between the color plan and life safety plan assignments, citing her design concept as a significant reason. Another reason she gave for these changes was code related. She reported that, as she had learned more about Revit and the IBC, she had begun exploring more design features in which she was interested. A key example in her reconfiguration of the stairs in her life safety plan. The new stairwell she designed was based upon her appreciation of spiral staircases; however, she found that, given the complex, mixed use occupancy type she had selected (assembly and residential), she could not get a spiral staircase to work within her understanding of the IBC. So, in this case, Amira prehended a lack of compatibility between the IBC and her particular design choice for the stairs causing her to consider other options.

Amira then decided to design an enclosed double-sided stairwell with one set of stairs leading to the basement, where temporary artists in residence could stay, and the other leading upstairs where the private living quarters for permanent residents were to be located. This arrangement, she reported, could be justified through the code. She also reported liking it as the layout of these stairs mimicked the "fun-looking stairs" she desired to include.

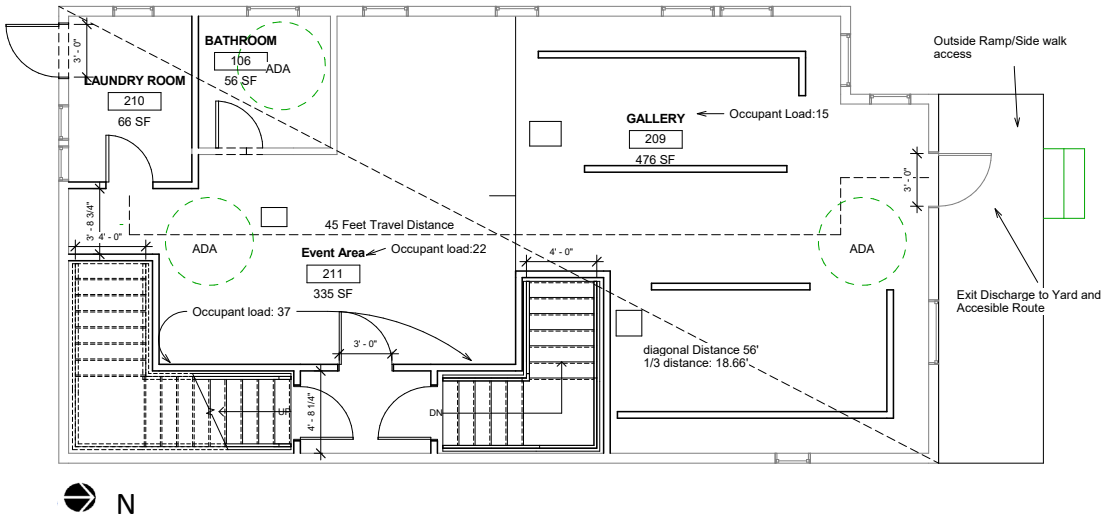


Figure 18: Amira's first floor life safety plan.

[84] This was despite my having "taken" Beth's course three times. With the start of each new semester, Beth and I liked to joke that perhaps this will be the semester that I pass. I never "passed" the class, but despite my architectural dunce cap, I continued to negotiate the IBC, learn about it, and be vexed by it.

In Week 10, Amira again sat down with Beth, this time for a one-on-one review of her "completed" life safety plan (see Fig 18). During their discussion, Beth raised two code issues and instructed Amira to fix them. First, Beth and Amira together determined that indeed the stairway needed to be enclosed (as it is in Fig 18). However, based on Amira's mixed use occupancy type, the enclosure itself needed to be 2-hour fire-rated, something Amira had not specified in her code study document. The point matters because an egress system cannot require occupants to exit through a floor with a lower fire rating than the stair enclosure. In other words, as Beth explained, one cannot enter into "a more unsafe area in order to exit the building during an emergency." Beth thus recommended that Amira place an additional exit from the first-floor landing within the enclosed stairwell and through the building's exterior east wall. Amira did that in her final construction documents (refer to Fig 14), and she removed the clearly unnecessary doors between the stairways and the first-floor landing. Beth also indicated that doing all of that would likely be more cost effective[85] than increasing the fire rating of all wall materials for Amira's "Event Area" and "Gallery."

Design Actant 3: Existing Material Structure

Each cohort had to deal with the redesign of an existing building. Consequently, those existing material structures affected students and how they configured their designs, particularly how they imagined their future realization. As described earlier, the KI property had some issues with structural support for its first-floor flooring. This problem was recognized and expressed by Beth, many of the students, myself, and even the KI intern who supervised the kitchen being placed on the north side of the house, away from the flimsiest part of the flooring on the southeast part of the house. While this did not necessarily determine Baheera's placement of the kitchen – she was the only student to place the kitchen on the north side in her design – the students all knew that the flooring was problematic and needed repair.

For example, Jakub acknowledged that supporting his custom aquaponics system's weight required better structural supports added in the basement. He stated that KI would need to "sister up the floor joists[86]" to stabilize the first floor for the aquaponics system. He mentioned that he intended to include the joist repairs on his required basement ceiling plans;

[85] Here, potentially expensive wall materials with high fire ratings acts as a design actant that influences what is possible for Amira and her design.
[86] A joist is a piece of wood (or steel) that supports a floor or ceiling. If a joist is damaged or insufficient in some way, one sisters it by installing another joist alongside.

however, when I examined his final ceiling plans, I discovered he had not done so. Similarly, Dakota, who features in Chapter 5, also discussed how joist repairs were required to make her designs possible.

The Big Car property had its own material structural issue that students had to consider. The property's basement had little head room. At 6 ft. tall, I was very conscious of how close the open ceiling's beams were to my head. Several students and I expressed concerns about the basement's livability – it was also then unfinished. The IBC requires that any "habitable" space's ceiling height must be at least 7½ feet (see IBC section 1208.2). Despite these constraints, all but two students designed Big Car's basement to include living space. One of them, Janelle, decided to use the basement as a "flex space," meaning she had not specified an explicit use for it, although she did mention that it could be prepared for a future bathroom or additional "community outreach" space. She stated that such preparation would mean Big Car personnel having to have the basement dug out to allow more head room. Janelle also reported that Beth had informed her that "digging out" the basement would not be "that bad" in terms of labor, but it probably would not be "cheap." In my final interview with Janelle in Week 14, she added that she would not want to use the basement as a "sleeping space" or a "chill space," and emphasized she was "*not* a basement person." This personal preference, along with the fact that the basement was unfinished and lacked head room, combined to inform how Janelle designed the use of that space, as well as what would be needed to make it usable.

Design Actant 4: Peers

During interviews, I asked each student questions about how their peers affected their designs and how they may themselves have affected their peers' designs. This was commonly a difficult question for them to answer – along with the question, "What does it take/mean to be an ethical designer?" to which I return below. Students typically stumbled when asked about peer influence and appeared uncomfortable when asked to explore how their peers might have inspired some of the features of their designs (more on this below). Most of them could do little more than speak in generalities about how *so-and-so* helped them with a Revit or code problem they were having. Each of their designs was individually *theirs* after all.

Each student had to submit their own sets of floor plans that each had to develop *independently*. In the context of Beth's course, independence was seldom defined in terms of intellectual property or plagiarism – though those specters certainly haunted the design

processes I witnessed. Independence appeared to take the form of simply doing one's own work in Revit and not outright copying a peer's Revit file. Given that each student was working with the same client asking for the same things in the same existing building, there were bound to be multiple similarities between student floor plans. In addition, all students were present during each of their peers' client presentations, so the feedback given to their peers was also available to them. If the client appreciated a unique feature of a student's design during their presentation, several other students, who were also looking to please the client, may have then adopted that feature. For example, during the Fall 2015 cohort Gabriela (see Chapter 1) mentioned that she had been inspired to include a "flat roof" on her design because 1) a peer had had one and 2) KI personnel had expressed liking the idea of a flat roof when Gabriela's peer presented this as an option. Also, during that semester, it was evident that several students were inspired to design for a tiered aquaponics system, at least in part, due to Jakub's extra work with aquaponics and KI personnel's positive response to those efforts.

Amira was arguably the student best able to articulate the effect her peers had had on her own design. Earlier in this chapter, I mentioned that Amira and one other student designed special walls for the first-floor gallery displays, including displays that were in front of windows, so people could see art from the street. Amira mentioned that she was both "most proud of [her] gallery" design and that she had originally gotten the idea from that other student, Lindsay. She explained that Lindsay:

> was the inspiration behind [the gallery displays], she actually gave me this, this whole idea … she put out this idea, and then I further developed it within my own design. And so, she gave me this idea, like, you know, create a space where you could put like, you know, even display, you know, a lot of displaying, you know, what I mean? Like, that's a good idea. So, what kind of open concept [could I do], you know? … Okay, behind the windows, you put … displays behind the wall space, you know? She gave me these ideas.

So, the lines Amira drew in her gallery space reverberated, at least in part, with the affective force of Lindsay's original idea. Through this process, Amira's relationship with Lindsay became a part of her design just as Big Car's emphasis on placemaking and the needs of their

APLR program, as well as the IBC and the material structure of the building were included in Amira's design. This clearly illustrates not only of how design actants affect a design(er), but also how the relationship between design actants creates concatenations of affective force that, through their interconnectivity, constitute the design(er) in any present moment. Through the design process, these relationships were mapped onto a geometric plane in the form of the lines that constituted students' floor plans.

In this chapter's final section, I explore how students thought about and valued these varied and constitutive relationships, particularly related to how, if at all, students did so ethically.

Revisiting Capitalist Modernity and the Discourse of Professionalism

The above discussion of design actants illustrates both that student designs were relationally constituted and that students were capable of narrating this relationality – yet, at times, only with my prompting. That said, I have yet to explore in depth why students may have engaged with design actants in the ways they did. Doing so requires consideration of how the beliefs, assumptions, ideologies, rationalities, and discourses of capitalist modernity impacted how students' thought and acted throughout the design process. I focus specifically on professionalism and professional standards and on how students' ideas about ethics were often assimilated into notions of professional practice and success. I aim to support an argument that students often thought of "ethical" design and the care provided to their clients through the lenses of professional practice and career success and longevity. In doing so, students often reproduced the status quo of capitalist modernity that, as I argue further in Chapter 6, is maintained in part through the concealment and devaluation of relationships.

Student Definitions of Ethics

I initially designed this study to explore how, if at all, students enacted ethical thought and practice during the design process. In Chapter 1, I briefly outlined how I defined ethics for the purposes of this study. To review, ethics is first concerned with how we live out our answers to the question: how ought one live? However, ethics is no mere series of individual exercises, though those are a part. Ethics is fundamentally interactive. As we strive to live as we believe we should, we are affected by others, who also affect us; and, through this interactivity social problems arise and values must be negotiated as we seek resolutions to these shared problems. Ethics, then, is an act of practical inquiry into how I should govern

myself and others, as well as the exigencies that are born from relationality. The beliefs, values, and ideologies we bring to our ethical inquiries affect how and why we respond to the needs and problems of the present in the ways we do. However, I suggest, there are beliefs, values, and ideologies that directly undermine the ethicality of our modes of inquiry into how and why we address the personal and social problems affecting us. For example, since ethics is fundamentally relational, any belief, value, or ideology that conceals or devalues relationships is likely to undermine ethical thought and practice, if not make it impossible.

In this section and in Chapter 5, I seek to address the following questions: (1) as students provided care and concern for the relationships they encountered throughout the design process, did they do so ethically? (2) Or, did they embody other techniques and strategies that undermined ethicality to rationalize and justify their modes of thought and practice throughout the design process?

In my final interviews with students, I always asked the question, "what does it take to be an ethical interior designer?" Many students found this question difficult to respond to. Some were unfamiliar with the word "ethics." Two students had seemingly never even heard the word. One, Melanie, struggled with the question, even after I connected the notion of ethics to morality and morality to the beliefs and practices of her Christian faith. Furthermore, as she was answering this question, she used the word "ethically" and then immediately looked at me and stated: "I don't even know if that is a real word." I did not get the impression that any of the students were overly familiar with the idea of ethics or how it related to their disciplinary education. That said, with some support and probing questions from me, they were able to articulate some of their thoughts about how they, as interior designers, should act and why they should do so throughout the design process.

When discussing ethical interior design, three main themes arose most often. These themes are care and concern for clients, the IBC, and academic honesty and intellectual property. Many students talked about how important it was for interior designers to show "care" for their clients – particularly regarding their design requests – and professional courtesy for everyone with whom you work (e.g., construction professionals). According to Melanie, for example, as an interior designer, "you have to be concerned with the different ideas [of] the person that's going to be living in the space." Neil echoed Melanie's statement when he said that, as an ethical interior designer, he would need to try to free himself from "bias" and be "open" to the needs and perspectives of his client.

However, underlying this care and concern for one's client, I often found a professional rationality that is most easily summed up by the old commercial adage, "keep

the customer satisfied." This means that much of the care and concern for clients was framed by what Beth would have called professionalism and professional practice. Baheera, for example, strongly argued for the importance of "honesty" in the designer-client relationship; however, she did so in a way that portrayed honesty as essential to one's success and career longevity. She stated:

> I think your career works a lot by word of mouth, it's all word of mouth, people recommend you, because they like you…if you are an ethical, honest person, it will get out there. People will…recommend you just because they thought that you didn't cheat them…you were working in their best interest.

Going further, Lindsay described an ethical interior designer almost entirely in economic/business terms. Lindsay immediately framed her answer to my question about ethical interior design in terms of "success." She stated, "if…you want to be a successful designer…you have to have the ability to communicate with people… if you can't communicate with people, then how are you going to get anything [i.e., their design expectations] out of them." For Lindsay, this appeared to be the starting point for ethical interior design. She also asserted that an ethical interior designer would need to be able to work well with "different calibers of people." As she explained: "you're going to get people who are nice, and you're going to get the crazies who [hold] a flashlight up against the wall and look [closely] at everything [you've done]." For her, an ethical interior designer needed to be able to work with all kinds of people, listen to them well, communicate clearly with them, and be patient with tough customers. Being ethical, in the sense Lindsay outlined, was a prerequisite for success.

My many interactions with students over the course of my fieldwork left me with the impression that, for them, ethics was a necessary appendage of their chosen disciplines/careers. This necessary appendage was also commonly equated with the discourse of professionalism. Students reported needing to perform their profession ethically and, in doing so, their work would be legitimated and could be valued within the interior design market. In other words, students cared. They arguably cared deeply for their clients. However, much of the care provided to clients was wrapped up in (or warped by) personal interest and financial considerations. Here, I suggest, the following question resonates: what do I need to do as an interior designer to ensure that I collect fees from my clients or wages

from the design firm/company employing me? One needs to care for one's clients, listen to them, be concerned for their needs, because doing so, legitimated oneself as an interior design professional.

Allow me to provide a note of caution here. This commoditized care, while ubiquitous, was not absolute (see Chapter 5). Amira, for example, described a "true designer" as someone who "takes the time to know their client." According to Amira, this is not done simply because it is a "business relationship." For a "true designer," Amira asserted, the care one gives a client must be "sincere." Here, Amira crafted a distinction between business and sincerity; they co-exist, yet they are discrete categories of practice. Amira stressed that when she designs, "I'm designing for [the client] … I want you to benefit from what I'm going to be providing you." For Amira, when a designer is sincere, their focus must be directed beyond a transactional relationship and into a relationship in which the designer desires the good fortune of those being served.

When examining this all together, I find no evidence that students delivered care to their clients cynically. Rather, it suggests that the care work they did within their budding profession was often immediately captured by capital or, more specifically, captured within the onto-epistemic framework of capitalist modernity. Under such conditions, "ethics" frequently becomes just another professional skill needed by students to make a living. That said, however, Amira's words point to a "yes, and" relationship: yes, care is commoditized, *and* care in such contexts can be "sincere," *and* this sincerity is not necessarily seen as part of business practice.

My conversations with Baheera revealed a similar position. Not only did Baheera discuss "honesty" in professional terms (see above), she also explicitly connected it to her Islamic faith. Thus, in our final interview, she revisited the strip club example that Beth often used in class (see Chapter 1). Due to her religious beliefs, she reported "even if it's worth a lot of money, if I'm not comfortable doing it, and if I'm not comfortable with it, I wouldn't do that. It will be against my ethics to do something that I cannot put my whole heart into." Similarly to Amira, Baheera attempted to negotiate the creative tension between ethics and religious values on one hand and the exigencies of professional and business practices on the other. In Chapter 5, I describe other ways that students challenged the overwhelming capture of interior design by the onto-epistemic framework of capitalist modernity.

The second theme that arose in my conversations with students on interior design and ethics pertained to the IBC. When students talked about the connection between ethics and the IBC, it was typically in terms of safety for those occupying the built spaces they were

designing. For example, according to Baheera, “it's your moral and ethical responsibility to design a space that would be safe for people to inhabit it.” When discussing ethics and the IBC, Baheera brought up memories of her father, an electrical engineer, who always told her “you should always strive to do the right thing, because if you do the right thing, even if you don’t earn that much, you will have no burden on your heart.” She proceeded to connect this lesson from her father to why she must follow the IBC when she discussed the personal “burden” she would experience knowing if any of her designs ever caused harm.

Accessibility was also mentioned when discussing the relationship between the IBC and the code. Scarlett, for example, stressed that the IBC was concerned with “the universal needs of everybody” as one creatively navigated the “ethics of who could possibly be coming into this house.” The IBC helped student designers to ensure that their designs were inclusive of different people with diverse needs.

All students also talked about the code as something “required,” something to which they were obliged to conform their designs. While certainly true of the IBC, this can also be connected back to how Beth presented and portrayed the IBC. Throughout each semester, Beth had presented the IBC in both ethical and professional terms. The code was, for Beth, about “mitigating [possibilities of] the loss of life;” it was about ensuring the safety of any and every kind of person, who might enter a building. Simultaneously, Beth also stressed that designers needed to follow the code if their designs were to ever come to fruition. That latter statement points to a professional and commercial/business need: following the IBC legitimized designs, controlling what can and cannot be built and, in turn, what can and cannot generate revenue. Following the IBC both protected life and legitimated the professions that used it, as the IBC was part of how these professions fortified public trust in their services and, in turn, protected their statuses and interests (see Evetts, 2013). Again, we see an entanglement of caring concern with professional advancement and legitimacy.

The third ethics-related theme focused on the complex ways that concerns over academic honesty and intellectual property were entwined. When asked about ethics, students occasionally talked about academic honesty in a manner involving them repeating what had been told to them throughout all levels of their schooling – that they should not cheat or plagiarize others’ work. For example, Amira connected ethical design with “not cheating…[not] taking others work and making it your own.” Salient are her two words “your own.” The designer creates a floor plan that is their own creation. It belongs to them; it is their property; and it must not be taken. The ideas within one’s design are one’s intellectual property.

The kind of relational indebtedness described by Nyamnjoh (2017a), where one acknowledges one's relational constitution and convivially seeks, when possible, to return the favor or pay the debt, is absent here. I attribute that absence to the idea and function of property within student discourse. This was most evident in conversations I had with Lindsay and Esen.

Lindsay had many experiences working alongside her father who operated a real estate investment business that "flipped" houses – a practice of purchasing a rundown property (perhaps in an "up-and-coming" neighborhood) for a low price, renovating/remodeling it (sometimes cheaply and carelessly), and then selling it for a profit. During our final interview, Lindsay acknowledged how her initial Color Plans were deeply informed by her experiences of flipping houses with her dad. Considering how influential these experiences were to her, I was unsurprised to hear her describe her design for Big Car as a "free product" and then quietly mumble, "I don't get paid for it," with a laugh. While she did not elaborate further, Lindsay clearly found something askew with *her* design being a "free product."[87]

In contrast, and by comparison with her peers, Esen, expressed far deeper concerns regarding how her intellectual property was being used. Esen had then recently (within the past 3 years) immigrated from Turkey with her husband (a surgeon) whose profession tied him to a hospital in Indianapolis. Esen had a Bachelor's degree in Architecture from "the biggest architectural school in Istanbul" and reported having worked as a professional architect there. But, she noted that, when they moved to the U.S., "my English was not good" and this had made passing U.S. architecture certification exams difficult. Moreover, she did not have a driver's license and was unable to commute to nearby Muncie, Indiana, where Ball State University offered a Master's program in architecture. She had decided, rather, to continue her education by completing another Bachelor's degree, this time in interior design at IUPUI, which was near where her husband worked.

When Esen and I discussed ethics, she first considered the usual topics like the IBC and safety. However, as the conversation progressed, she began expressing frustration about how she was expected to share her designs with KI. For Esen, her designs were her intellectual property and giving them to KI felt, she reported, that she no longer had "any

[87] In a separate conversation with Melanie, she expressed a similar complaint – that Big Car was "getting all this work done for free." She made the statement while expressing frustrations that, as she saw it, Big Car personnel were "not taking the project seriously" and were insufficiently engaged with the students. This again illustrates how some students saw their designs and the labor that went into those designs as having monetary value.

rights" to her designs. She added that "[if] someone uses my designs without letting me know, it is not good." According to Esen, this was "unprofessional" practice because lack of a contractual agreement meant that KI could use her design and not inform her; and that she then would lose her rights to her design and forfeit financial compensation. Clear here is that Esen's past experiences working as a professional architect within an architectural firm colored how she perceived her design interactions with KI. She appeared to struggle with disentangling her past professional experiences from the service-learning experiences within the *Commercial Construction* course. KI did not choose any one particular student's design to build. At most, KI received some ideas from students in exchange for playing a role as an educational community partner for Beth's course. Yet, Esen perceived her designs to be her property; and the relational constitution of her designs and the educational context in which they were created did not challenge her perception that her floor plans were her inalienable property. For Esen, ethics and professionalism were deeply concerned with safeguarding an individual's property.

Esen's concerns suggest that, for her, designing necessarily involved the rationality of a market economy where ownership (i.e., of intellectual property) is assigned to individuals through a process of exploiting, concealing, and devaluing the relations constituting a design within a capitalist market economy. Esen's perspective illustrates well a process of making ethical sense of design through the hegemonic lens of the onto-epistemic framework of capitalist modernity, where ethics is consumed by concerns for one's professional rights and responsibilities. This is clearly utterly different from what Nyamnjoh (2017a: 18) calls an "economy of intimacy" which requires a sense of incompleteness and indebtedness. From that perspective, oneself as designer and what one makes/designs is always in process, never achieving completion, it comprises an emergent composite of one's valuable relations. I further examine the ethical repercussions of this contrast and the dominance of the former perspective in Chapter 6.

To conclude this chapter, I note that my student interlocutors were significantly affected by modes of ethical care that had already been captured, at least in part, by capitalist modernity. However, as Massumi (2015) has argued, the entirety of an affective force is never completely exhausted or captured. Some force remains; some piece of it is not captured. This is how I would argue one should understand the care and concern students embodied. They cared for their clients, but sometimes this care was captured by the beliefs and values of capitalist modernity. They cared for the safety of those who might come to inhabit the buildings they designed, but sometimes this care was captured by the legitimating

discourses of professionalism that disciplined them as budding interior designers. I stress these points because it is in them that educators can begin to see new potentialities that may enable us to seize upon different ways of thinking and valuing the relations of design. For me, capitalist modernity and its otherwise both exist in each moment of the design process.

In Chapter 5, I explore further how students, through their thinking about the relations of design, fled the easy capture of capitalist modernity and hinted at nascent alternatives. In Chapters 6 and 7, I support my argument that while the onto-epistemic framework of capitalist modernity and its modes of valuation undermine ethical thought and practice, it is possible to overcome that constraint; and that, in order to truly educate "the whole student" and to foster their ethical development, educators must strive to introduce students to alternative onto-epistemic frameworks that imagine value beyond capitalist modernity.

How can I begin anything new with all of yesterday in me…how can I exist as the vessel of yesterday's slaughter?
-Leonard Cohen, Beautiful Losers

Not bad. I wonder who I was when I wrote that.
-Leonard Cohen, Uncut, 1974[88]

It's not new that architecture can profoundly affect a place, sometimes transform it. Architecture and any art can transform a person, even save someone.
-Frank Gehry

Chapter 5

Tweaking Primary Colors and The Ethico-Aesthetics of Design: Exploring the Role of Past Artistic and Traumatic Experiences in the Design Process

In the previous chapter, I described how my student interlocutors' designs were relationally constituted and how they narrated the relational design process. I also explained that student sense-making of this relational process was often constructed through the ideological lenses of capitalist modernity's political rationalities. More specifically, students often expressed their understanding of their design choices through the discourse of professionalism. This significant concern with cultivating the standards of professionalism was, I argue, an extension of the commodification of much of life under neoliberalism and the related goal to develop supposed "human capital." By embodying pedigrees of "the professional," students became the return on their investment of their own "human capital," which, once matured, could be commodified and sold on the labor market. As a human commodity, it, and anything produced by it (i.e., a design), were fetishized. In other words, the students and their designs, which were bundles of social relations, were concealed behind a veil of a universal equivalence of value. Student thinking around the relations of design often reproduced this veil, specifically by capturing and interpreting these relations via beliefs and assumptions of capitalist modernity. The veil stayed firmly in place precisely because capitalist modernity is naturalized. Practices of acknowledging and caring for all to

[88] https://www.uncut.co.uk/features/leonard-cohen-london-june-1974-33860/

which we relate are then in danger of becoming practices of commercial or financial self-interest first and ethical practices second, if ever.

In this chapter, I explore moments of slippage where concealed relations were unveiled *and* interpreted in ways that fled capitalist capture. I do that by first examining how, in drawing upon their past experiences with artistic expression, students constructed modes of thought that exceeded the bounds of professionalism and the production of "human capital", and entered into engagement with the design process as an artistic practice undergirded by an aesthetic rationality. Thereafter I explore how students also drew on experiences of trauma, as well as the arts, in complicated ways and, in doing so, practiced a kind of empathic design. Here, I am concerned with two questions: (1) How, and to what extent, did past aesthetic and traumatic experiences affect student design(er)s throughout the design process? (2) How, and to what extent, do the affective forces of such experiences contribute to alternative modes of valuation that may escape the hegemonic forms of valuation found in capitalist modernity? Prior to addressing these questions with my ethnographic data, I first briefly define experience and describe its temporal operation via the work of Whitehead and Dewey. Then, I discuss Guattari's ethico-aesthetics in order to explain how this framing helps to conceptualize how the aesthetic practices and rationalities of some students may reveal alternative modes of valuation beyond mere professionalism and human capital production.

Experience and the Experiential Continuum

The past experiences of students comprise the design actants on which this chapter focuses. Our past experiences hold potentialities that affect us and influence how we participate in the actualization of the present. As Whitehead (1978) has explained, actualizations in the present "perish" and attain an "objective immortality" within what I would call, following Dewey, an "experiential continuum." Past experiences (whether distant or part of an immediate past), though having perished, continue to affect or haunt the ephemeral and emerging present and provide potentialities for becoming (see Chapter 6 for more on ghosts and haunting).

For Whitehead (1968), language plays an instrumental role in how the past enters the present. As we experience the actualization of various data within the present, we prehend such data contributing to our own subjective actualization. According to Whitehead (*ibid.*), language is, in part, the means by which we come into conversation with ourselves. For example, through language, our pasts are "rendered distinct in the present" by way of one's

self corresponding in the present with past experience (Whitehead, 1968: 33). In such an instance, past experience becomes an "articulated memory" that is "an expression of oneself in the past to oneself in the future" (*ibid*.). These articulated memories possess affective force and can be felt and prehended for present actualizations.

Dewey (1938/1998) describes this process in a similar way. Experience, for Dewey, is possible via continuity and interaction. There is an expansive continuity to experience, meaning that there is a building or accumulation of experience in each present moment. Since experience has continuity, there is always the possibility of prehending what has come before in order to address the exigencies of the now. Therefore, in the present, one is interacting with one's own continuity of experience, as well as the experiential continua of all others inhabiting a shared present. How each subject interacts within the present with their past, as well as with other subjects/actants, present affects what becomes in any given moment.

Given that past experiences profoundly affect how one interprets and rationalizes one's decisions and actions within a relational matrix, it is important to examine various kinds of experience and what values, obligations, and commitments such experiences engender toward present interactivity. By examining how aesthetic experiences and values are mobilized in the design process and how trauma impacts student thinking around relationality, I explore how past experiences exerted affective force on student design(er)s and how such forces contributed to students envisioning their design practices as also ethical practices (not to be confused with professionalism).

Ethico-Aesthetics

As introduced in Chapter 3 (see page 95), Guattari's (1987) ethico-aesthetic paradigm marks various resistances to capitalist power structures that aim to evade the hegemonic, fixed, transcendent, and hierarchical capitalist assemblage. Therefore, his ethico-aesthetic paradigm is nascent within our current reality of capitalist modernity. This means that it is possible to see and experience the commodification of life – the overdeterminization of capital – alongside aesthetic practices that promote other modes of valuation and creativity. Within capitalist modernity, the transcendent exerts *outside* pressure upon the subject, which is finite and subjected to hegemonic rationalities and ideologies (i.e., the transcendent) leading to the "reduction of heterogenetic multiplicity to the principle of exchange" (O'Sullivan, 2010: 260). Here, due to the hierarchical character of capital, the potentialities latent within difference may either be foreclosed upon or, if such difference is actually

prehended within a given becoming, what is produced may be easily captured by capital. I argue that this is aligned with what I have described in Chapter 4 as the capture of student's care and concern for their clients by the discourse of professionalism and the broader onto-epistemic framework of capitalist modernity.

In contrast, the ethico-aesthetic paradigm inaugurates a "folding-in" of the transcendent. What this means is that the subject then comes to possess access to the powerful capabilities of the transcendent in their own fashioning, and then by being able to create freely with the potentialities within multiplicity, they begin to map their trajectory away from subjection and toward the achievement of something new. Using a playful neologism, Guattari (1995: 106) presents the arts as the means for the production of "mutant coordinates," since art "engenders unprecedented, unforeseen, and unthinkable qualities of being." Mapping one's trajectory onto such "mutant coordinates" may foster the creation of new subjectivities, particularly ones that move beyond the qualities of *homo economicus*. In what follows, I describe how students utilized artistic thought and practice to imagine new ways of designing and becoming a designer.

Artistic Practices and Aesthetic Values: Painting with Sasha and Annie

In this section, I focus on two students who had significant experiences with the arts. Sasha was a student in the Fall 2015 cohort and Annie was a student in the Spring 2018 cohort. Both cohorts worked with KI. While Sasha and Annie were not the only students affected by significant experiential histories with the arts (see Carmen in Chapter 2 and Dakota below), they were uniquely reflective on the artistic nature of design. For example, as I describe below, Sasha and I co-constructed a metaphor around the relationality of design and the use of color in the practice of painting. In our metaphor, clients and their desires and feedback became the colors populating the painter's pallet of the designer. In addition, I relate a detailed conversation between Annie and me in which we explored the role of beauty in the design process and what values an interior designer must embody to ensure the realization of beauty within a design.

By focusing on Sasha and Annie, their aesthetic experiences and our work on constructing our metaphor, my goal is to examine how they expressed aesthetic modes of valuation and how such valuation was linked to perceptions of ethical thought and practice. As it was with Sasha that the metaphor took its initial shape, I first focus on the affective force of her aesthetic experiences. I then describe Annie's past aesthetic experiences in order

to further connect the notion of beauty to concerns with the ethical thought and practice of design.

Making a Metaphor: Art Experience and Clients as the Colors of a Palette

Born into a large Catholic family, Sasha was one of 13 children. She expressed deep admiration for Michelangelo due, she said, to his ability to merge his faith with his artistic expression. She reported aspiring to what she described as Michelangelo's synthesis of the personal and spiritual dimensions of life with the design and professional dimensions. In doing so, design would be an act of service, or a care practice, that, for Sasha, expressed her faith. She stated that she desired to "impact someone's life" and that she did not want to necessarily work in the future with clients that had "millions of dollars." Rather, she reported wanting to serve clients similar to KI, who might have a tight budget and might need a space designed to help them achieve their mission.

Yet, design was not only a form of service or a way of making a living. For Sasha, it was also a creative act of artistic expression. While she stated not always feeling a deep connection to the arts, she said she had found she was quite good at it in her first art class in high school. After that, she took several more arts classes as electives. She described beginning and ending each day in art classes. She explained that being immersed in artistic practices gave her "a whole different mindset on everything." For example, she said, when making art "You just forget about your stress and everything and just go somewhere else and be good at something and just listen to music and lose track of time."

Upon entering university, she quickly navigated away from her initial major in dentistry, because she "missed the art stuff." Bored with "psychology and science classes," Sasha entered into IUPUI's Herron School of Art and Design, where she vacillated between multiple specializations, including drawing, photography, painting, and furniture design. After losing interest in those, an advisor suggested IUPUI's School of Engineering and Technology's interior design major. Sasha took an introductory interior design course, and she determined that interior design was "the perfect fit." She acknowledged that without the aggregate of her specific experiences – or as she put it, "finding my way" – she would not have stumbled upon interior design. (I would add that without all of these experiences it would have been unlikely that we could have constructed what I am here describing as our painter's palette metaphor, which provides interesting insights into the relations of the design process).

Sasha and I began discussing the painter's palette metaphor during our first interview. Whilst identifying all of the actants that must be considered during the design process and where she, as designer, is positioned in this process, Sasha stated: "I think that my creativity is fueled by what other people want, like what I can give them, like putting a spin on what they want kind of thing… I think my creativity is fueled by what I have laid out in front of me."

This statement, made in the context of a long interview that contained a substantial amount of conversation on formative experiences with art and creativity, got me thinking about a painter's palette. And I suggested to Sasha that perhaps her perspective on her clients is that their desires and needs comprise a kind of "extended" painter's palette that includes many distinct colors, each representing a client's desires. Noticeably intrigued by the idea, Sasha engaged with the metaphor, critiquing any idea that there are simply, for example, "50 different colors" on the palette. Rather, she suggested that "you can start with your three primary colors and make those 50." The conversation continued:

> **Grant**: So, you got those three primary colors, what would you say those three primary colors are?
> **Sasha**: Like color wise, are we talking about colors?
> **Grant**: No, we're talking about the symbol of the colors for this metaphor.
> **Sasha**: For this project, ok. So, you have the structure of the building…
> **Grant**: So that would be 'red.'
> **Sasha**: Ok, and we have the client's concept, the self-mastery, KI…
> **Grant**: 'Blue.'
> **Sasha**: I don't know what the next one would be…just the budget maybe. It would be a huge part of it. That would be why [creativity] would be constrained otherwise you could just do anything.
> **Grant**: Your passion, is it not a primary color?
> **Sasha**: My passion would matter, but my passion is for that client's concept. It's for what they want.
> **Grant**: It mixes with that primary color to create a new color?

> **Sasha**: It's the white that creates the lighter hues. You always have to have white when you are painting… The designer provides the white and the black for the client who has the primaries.

We need here to remember that with white and black (here metaphorically representing the designer's own experiential continuum), an artist "tweaks" the intensity of the primary colors alongside mixing those colors to make secondary and tertiary colors. For example, were one to "mix" the building structure (i.e., red) and the client's concept (i.e., blue), one might find that a particular objective held by the client is not feasible in a particular part of the existing structure. An example here is how the first-floor flooring of KI's property arguably limited placement of the kitchen if it was to be used for their culinary training activities for recently released prisoners. Returning to the painting metaphor, once mixed, the designer then adds white and/or black to modify how and why the now created secondary color is expressed. And now considering again KI's flooring, perhaps the designer chooses to "sister up the joists" – as Jakub suggested (Chapter 4) – to put the kitchen anywhere; or perhaps they choose to move the kitchen to an area with more secure flooring.

My co-crafting of this metaphor with Sasha was a meaning-making activity. Drawing on Sapir (2016: 10), engaging in this tropological work produced a metaphor capable of providing "the means for making precise statements about their subject" or, in other words, our co-created metaphor contributed to our production of a shared understanding about the design process and the actants and affective forces that constitute it. Such shared understandings are needed to support efforts to map out new ways for creating new design(er) subjectivities.

Interestingly, Guattari (1995: 7) also employed the painter's palette for its metaphorical power: "One creates new modalities of subjectivity in the same way that an artist creates new forms from the palette." Sasha's and my work on the painter's palette metaphor similarly sought to understand the relational process by which something new (i.e., a design/er) is created, and that this creation of something new could occur through ethico-aesthetic modes of valuation that at least partially flee capture by capital.

The important point to take away from Sasha's and my metaphor is that the relations of design can be, and at times were, understood and valued beyond the framings of professionalism and the concerns promoted by the hegemonic beliefs and assumptions of capitalist modernity. Through this metaphor, interior design was conceived as a

fundamentally creative endeavor that sought to intermingle a plurality of differences into a coherent unity, a design. However, just as Sasha's suggestion that "the budget" could be one of the primary colors on the painter's palette, we cannot entirely bifurcate the concerns of capital from the alternative modes of valuation found in ethical and aesthetic thought and practice.

The metaphor remained dormant for me until I met Annie more than two years later during the Spring 2018 course when I introduced it to her. Although we did not build it out further, Annie was very taken with it and stated that, for her, it was "an excellent way of thinking about" the design process. I turn now to Annie because her perspective on the ethical had strong aesthetic elements, namely a thoughtful engagement with beauty, which is an issue central to my closing chapters.

Considering the Role of Beauty and Difference in Design Ethics

Annie also had a great deal of experience with the arts, particularly drawing and painting. In our first interview (Week 12), she reported having drawn a few tattoos for her friends. She told me that she enjoyed the "problem solving" that went along with interpreting and translating her friends' ideas for tattoos into a final tattoo design. She also described her love for painting "nature," including animals but especially landscapes like beachfronts. She liked painting ocean views, she said, because she found the ocean to be relaxing. Annie loved the ocean. She wanted very much to be a marine biologist, but not so much that she was willing to leave her family and friends in her landbound Indiana home and to move near the coast for her studies. She described herself as a "homebody" who deeply valued her family. Not wanting to leave the security of friends and family, as well as her reported struggles with understanding the content of a high school marine biology course, had led to her reassess her educational focus. She also reported being inspired by home-improvement TV shows that she often watched with family members.

As I did with all my student interlocutors, Annie and I reviewed her floor plans and how they evolved throughout the semester during our final interview (Week 17). Immediately prior to my asking her about interior design ethics, I had asked her about how her design concept manifested in her design. Annie had eventually settled on "reawakening" as her design concept; however, "rebirth" and "renewal" were also formative concepts that she eventually folded into "reawakening." As she answered my question, she connected "reawakening" back to Imhotep's story about the scarab beetle (see Chapter 1) and the positioning of the scarab in KI's logo. She reported that her design was intended to be "a

renewal of the house," particularly the house "structure." Similar to several of her peers, she described this "reawakening" as being fostered through an open floor-plan design.

After she had made this point, I asked Annie: "What does it take to be an ethical interior designer?" She paused and sat quietly for several seconds before nervously laughing and then saying: "Sorry, I need a little more elaboration on that."

This was not the first time that a student had appeared quite lost when I asked them directly about ethics. However, I found, after doing many such interviews, that some gentle encouragement helped students craft an answer without having first to listen to an ethics lecture from me. I now encouraged Annie and suggested that, as our conversation progressed, we would work together to deepen our understanding. Appearing a bit unsure of herself, Annie agreed. She stated:

> An ethnical [sic] interior designer, I would think is an interior designer that is an interior designer but is also taking into consideration all the ethnics [sic] and culture around them. And to not only respect them, but also highlight them and make them more beautiful…to show, like, the beautifulness to all of them. So, I guess that's really, what it takes to be an ethical interior designer is just having, like, an open mind … is probably the biggest one and to take into consideration the ethnics [sic] around them to provide that in the design.

I was equally intrigued and befuddled by her answer. Upon relistening to the recording of this interview, it made sense that she would focus her response on being considerate to different cultural and ethnic groups given that she, a white woman, had just been discussing how she had incorporated KI's values into her design through her design concept. This is an interesting example of how her past experiences with KI personnel affected how she came to think about the ethics of interior design.

That said, however, her replacement of "ethics" with "ethnics" (with one notable exception) was still strange; but, in the moment, I also saw how it created an opportunity to appeal to the beauty of difference and one's openness to it. I decided to see if her answer would change if I replaced the word "ethical" for "moral," so I asked her about a "moral interior designer." She reiterated that an interior designer needed to be concerned with cultural and ethnic diversity. At this point, I felt that I really needed some clarification, so I

respectfully asked her, “Did you say eth*nics* or ethics?” She chuckled and said “I don’t know.” So, I offered her a very brief and general definition of ethics, which included the notion that ethics is at least in part concerned with how we carry on our relations with others. After I made this general point about the connection between ethics and living out our relationships, Annie interjected and stated, “Yeah, that’s the first thing that I thought about when I heard [the question about being an ethical interior designer]…[I thought about] who we’re working with and understanding them as a client and portraying that into their design.”

I then pointed out how, considering what she had said so far, she had already asserted the importance of beauty and openness, both of which could be considered ethical values. Following that, I pointed out the conceptual relationship between beauty and art, and I wondered aloud to her whether she saw her focus on beauty as connected to her passion for art and her ways of understanding the ethics and morality of interior design. Without hesitation, she responded:

> There is, yeah, because I mean ethics is always like expressed in art. So, I feel like you can see like a piece of art and understand all the ethics behind it, and culture and all that kind of stuff, too. So, I think everything leads back to art, because art just expresses everything.

Annie’s stated perspective of the connectivity between interior design, ethics, and the almost universal expressiveness of art articulated a point made differently by other *Commercial Construction* students; namely, that an interior designer must provide thoughtful care and concern for their client’s desires. Here, Annie began to reframe this care and concern as an ethico-aesthetic practice directed toward the creation of beauty.

Our conversation continued by exploring Annie’s thoughts on how beauty operates within the design process:

> **Annie**: So, I feel, like, you could, like, design this space beautifully. But, like, you need to do it also, in a way that is understanding the client in a way. So, like, beauty as in, like, the beauty in them, and, like, bringing that out of them and putting it into their space, if that kind of makes sense. So, like,

> that way, they're both, like, reflecting on each other. So, I think that would be a part of making a design beautiful.
> **Grant**: What about when the beauty of them meets the beauty in you? What happens in that moment? And how does that play a role in design?
> **Annie**: I think, like, if you have the beauty in the client and the beauty in the interior designer coming together to make a space, it's just going to be twice as more beautiful. Because, I mean, you have two different mindsets that are coming together. So, like, I have my opinions and my ideas, but I also have another person's opinions and ideas too. So, they just kind of come together, and they can probably make something out of both of those and…think of something that both had neither thought of, but, like, two different ideas come together and, like oh, we can actually do this with those two ideas and combine them and then just have that in the space.

For Annie, beauty was not merely a characteristic of a design as a product; rather, beauty was an active element within the relational process of design. For her, the differences encountered within the relationships of design were the beauty to be identified, considered, and cared for. These differences could be cultural/ethnic – and in this case, between Annie and KI, they were. More generally however, these differences were, according to Annie, based in "mindsets," including "opinions and ideas," which were possessed by both designer and client and negotiation was needed if creation was to be successful.

At this point, our conversation returned to "openness" as one of Annie's key values as a designer and as the value that is "gonna make that all happen." She added: "So, you can be closed off as much as you want, but if you be closed off, nothing's really gonna come about it. I mean, you're just gonna be stuck and walking in circles."

From Annie's case, it is again apparent that the relationality of design can be understood through ethical and aesthetic lenses without directly appealing to professionalism and other values ingrained in the onto-epistemic framework of capitalist modernity. Annie's emphasis on beauty moves beyond the relational concatenations of the painter's palette metaphor and infuses her design thought and practice with an ethico-aesthetic mode of valuation, which, through her care for diversity and the harmonization of differences,

establishes the achievement of beauty as her primary ethical objective (see Chapter 7). Being open to difference, for Annie, was a strategy to achieve beauty and to prevent creative stagnation, which could leave a designer "walking in circles," or, in other words, reproducing the same thing (i.e., the status quo) over and over again.

Trauma and Aesthetics: Empathic Design with Dakota

In Chapters 1 and 2, respectively, I presented vignettes about Gabriela and Carmen that acknowledged the role past traumatic experience can play in students' designs. As with the "money bunnies" provided by her father, Gabriela's designs were receptacles containing her past traumas and the empathy and care for KI personnel and interns those traumas enkindled. Carmen's struggles with anxiety and depression, her love of the arts and design, and the caring relations she shared with her boy scouts and her friend James, all animated her design concepts and influenced the constitution of her floor plans.

I now provide a description of how Dakota's past traumas, neurological challenges, and formative artistic experiences affected her. Dakota, a student in the Spring 2018 cohort, gave voice to such experiences in her design concept and in her floor plan designs. In this description, I aim to support the assertion that, in being affected by and prehending such experiences, Dakota was valuing relations in ways that may speak to an ethico-aesthetic paradigm similar to that proposed by Guattari (1995). To do this, I begin by identifying elements of her experiential continuum that possessed affective force as design actants. Here, I am referring to her challenges with epilepsy, familial trauma and artistic practices. I then explore how these experiential elements affected each other, as well as other design actants affecting her throughout the design process and that led her to an empathic design that was full of care and, as Dakota suggested, "liveliness."

Traumatic Experiences, Epilepsy, Empathy, Art, and Liveliness

I met Dakota during the second semester of her sophomore year at IUPUI. During introductions on the first day of class, the students were asked to share an interesting fact about themselves. Dakota said that she had 10 siblings – comprising "full, half, and step siblings" – and that she and her twin were born on their mother's birthday. As she imparted these personal facts, her speech was noticeably slow and labored. As I got to know Dakota, she shared with me that, from an early age, she had struggled with epilepsy, which can affect speech. When the class traveled to meet with KI personnel, Dakota was dependent on others

for transportation, as her epilepsy was so severe that she had never been able to obtain a driver's license. As I detail below, Dakota had an intimate understanding of living with a disability which, she reported, profoundly affected her own empathic relations with others and her own empathic approach to design.

During our first interview during Week 11, Dakota offered me a broad overview of her life history. Her biological father had been absent for most of her life. As she said, "he disappeared for a few years and then came back and then disappeared again." Dakota reported that he had remained a "stressor" for her and her siblings until he completely disappeared when she was 12 years old. During her pre-schooling years, she had "a bunch of father figures," all of whom she described as "drunk" and "abusive." Around when she started Kindergarten, the man who would become her stepfather came into her life. From our conversations, I gained the impression that he was more stable than her preceding "father figures" although she said that they did not get along particularly well. She nonetheless credited him with instilling in her a love and talent for art – he taught her and some siblings how to draw and paint.

Art was a "big part" of her life from an early age. She described her childhood home as being full of her stepfather's paintings. Just as had Carmen, Sasha, and Annie, Dakota said that creating art was soothing: "…it was just like another outlet for us, especially because we had a lot of frustrations or problems growing up. It was a way to release some extra internal stress." By helping to release her frustrations, art practices also helped Dakota to see "the beauty still in life." As she elaborated:

> Art gives me … and others a way to create, like a liveliness, even if there isn't. So, there's hope to spread it. There's hope to spread knowledge and joy and other emotions through it. There's hope that experiences get passed through it, that I can be understood better through it.

As evident in this quote, the arts also provided Dakota with a mode of communication that did not rely heavily on the spoken word. Due to her neurological disability, she had difficulty "focusing" her words and "explaining stuff." Dakota added that with art, "I can visually show someone what I'm thinking in my head." She also said that interior design enabled her to maintain her artistic sensibilities and show people what she was thinking whilst engaging what she deemed to be "more intellectual components" from the sciences and engineering.

Throughout the semester, I consistently found Dakota to be exceedingly thoughtful in how she approached the conceptual and practical work of design. For example, she was markedly distinctive in who she understood their design client to be. This became apparent during Week 11 when Beth led a debriefing conversation about the students' recent meeting with KI personnel. As students discussed their main takeaways from KI personnel's feedback, Beth stressed that she did not want the students to get too wrapped up in the "technical part" of the project and the specific requests (i.e., for a commercial kitchen, dormitory space, a laundry). Rather, she said, she wanted them to remember the "heart" of their designs, which she insisted KI personnel deeply cared about. She then asked the class: "who is the client?" The students were slightly divided on this point. Most agreed that Imhotep and Paulette were the client, but many mounted an argument that the KI interns who lived in the house were the client. Dakota, however, proposed an entirely different design client: "the community," or "the client's client." Although it did not inspire any public agreement or additional conversation from the class, this struck me as a very thoughtful and caring idea, particularly since it was evident, from her floor plan design, that she was there empathically expressing her concern for the people served by KI. Moreover, she explained during an interview that, in singling out "the client's client" in response to Beth's question, she had been talking about the broader community, including recently released prisoners; but that, most specifically, she was referring to "troubled youth that need a place to get away." Having explained that, she soon added that, as a child, "I didn't really have a place to get away a lot." She then elaborated:

> Empathy is a big part of what I do… how I see the world is: it's easier for me to express things, especially communicate with others, if I know and can see what's going on with them, and at least halfway experience it for myself. And I see, for these kids, it's an escape place – for anyone in the community – to escape…because it's not a great neighborhood. And I see that. I mean, I've walked the streets a few times. Just wandering around. I'm from the east side [of Indianapolis], I didn't grow up with a lot. But [the neighborhoods served by KI are] worse off than my neighborhoods [growing up] were.

In the above quotes, we see how, her having been affected by her earlier traumatic experiences, Dakota now empathized with KI's clients and crafted her conceptualization of the purpose of her designs.[89]

Dakota's empathic stance was also evident in her Week 8 journal entry where she described her design concept as "Life Force." She wrote that KI was "a life force for their community," and that KI personnel gave "their heart and soul to make their community a better place." For Dakota, KI's community center was to be "a centralized area for their life force to flourish." She reinforced that argument by drawing on KI's extensive work in urban horticulture and food security and said in an interview that it should be a "point of nutrition" from which community life could thrive and "as a result [KI] could thrive and grow."

Dakota often used the word "liveliness," connecting it, during our final interview (Week 16), to art, stress, revival, and life force. Reporting also that the semester had been rather stressful for her at university, as well as with her family, she explained that the semester design project had permitted design to "slowly become a new form of art for me," one where the "consistency" of her KI design project had helped her to focus on something – as practicing art had – in a context where there had been so much "chaos." In addition, she connected that sense of "consistency" to the "liveliness" of art and the "hope" it inspires and then asked me: "How can I incorporate that?" This incorporation was important, she explained, because KI and their clients were "going through hard times too." As she elaborated:

> I think it was kind of helpful, that there's a bunch of stress going on. And this was the theme for everything… the liveliness and trying to help revive and renew things and bring together everyone and be the center and life force for those who need it. I think my own issues helped me create a plan that would be a focal point for people who need it.

Evident here is how Dakota was communicating a complex, conceptual intermingling of personal trauma, aesthetics, and empathy for her client (and their clients) through how and

[89] Dakota's use of empathy brings to mind an empathic design process that utilizes multiple "empathic techniques," which aim to develop "empathic understanding" between designers and users, leading to the identification of design criteria and the production and evaluation of design concepts (Justin L. Hess & Fila, 2016).

why she designed her floor plans for KI in the ways she did. Her ultimate design concept, "life force for the community," was what she was seeking for herself, just as much as it was her expression of the mission and values of KI. In that respect, she was explicating what I am arguing in this chapter, that prior life experience is a powerful design actant that need not be underpinned entirely by capitalist value, but that is fundamentally driven by a different ethico-aesthetic value system.

In Dakota's case, we see a young woman possessing an experiential continuum haunted by familial trauma and neurological struggles. Yet, it also contained a reserve of artistic practices that both soothed her and were capable of mobilizing those traumas and struggles as tools for the creation of something full of empathy, care, and beauty. It would be misleading to assert that Dakota was conscious that she was effectively challenging the structures and modes of valuation of capitalist modernity with her design practices, although there is evidence that she was conscious of the power of her past as what I am calling a design actant. This is clearest in Dakota's acknowledgment of the role her "own issues" played in the creation of a floor plan "for people who need it." That said, my point here is that, even though Dakota certainly aspired to a good job and a successful career, her approach to the design process, how she engaged in and valued design relations, cannot be fully explained by an appeal exclusively to professionalism. Her empathic creativity, emanating from the scars of her traumatic experiences and her struggles with epilepsy, along with her sense that she shared the struggles faced by KI's clientele, together facilitated her creation of a design vibrant with a liveliness that she imagined, if built, could "revive and renew" a communal togetherness and be a "life force for those who need it." What I observed is that Dakota put a great deal of herself into her design as an act of care for "the clients of her client." Like Gabriela and Carmen, Dakota's efforts to give KI what they desired both met and exceeded the limits of professionalism and, in doing so, entered into domains of ethical thought and practice.

Seen that way, it is evident that, for Dakota, the ethics of design is concerned with "making sure you keep everyone in mind." In other words, she understood that the relations of design are to be valued as constitutive elements of a beautiful whole. From such a perspective, relationality is not entirely captured by the pursuit of a goal to reach the upper echelons of a profession or to ensure career longevity. Rather, it is liberated to become an animating force for creativity that, in its very liveliness, resists concealment behind a veil and seizes the potential for revival and renewal.

To close out this section, I briefly return now to the painter's palette metaphor. Dakota's experiential history and her design concept – the latter informed by her past experiences and the mission of KI – are concrete examples of a form the metaphor's black and white paint may take. When I asked Dakota about how her design concept was manifested in her final construction documents, she stated:

> … the life force to me is, umm very big in, like, the open spaces, especially because they are like the social areas. They are the spots where everyone gathers together; it's where community connections are placed; that's where everyone helps each other out…it's where I brought in some of the older concepts, like the [founding] table, to try to bring some[thing] of where they started from…the kitchen is one of the big spots...because it's going to be, like, one of their big projects coming up. I tried to make sure it was open. And they could still have a bunch of kids centered around cooking. But it was still easy enough to get to everything...I was trying to keep it still feeling like friendly and stuff, without getting away from being useable. And trying to make sure the functionality matched the liveliness of the space, I use bright colors on the walls for accent walls and pop colors.

Here again we see the notion of the open floor plan, which was very much in fashion among many of the student designers. For Dakota, the openness of the floor plan matched her passion for creating a building that was lively and could act as a life force for the community served by KI. Returning to the metaphor, Dakota's black and white paints mixed with the primary colors of the client to produce a design that reverberated with her past experiences and intermingled her passions and needs with those of her client.

Conclusion

The past experiences of my student interlocutors exerted affective force on the creation of their designs and themselves as subjects. These forces, furthermore, contributed to how students envisioned their design practices as aesthetic, empathic, and ethical practices

(not to be confused with professionalism). In other words, students – e.g., Sasha, Annie, and Dakota – entered into a deep engagement with the aesthetic and the ethical, and, in doing so, they noticed the specters of relationality that haunted their designs from behind the veil of capitalist valuation. Intriguing here is how the past aesthetic and traumatic experiences of some students contributed to modes of valuing relationality (i.e., aesthetic, ethical, empathic) that do not accurately fit into the "ethos" of professionalism. When aesthetic thought and trauma were brought to bear on a student's design process, they fostered the creation of new expressions of ethical sense-making that subverted the simple reproduction of the hegemonic rationalities and ideologies (i.e., neoliberalism, the American Dream, *homo economicus*, professionalism) of existing relations of production.

Descriptions of design education, such as those provided in this thesis, are needed in order to map out the tensions and contradictions that exist between the capturing practices of capitalist modernity and the creative impulses of relational processes. As much of life under neoliberalism is commoditized, much to which we relate is fetishized. That in turn produces a haunting of the present where an incorporeal past – comprising relations that are often unacknowledged and devalued – exerts its affective force and modifies what, why, and how, in the cases here, student design(er)s become. Such fetishization can lead to easy capture. Even when the actual relations constituting the present are recognized and challenged, the hegemonic forces of capitalist modernity can still exert great power over how one values and makes sense of those relations. In order to cultivate the capacity to construct just recognition and valuation – or, in other words, to do ethical work – a critical pedagogy is needed. By learning to identify and justly value the affective forces of design actants, I argue in what follows, students can come more readily than is commonly the case to harmonize the beauty within themselves with the beauty present in all that they encounter. But, how should we begin to think about training students to look beyond the veil of capitalist valuation, account for the relations that constitute design(er)s, and justly (re)value those relations for their creative contributions? I now turn to such theoretical and pedagogical concerns and questions in the final chapters of this thesis.

I am large, I contain multitudes…For every atom belonging to me as good belongs to you.
-Walt Whitman, Song of Myself

Truly the universe is full of ghosts, not sheeted churchyard spectres, but the inextinguishable elements of individual life, which having once been, can never die, though they blend and change, and change again for ever.
-H. Rider Haggard, King Solomon's Mines

Chapter 6

This House is (Not) Clean: Living with the Affective Hauntings of Experience and Challenging Ethical Fetishism

Throughout their semester design projects, my student interlocutors negotiated various accountabilities with the multiple actants/affective forces influencing and modifying their designs and their design processes. Students narrated the affective forces of these design actants in conformity with culturally hegemonic ideologies and rationalities stemming from the onto-epistemic framework of capitalist modernity. However, students often circumvented the discipline exerted upon them from such fixed and hierarchical ways of being and doing and, in doing so, imagined alternative ways of engaging with and articulating the fundamental relationality of existence, thereby creating ingressions into other, potentially non-capital-centric, ethico-aesthetic modes of valuation. Put differently, both capitalist modernity and its otherwise existed in the students' design processes. However, the curriculum formally acknowledged only the former while the latter was concealed and was therefore seldom recognized.

In this chapter, I identify and explain the theoretical implications of my study. I present and support my argument that capitalist modes of valuation and the onto-epistemic framework of capitalist modernity concealed the relations involved in the design process. I also show how it undermined and devalued those relations by not recognizing design(er)s' indebtedness to those relations. The actants and affective forces constituting design(er)s, therefore, take on ghostly forms that, while capable of providing modifying influence to a present actualization, operate behind veils, making it difficult to identify and attribute power

and responsibility to them. My goal is to support the argument that, by recognizing those ghostly forms as permeating a process where capitalist modernity currently prevails, one can begin to conceptualize and operationalize alternative practices so that modes of thought may be able to challenge the status quo. This chapter is thus not just about a theorizing of what we find ourselves in but rather about imagining the theory and praxis needed both to flee the current status quo and to participate in the creation of novelty, of something otherwise.

To accomplish these tasks, I employ the tropes of ghosts and hauntings to conceptualize the design actants and affective forces that constitute design(er)s and animate the design process. I then put the ghostly attributes of design actants and their affective forces into conversation with two Marxian concepts: dead labor and commodity fetishism. In doing so, I aim to establish a connection between the concealed relationality of design, capital-centric modes of valuation, culturally hegemonic rationalities and ideologies, and the persistent devaluation of the relational. Thirdly, I support the argument that such a connection facilitates the production of what, following Bryant (2011), I call ethical fetishism – a process whereby capitalist modes of valuation and the onto-epistemic framework of capitalist modernity undermine ethical thought and practice through concealment and devaluation of relationality. Finally, in order to challenge this ethical fetishization, I argue that we must foster new modes of thought and new reflective practices capable of both revealing the relationality that has been fetishized, and interpreting that relationality in ways that map a line of flight away from the reproduction of fetishization and the most problematic beliefs and assumptions of capitalist modernity. I do that with the intention, in Chapter 7, of introducing and supporting new configurations of the ethical as well as new educational approaches that may contribute to the creation of alternatives or worlds otherwise. Such an educational intervention matters precisely because, as seen in Chapters 3 and 4, students were capable of recognizing and narrating the relations of design but that the frameworks they most often employed to interpret such relational experiences were often limited to the discourses of capitalist modernity, as evident in their references to professionalism.

Ghosts and Hauntings

This chapter's title is a play on a line from the 1982 horror film *Poltergeist*. Following the film's climax, Tangina Barrons – a spirit medium played by Zelda Rubinstein – announces, "This house is clean." The house, the Freeling family's residence, had been built over a graveyard by an ethically-challenged developer. The gravestones were removed,

but the bodies had remained. The wronged dead's restless spirits were enthralled by Carol Anne, the Freeling's young daughter. According to the medium, Barrons, a powerful supernatural force (i.e., "the Beast") was manipulating the spirits and preventing them from crossing over by luring them – using Carol Anne's life force – to stay. The house became "clean" when the supernatural bond with Carol Anne was allegedly broken. The "dead" past haunted the liveliness of the present; it permeated the foundation of the house, saturated its walls, and bedeviled the life attempting to dwell there. But was this "dead" past truly done with Carol Anne and the Freeling family? The two *Poltergeist* sequels certainly challenge such a conclusion. However, even without those films, it would be difficult to argue that psychological trauma would not persistently haunt/affect Carol Anne and her family.

Scholars have previously employed ghosts and hauntings as tropes for examining personal and collective phenomena. Sigmund Freud's use of language evoking ghosts and hauntings, particularly in his conceptualization of "repression," is an early example (Freud, 1957). For Freud, one's past experiences – especially those that were traumatic – may be repressed due to their painful nature and, therefore, treated with ambivalence and relegated to the unconscious. Psychoanalysts regard those repressed memories as not merely banished to the unconscious but as traumas that return and undermine personal development and psychological flourishing. According to Frosh (2012: 245), the psychoanalytic consideration of haunting is arguably concerned with "exorcism" practices: "What troubles us now is laid at the feet of a ghost; that ghost must be identified, appeased, laid to rest…offering it something that acknowledges it, that embraces the damage done." For example, the psychoanalyst may be fixated on revealing repressed memories haunting their client, so that this past can be confronted and the psyche can be healed. For Freud, more so than later scholars (see below), ghosts were less something to be lived *with* than something to be expunged from one's life. Freud's (2003) introduction of "the uncanny" also speaks to experiences of spectrality. The concept of the uncanny, however, grapples with the idea that the present is not haunted merely by the past, but by future anticipations, such as one's own death or an unfulfilled desire (Frosh, 2012). Here, fear envelops. The return of the past to the present, or hauntings, can certainly lay these fears bare before us.

More can be said about how psychoanalytic discourse characterizes the constitution of the ghosts that haunt us. For example, drawing on Avery Gordon (2008), Frosh (2012) establishes the important role of sociality in the creation of ghosts and the becoming subjects they haunt. This is a sociality that arguably leaves "a 'remainder' that cannot be integrated into the subject but rather inhabits the subject as something alien yet constitutive" (Frosh,

2012: 246). Similarly, Kristeva (1991: 81) describes an "uncanny foreignness" that is "within us: we are our own foreigners, we are divided."[90] Here, we see the subject as a relational composite of its hauntings, and the constitutive ghosts as "remainders" that, as I have argued following Massumi (2015), possess an affective force that is never entirely exhausted. What remains continues to affect. Returning to Whiteheadian and Deweyian language respectively, such ghosts are concrete actualizations that have "perished" and now inhabit a subject's "experiential continuum." When the affective forces of such ghosts are brought to bear on the present, a haunting occurs, leaving a kind of residue, examples of which I have mapped in Chapter 2 through Chapter 5.

With my *Commercial Construction* student interlocutors, such ghosts of both the past (e.g., the aesthetic experiences of Sasha and Annie and the traumatic experiences of Gabriela and Dakota) and the future (e.g., anticipations of the fulfilled promise or fears of the failed promise of one's American Dream) are entangled in a present that is populated by design actants providing further modification to design(er)s and the design process.

In his *Specters of Marx*, Jacques Derrida (2012: 246) introduced the concept of "hauntology" which, in conjoining the words "haunt" and "ontology," fostered a way to think about the unsettled nature of the present; or, to phrase it differently, to think about how the past affects the present whilst also creating ingressions into the future. Derrida is concerned here with how we "live *with*" such ghosts and, in doing so, with how we come to understand truths about our present situations. According to Mark Fisher (2012: 16), who built upon Derrida's notion of hauntology, we are haunted by "lost futures;" in other words, we are haunted by a "failure of a future to transpire" or to become the actualization of desirable potentialities. Yet, Fisher also acknowledges that the very idea of particular futures is never exhausted since they continue to remain virtual and to hold fast as potentialities for actualization. Such potentialities of what has not (yet) come to fruition haunt the present alongside those entities that, having once achieved actualization, are now memories of the possible, and potentialities for new actualities in the present. As my exploration below shows, Derrida's and Fisher's notion of hauntology resonates with my efforts to explain how one might craft an argument that aims – with great anticipation for the future and thoughtfully sensitive to failed potential – to create worlds otherwise via education. I return to that analysis below.

[90] Kristeva's insistence on a subject that is divided resonates with Strathern's (1988) notion of the "dividual," as well as Nyamnjoh's (2017) work exploring how, in African subjectivity, a person is a relational composite.

The scholarship compiled in Tsing et al's (2017) edited volume, *Arts of Living on a Damaged Planet,* expands upon the ideas of ghosts and hauntings. In their introduction to the volume, Gan et al. (2017: G1-G2) focus on specters haunting "landscapes" – "the overlaid arrangements of human and non-human living spaces" – of the Anthropocene. Their insights, however, are salient in the context of design education, especially if one thinks of designs as landscapes "haunted by past life ways." It is a haunting that is "felt only indirectly" in that "we cannot see it even as we learn to find its traces" (ibid.).

In his chapter on ancient chestnut stools in central Italian forests, Mathews (2017) describes the complex relations between capitalism, industrialization, cultivation practices (e.g., grafting), and human mobility that, though themselves invisible, haunt the chestnut stools that remain within those abandoned forests. Mathews (2017: G146) argues that the stools emerged into the forms he observed through "partial relations between multiple actors…where the actors themselves [were] constantly changing as a result of relations with others." Like these ancient chestnut stools, design(er)s are haunted by the constitutive relations between a multitude of design actants.

Design work is ghostly work. The past haunts us – whether that past be moments of great trauma or profoundly ordinary moments such as those when my student interlocutors unknowingly experienced the affective force of design actants and of elements of the onto-epistemic framework of capitalist modernity. Our presents are not clean. There is no blank slate. We are haunted by the past relations that have constituted us and by futures that we may both anticipate and fear, that is, if we are even aware of the potential for their actualizations. Similar to a child playing as a ghost beneath a white sheet with two circular eyeholes snipped to allow a view of what they aim to haunt/affect, these constitutive relations are obscured behind a veil obstructing recognition of the creativity of relationality. That which haunts has the capacity to affect and to be affected, but if we cannot gaze upon, or even intuit, what lies behind the veil, we cannot consciously and ethically engage with it. Moreover, even if we come to engage with it, such engagement does not mean that those relations are justly appreciated or valued. These relations, in fact, can readily be devalued.

Following Derrida, I connect the ghostliness that I consider in this thesis to Marx's contributions to critical theory. However, I do so in a slightly different way. Instead of starting, as Derrida does, from communism as "a specter…haunting Europe," I begin with Marx's (1867/2019) work on the fetishization of the commodity and the concealment and devaluation of relationality such a fetishization generates. For me, ghosts are ghosts by virtue of the veil that conceals them. The ghosts concerning us here are those born from making

constitutive experiences invisible. My focus on ghosts and hauntings relative to design processes and design education then becomes a matter of unearthing and narrating relationality in ways that reject and refuse fetishization, that deny the naturalization of neoliberal rationalities, and that strive to (re)value each actant according to the role it plays in the continuous process of a design(er)'s becoming.

In the next section, I draw on the Marxian notions of dead labor and commodity fetishism to conceptualize the concept of ethical fetishism. By doing so, I aim to explore how ghosts come to be present and how, despite being revealed, they may continue to be veiled behind and hence devalued by a capitalist regime of value.

Dead Labor, Commodity Fetishism, and Ethical Fetishism

I situate my interest in "revealing" design actants, their ghostly affective force, and their value as adjacent to the Marxian notions of the dead labor of the commodity and its fetishization (Marx, 1867/2019). My interest stems from my fundamental concern with the operation of ethical thought and practice throughout the relational process of becoming, particularly as it pertains to student design(er)s. In this thesis, I have inquired into (1) how relations of design might be identified and their influence accounted for, and (2) how students made meaning of the care and concern they showed for relationships (with both humans and the more-than-human) affecting the design process. Much of this meaning-making occurred through the onto-epistemic framework of capitalist modernity. However, students also employed alternative frameworks, such as aesthetics and empathy, to make meaning within the design process.

Building on my discussion in Chapter 3 of the relationship between the U.S. state and universities, I now turn to an exploration of how capitalist modernity undermines ethical meaning-making. To do so, I first present the idea of dead labor before exploring commodity and ethical fetishism.

The Marxian notion of capital as dead labor refers specifically to ossified labor within various technologies and other commodities (Marx, 1867/2019). Living labor utilizes such dead labor in the present to produce commodities which in turn have labor power ossified within them. In other words, there is a relational past comprising everything used to create in the present. As capital, the ghostly relations of such past labor within the commodity becomes, according to Marx (1867/2019: 160), "vampire-like" in that it is used to extract surplus value from the products of exploited living labor.

But, how do we live with these ghosts and hauntings in ways that do not bleed away our life force? What modes of valuation and relationality might expose and challenge the systemic/structural use of the past to alienate those that create from what they create, as well as from the potential such creators possess to create novelty? I suggest that the repression and concealment of our past relations (between various actants) threatens our ability to create something new. If repression and concealment are not first grappled with, then they likely will be reproduced: dead labor will produce more dead labor; ghosts will be born of ghosts. I now turn to ethical and commodity fetishism to explore such phenomena further.

Levi Bryant (2011: 27-28) proposed, in two short sentences, a connection between Marx's commodity fetishism and his own intriguing idea of ethical fetishism.

> To argue that nonhuman actors should be excluded from ethical thought or treated as mere means to an end is to fall prey to a fallacy similar to that which Marx denounced under the title of "commodity fetishism." Just as commodity fetishism prevents us from seeing the complex networks of labor involving workers, technologies, materials, etc., ethical fetishism prevents us from seeing the complex networks of nonhuman actors that play such a significant role in perturbing collectives, bringing about the moment of the ethical.

Bryant stresses the need to consider the role of more-than-human actants in the relations constituting ethical events/problems. As ethical fetishism was not central to the thesis of Bryant's essay, it is unsurprising that he did not develop the concept. Moreover, development of the novel idea of ethical fetishism appears to be absent in the literature. That aside, however, when I consider the design processes described and experienced by my student interlocutors, I find that human relations are also obscured and devalued (see Chapter 4 on intellectual property, pgs. 141-143) when we encounter "the moment of the ethical," an issue I discuss a little later. But first, we must ask: what is it about fetishization that undermines ethical thought and practice?

In *Marx and Whitehead*, Anne Fairchild Pomeroy (2012: 172) aptly states: "By 'devaluing' the human creativity in the present, by 'valuing' human life according to the commodity value of its labor power, its value as product of past labor, its money value, capitalism stagnates process, turning the adventures of novel becoming into the anaesthesia

of repetition." By mistaking all value as monetary value, one conceals the engine of creativity, which is relationality. Further, by concealing the affective forces within relationships and the latent potentialities therein, one may easily fall prey to an uncritical reproduction of the status quo.

Within Marx's (1867/2019) commodity fetishism concept, social relations are concealed through the expression of value in terms of money as the universal equivalent of value. As a universal equivalent, money conceals *value* that derives from the socially necessary labor time required to make/produce something that is of use and can be exchanged. Or, to put it differently, the processes of money-based exchange hide the fruits of labor which are what Pomeroy (2012: 172) describes as "the achievements of value of creative individuals." In yet other words, when one purchases an item at a local market, that item's value is expressed in terms of a monetary amount which acts as a veil hiding the human labor time (i.e., the social and material relationality) that was needed to create it.

Over time, these exchange relations – founded upon the abstraction of value that is money – have taken on the appearance of being natural. Moreover, believed to be "concrete," money is then – via the logic of its "naturalness" – imagined to represent anything as its double. In other words, anything can become a commodity to be bought and sold for a profit. Labor is a good example of this. My ability to work is valued according to money. I sell my labor power – which has become specialized through the social and economic relations of training/education – for a wage/salary, which I can then use to purchase other commodities and cover other expenses. Moreover, my ability to sell my labor power to the owner of the means of production is dependent upon that owner's ability to sell the product of my labor for more than the costs associated with my having produced it, thereby creating surplus value which can then be invested as further means of production (i.e., capital). Within this totalizing system, only briefly discussed here, the value of human relations and human creativity becomes expressed and valued in terms of money, which capitalist relations have now so naturalized that it encompasses the human individual. As a commodity in this totalizing system, the relations that constitute the human are concealed in tandem with the relations that constitute the creative fruits of labor.[91] As I consider shortly, perceptions of the naturalness of the capitalist economy (i.e. the market) also stems from what Escobar (2018) calls "the four beliefs of modernity" (see Chapter 3).

[91] It is also important to acknowledge that naturalization by and of capitalism is not solely the consequence of abstract monetary value being seen as representative of concrete reality.

I must stress that I do not see fetishization as mere concealment. Rather, it is a valuation – specifically in terms of valorization[92] – that is also, in a sense, a devaluation. The problematic of ethical fetishism is carried over from the problem expressed by commodity fetishism: relationships are devalued through the concealment of relationality, a concealment which derives from the belief that monetary value represents reality. Consider again Pomeroy's (2012: 172) statement, quoted above, where she refers to human life being valued as the "product of past labor." This echoes Marx's concept of "dead labor," which returns us to the argument about ghosts and hauntings. The commodities we produce for market circulation – including the commodities we make of ourselves – are haunted by the past relations that constituted them.[93] These past relations are, in turn, valued through money and not through the recognition that these past relations play a creative, modifying role in the constitution of each present moment. One consequence of this failure to recognize and justly value affective force is that the potentialities latent therein may go unseen and unconsidered, thereby foreclosing on a multitude of alternative worlds. Capitalist value, through commoditization, conceals and devalues these relations, and in doing so, the creation of novelty is stymied and "the anasthesia of repetition" sets in (more on this in Chapter 7).

However, as my student interlocutors demonstrated, even when they could see and narrate design relations, they had difficulty valuing them in ways that did not simply reproduce and further naturalize the logic of capital. This indicates that it is not enough only to claim that abstract monetary value conceals relations. It certainly does, but it does not do so alone. Rather, it is necessary for a culturally hegemonic onto-epistemic framework to legitimize the systems, rationalities, and ideologies that serve to conceal and, most importantly, to devalue relationality. In other words, this devaluation is further reinforced by features of capitalist modernity, which contribute to the (re)production of subjects resembling *homo economicus*.

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[92] I draw a distinction here between valuation and valorization. The latter can be used to refer to (surplus) value and, more generally, to the labor-intensive process by which anything that, when used in a way that successfully makes money, is proven to have worth. Such a *thing* is valorized. For me, this process of valorization is a mode of valuation, or one way of achieving value, particularly in terms of capital.

[93] Tsing (2013) draws similar conclusions through her examinations of how the value of commodities are constituted through gifts. Tsing draws on the anthropological tradition contrasting gift economies, via Mauss (1950/1990), and capitalist economies to examine how capitalist value emerges through "translation" from non-capitalist to capitalist relations – which is a "betrayal" – that "erases gifts" (Tsing, 2013: 39). I have chosen to consider this problem through the lens of actants, affective forces, commodity/ethical fetishism, and dead labor as opposed to gifts. I suggest that these gifts – and their value as gifts – are erased in ways similar to how I characterize the capture, concealment, and devaluation of constitutive affective forces.

Some of these features of capitalist modernity are articulated in the four beliefs of modernity sketched out by Escobar (2018) and which I described in Chapter 3 but deserve review here. The four beliefs of modernity are in the individual as autonomous, in the real, in science, and in the economy; all of them arise from Cartesian dualisms.

The first modern belief is that there are essential selves that are rational, autonomous, independent, external to the world/nature, and sufficiently "complete" (Nyamnjoh, 2017a). It is behind the veil of this self-complete individual that relationality is so easily concealed. The second modern belief is that there is an objective, real world and that the modern understanding of this world is hegemonically singular. This then forecloses on opportunities for pluralistic awareness and for thoughtful recognition of how everything participates in relational processes of becoming. The third modern belief in science perpetuates the view that knowledge of this singular real world can be disinterestedly and objectively observed by the individual as something separate and external to that individual. It also reinforces a subject-object dualism and contributes to a vision of the world as comprising nature on one hand and culture on the other. A consequence is that their relational entanglement is concealed. The fourth modern belief establishes that the economy – more specifically, the capitalist economy – is part of the real, and that it can be known through scientific discoveries made within the discipline of economics. The economy, and therefore capitalism, is thus treated as real and natural, operating separately from and external to the life and gaze of the autonomous individual.

Through these four beliefs and the abstraction of value born from the neo-liberal capitalism's operations, relationality's concealment becomes societally ingrained as a culturally hegemonic system of beliefs, myths, assumptions, political rationalities, and ideologies. It is difficult properly to see and value relations, to overcome "the anaesthesia of repetition," whilst these hegemonic structures continuously colonize one's consciousness. Because of this, we too often ground the fundamental creativity of existence in the achievements of supposedly complete, essentialized individuals and not within the relational processes to which all are indebted (see Nyamnjoh, 2017a). In other words, to borrow Strathern's (1988) particularly apt neologism, we are all "dividuals." Connecting creativity to the notions of relationality and indebtedness – dividuality rather than individuality – would require significant changes to how social analysts think about and practice the social relations from which creation arises. In other words, alternative modes of valuation – comprising both theory and praxis – would be needed.

One of the primary methods I utilized in the research which has resulted in this thesis was concerned with unearthing the relations constituting the lines drawn by students on their floor plans. These lines were the walls, doors, ceilings, and flooring assembled by the student designers for KI and Big Car personnel. However, when my student interlocutors and I co-interrogated these lines to reveal their meaning and their causes, it became apparent that there were deeper narratives comprising the lines, narratives that revealed the reality of the lines' relational becoming. In other words, several design actants, and the affective forces each wielded, influenced and modified the lines in student designs. Moreover, within interviews, students were able to narrate stories of the affective force of these design actants. In so doing, they revealed the relationality of the design process and acknowledged the responsibility of human and more-than-human actants as impacting their becoming and that of their designs. In Chapter 7, I develop this point in order to argue that reflective thought and practices could be a first step for addressing the problematic of ethical fetishism.

A persisting challenge, however, is that the frameworks (i.e., capitalist modernity, *homo economicus*, professionalism) that most students utilized to make meaning of these complex relations often succeeded in again devaluing the relations in the design(er)s' respective constitutions. Utilizing alternative frameworks, akin to Sasha's and Annie's ethico-aesthetic perspectives, I suggest, should be a second step for addressing the problematic of ethical fetishism.

The ideas through which we engage with and make sense of experience color how we co-create the world and what that world may look like. For example, as discussed in Chapter 4, students often made meaning of the relations of design through professionalism as an analytical lens. This means that students described their concerns for the desires of their client as necessary to deliver a good (valuable in economic terms) product, to keep the customer satisfied, and to ensure career longevity. As for another example, the IBC was often thought of as something that must be adhered to for safety reasons; however, students also mimicked Beth's messaging during lectures and reported that, if they did not respect the IBC, then their designs would never come to fruition and financial flows could then stagnate. All of these perspectives were true then, as they are now; yet their truth is positioned within the peculiar discourse of professionalism with its own particular, albeit often implicit, concern shown for legitimacy and longevity.

The students' rationalizations were interesting because they offered them only when prompted to discuss the ethics of design. It was as if ethical thought and practice had been collapsed into professionalism, a discourse that systemically participates in the devaluation

perpetrated through the circulation of money and capital. Care for clients, for example, was portrayed as an act of the rational, self-maximizing individual of capitalism and not as an ethical practice or disposition deriving from the relations of design. This is an occurrence of ethical fetishism to the extent that relational care is captured and devalued by virtue of the commodification of that care. While we see various "accountabilities" (see Smith, 2021) at play for students as they go about their design practice, some of these accountabilities clearly undermine modes of ethical thought and practice. This means that, at times, professional accountabilities may stymie one's efforts to acknowledge relational indebtedness, to safeguard difference, and to inquire with great care into the becoming beautiful of the subject, of its others, and of the world. I return to this concern in the final chapter where I discuss such ethical thought and practice further in terms of my concept of ethical becoming.

If one is to apply the concept of ethical fetishism usefully, one must necessarily recognize that the capitalist imaginary of value and the associated hegemonic beliefs and assumptions of modernity simultaneously undermine recognition and appreciation of relationality as central to one's creative existence. Moreover, various difficulties arise if awareness of relationality is diminished by a concealment of concrete reality born from the abstraction of value, as Pomeroy (2004) suggests, and by other features of the onto-epistemic framework of capitalist modernity. Those include difficulty in assigning responsibility to any given affective force; in reflectively examining what and why one has prehended; in identifying and carrying out obligations to all that constitute oneself; and in learning to enact each of those practices. In succumbing to these difficulties, we may remain ambivalent and inattentive, and, in doing so, we allow ghosts to remain ghosts, haunting our lives, ignoring them to our own detriment.

Recognizing the constitutive power of the affective force of all actants brings up new axiological considerations, as well as new epistemological commitments and critical pedagogies, that are seemingly incommensurable with that of capitalist modernity. In the next section, I explore Deleuze's and Guattari's (1987) work to begin conceptualizing ways to think about the complexity of constitutive relationships, as well as the modes of caring inquiry by which we may problematize and address ethical situations.

Towards New Forms of Ethics Education: In Search of the (Vo)luminous

As described in this thesis, students and their designs were not thoroughly "modern;" they were – to embrace Deleuze and Guattari's (1987) terminology – becoming along "lines

of articulation" and "lines of flight" upon a "plane of consistency." Simply put, I am conceptualizing a plane of consistency as the body/territory that forms from all that is real (i.e., both the actual and the virtual). Such bodies/territories are the realization/actualization of the potentialities of lines of articulation (e.g., values, practices, and beliefs that are culturally hegemonic) and lines of flight (e.g., values, practices, and beliefs that flee cultural hegemony). In a sense, one could say that in Chapter 3, I have focused primarily on the lines of articulation that contribute to creation of design(er)s; that Chapter 4 further considers this articulation whilst also describing how students often thought of ethical design through the lens of professionalism; and that Chapter 5, in contrast, revealed and followed potential lines of flight by focusing on how students utilized aesthetic values and empathy to make meaning of the design process. My question now, and the focus of the next (final) chapter, is *how might educators help draw out the capacity of students to map and, potentially, to live along lines of flight?* My argument is that to do so one must start with accompanying students in a process of ethical defetishization – revealing the ghosts of capital haunting their lives – and that, thereafter, educators must strive to create learning environments that foster critical and reflective thought and action through alternative onto-epistemic frameworks. One example, which I operationalize in Chapter 7 is a framework of ethical becoming.

In the context of the Commercial Construction course that was the focus of my ethnographic research, participating in ethical defetishization would have to involve seeing the designer, their designs, and the lines of their designs as, to use a term I am coining, *(vo)luminous*. This useful neologism merges the words "voluminous" and "luminous" to evoke the ideas (1) that all subjects are receptacles containing an expanding history of the relational process of their becoming (i.e., Whitehead's "objective immortality" coupled with Dewey's "experiential continuum"); and (2) that the content of these receptacles can be radiant lures for becoming. To give a specific example: the design(er) that is becoming in any given present is prehending the ample past even whilst the particular affective forces of other actants – that are themselves becoming– lure the design(er) to prehend some potentialities over others.

In any design, the ubiquitous affective forces of capitalist modernity exert pressure on designers to create themselves and their designs in images commensurate with the beliefs, values, and rationalities of the capitalist-modernist onto-epistemic framework. For a designer to be "created" in the image of capitalist modernity here means having to have captured the affective forces of design actants in ways that rationalize their use as being productive of capital. Whilst the student designers who were my research participants were often lured by

the needs and desires of their client, they were also lured by the ideals of professionalism, which had the effect of turning the ethical practice of relational care, as embedded in their concern for their clients' wishes, into a means by which capitalist-modernism circulates. Alternatively, however, the lure they felt of the desires of others often became entangled with the lure of the ethico-aesthetic and, in those instances, their prehensive moments were transformed into moments where indebtedness was acknowledged and beauty was pursued.

All these lures exist upon the same plane of consistency and all contribute to the same moments of becoming. However, in contexts of educational design, we need to recognize the extent to which our instruction focuses on reproducing cultural hegemony and to consider alternatives. Becomings such as those that uncritically reproduce cultural hegemonies are *unbecoming*, especially now in the context of the planetary crises of the Anthropocene. Seeking to identify and admit alternative lures that affect how we interact with the world offers possibilities for contributing to transformations in our modes of thought and practice. Introducing such lures into our everyday realities might also make the everyday even more (vo)luminous, containing otherwise unconsidered potentialities with which to experiment. My argument is that witnessing and engaging with this (vo)luminosity is central for students (and instructors) in processes of challenging ethical fetishization.

The ethnographic data presented in this thesis points to the idea that, while hegemonic lines of articulation exerted great influence upon my *Commercial Construction* student interlocuters, they also engaged with relationality and cared about and for those relations. In doing so, such caring was capable of revealing lines of flight that held the potential for creating something otherwise. With some students, it was evident that their thought and practices around relationality and care were operating through modes of valuation that were different from the approach conventionally expected of students in the course. Here, I am thinking of the creative ways that Gabriela, Carmen, Jakub, Amira, Annie, Sasha, and Dakota at times expressed their care and fused their own experiences and desires into their designs. This creative fusion was not necessarily something they needed to do to satisfactorily complete the course or to embody some professional ideal. Nonetheless they did it. This suggests that they were effectively, albeit inchoately, operating both within and beyond the rational frameworks of capitalist modernity. There is no evidence to suggest that they were *consciously* challenging that hegemonic, onto-epistemic framework. In other words, it was not apparent that they perceived their choices, their modes of thought, or their practices as embodying fundamentally different ways of being, doing, and knowing from those of their peers or from what was expected of them by Beth and their future professional community.

However, as an educator and education researcher, I could and can see the potential, in these moments when students are thinking and doing otherwise, as opportunities for lines of flight to be consciously revealed and followed. Moreover, I would argue, it is the educator's job to foreground such alternative modes of thought and practice, to identify them as lines of flight and to introduce students to the critical lenses that might help them independently and unaided to identify and follow lines of flight.

When it came to these alternative (i.e., ethical) modes of reflective thought, it was rarely evident that students – including the exemplars named in the previous paragraph – recognized the depth of this relationality and the affective forces and potentialities that arose therefrom. I was often met with "ummm's" and "I don't know's" and gestures (e.g., looking up, squinting, brow furrowing, staring into the distance) that communicated to me that the questions I had asked them – particularly those about values, ethics, and morality – were perceived as strange and something students seldom if ever reflected upon. This is perhaps what made it so simple for them to lean on professionalism when discussing ethics and morality, concerns that are both often spoken about dismissively as two things associated with the "soft skills" of their disciplines.

This is, for me, a problem connected to an education system that pays insufficient attention to ethics. As I have explored elsewhere (Fore et al., 2020), higher education most often positions what their practitioners and proponents describe as disciplines as primary, and ethics as appendages of those disciplines. Therefore, we get the formulation of, for example, "ethics in engineering" (i.e., ethics as legitimating appendage) as opposed to its opposite: "engineering in ethics" (ibid.). This latter formulation situates as primary the ethical subject, who, in striving to fashion themselves, others, and the world according to their thoughtfully crafted values and ideals, adopts ethical practices – i.e., the kinds of "spiritual exercises" examined by Hadot (1995) and Foucault (2010) – to self-fashion and to address particular ethical problems. Such an ethical subject asks the foundational philosophical question, "how ought one live?" and then works to align oneself with one's answer. Ideally, such a subject would then participate in higher education with the goal of cultivating their knowledge and skills to be used as tools for inquiring into ethical living and, in doing so, fashioning a beautiful self and world. This work of fashioning a beautiful world would require an abandonment of rigid, presumably complete, disciplines and an embrace of thought and practice that seeks to understand and address issues, ills, and problems relative to immediate context, à la Dewey (1938/1998, 1988). Such a dependency upon context frames one's use of thought and practice as relative to the exigencies of a given encounter. Here, it is not

disciplinary learning that one needs, but a learning of how to inquire into the problems that vex us all. These problems may need a variety of "disciplinary" skills to be sufficiently addressed. In this vision, disciplines are not complete; rather, they are pieced together to create a pluralistic inquiry. Higher education – as well as primary, middle, and secondary education – as a whole would need to transform to support such efforts.

The point I am making here also echoes Lewis Gordon's (2015: 4) critique of "disciplinary decadence," or the "reification" of disciplines by way of "the forgetting of their impetus in living human subjects and [those subjects'] crucial role in both the maintenance and transformation of knowledge-producing practices." Here, a discipline becomes imagined as complete in itself and as a thing that has no need of other perspectives. As a result, legitimation of the discipline becomes paramount in the form of the "proper administering of its rules, regulations, or…methods" (Gordon, 2014: 86). The fixation upon legitimation contributes to the concealment and devaluation of the public purposes of a discipline, including addressing "social ills" through education, as advocated for by Dewey (1938/1998). With the rise of an academic managerial class and, according to Gordon (2015: 10), its commitment to "quantity" over "quality and content," purpose is able to be reimagined as an insular telos, that of disciplinary ossification and maintenance. Attaching ethics to such a vision of purpose is difficult when said purpose forecloses on relationality.[94] Instead, we get the phenomenon of "ethics in engineering," or ethics as a legitimating appendage of a complete discipline. Here, in chorus with Dewey and Gordon, I aim to push back against concerns for legitimation and argue for an educational focus on the use of inquiry in addressing social ills and in fashioning selves and worlds otherwise. In Chapter 7, I do so by appealing to the notions of relationality, indebtedness, incompleteness, beauty, care, reflective thought, and ethical inquiry.

In order to enter into the kind of ethical undertaking needed to challenge ethical fetishism, students would need to develop reflective practices that increase their capacity to build ethical awareness in all situations. Such awareness is necessary in order to recognize the actants and affective forces constituting the relational matrix within which the ethical plays out. This is precisely why ethical fetishism is such a fundamental ethical problem. If humans fail to develop the capacity to acknowledge how all to which they relate – and have related to – participates in their constitution, and how they in turn participate in the constitution of all to which they relate and have related, then how can the ethical catastrophes

[94] Gordon (2014: 88) briefly touches on this point too.

that plague our present be competently addressed? How can we address such wicked problems if we cannot justly value all actants and their affective forces? If we cannot learn to mobilize alternative modes of valuation, as well as the reflective thought and practice required to do so, then we will fail to live *with* all that haunts us; we will continue to fetishize moments of the ethical; and we will perpetuate the onto-epistemic beliefs and values that articulate us, thereby foreclosing upon the potentially novel ingressions concealed within a (vo)luminous reality.

Radical politics is about attending to the foundational debt we owe each other, the debt of life, the recognition of which is the first step and only road to genuine restitution, reparation and the possibility of a world in common.
- Achille Mbembe

Now this complete gentleman was reduced to head and when they reached where he hired the skin and flesh which covered the head, he returned them…
-Amos Tutuola, The Palm-Wine Drinkard

So it is that in the seed the tree exists, but it is hidden and concealed; when it develops and grows, the complete tree appears. The seed does not at once become a tree; the embryo does not at once become a [hu]*man; the mineral does not suddenly become a stone. No, they grow and develop gradually and attain the limit of perfection.*
-'Abdu'l-Bahá, Some Answered Questions

Chapter 7

Conclusion: On Ethical Becoming and Ethical Education[95]

I have situated this thesis at the intersection of anthropology and design. To reiterate what I stated in the introduction, this is both an ethnographic and an applied project. My intention has been not just to describe and interpret student experiences during the design process but also, in doing that, to determine where new modes of ethics education may need to be imagined, conceptualized, and operationalized. I have done that in the hope that it will help to produce and sustain subjectivities and modes of valuation that are otherwise to the beliefs and assumptions of capitalist modernity; and to give life to the kinds of subjects that have developed the capacity and know-how to critically reflect on their experiences through alternative onto-epistemic frameworks. As I see it, those are essential if we are to subvert the trap of the anesthesia of repetition. Such subversion is possible only when ethical fetishism is

[95] Significant portions of this chapter have been published in the journal *Science and Engineering Ethics* (see Fore & Hess, 2020). As first author of this article, I conceptualized and wrote, with comments from my primary supervisor, Andrew Spiegel, the ethical becoming sections. My colleague, Justin Hess, contributed the engineering ethics education literature review sections used to frame the ethical becoming concept, as well as additional comments on the ethical becoming concept. Since Hess' literature review is not central to my thesis, I have excluded it here whilst also reworking and elaborating upon the parts I wrote.

challenged, meaning that capitalist modernity, its modes of valuation, and the rationalities and ideologies that support the reproduction of such valuing must be switched out for alternatives as a kind of counter-hegemonic event. That is necessary because it is through practices of capitalist valuation that ghosts are born and the power of their relational contributions is denied recognition. In other words, the veil concealing relationality must be torn off and new axiological commitments, thinking, and practicing must be established.

In what follows, I first argue that the relational process ontology of Alfred North Whitehead provides the ontological foundation for such an alternative framing. I then conceptualize the notion of ethical becoming before operationalizing it as a kind of critical pedagogy that prioritizes ethical cultivation, particularly as a way to address the problem of ethical fetishism.

Whitehead and the Ontology of Relational Process

In Chapter 1, I briefly introduced Alfred North Whitehead's relational process ontology. I did that because several of Whitehead's ideas – e.g., processive becoming, prehension, objective immortality – were central to how I analyzed my ethnographic data. Now, as I conclude this study, I again express my debts to Whitehead as it is upon his process metaphysics – and in conversation with my ethnographic findings – that I now build my own conceptualization of ethical becoming. It is important to acknowledge this for two reasons. One is that I am asserting here that my analytical use of his concepts was epistemologically relevant and pragmatic – and may also suggest the notion of an anthropology of process or processive anthropology. The other is that Whitehead offers the foundation for an alternative onto-epistemic framework, one built upon the idea that reality is a never-ending process of relational becoming. This is a process rich in experience from the tiniest atom to the constitution of civilizations and beyond. That said, the difference between say an atom and me is a difference of degree not kind (Henning, 2005). Whether our concern is an atom, a human, or a civilization, each is relationally constituted and each varies in complexity. For example, as I comprise a complex "society of actual occasions" (Stenner, 2008: 101), I am capable of a level of consciousness not possessed by an atom – by virtue of how all the various relations that constitute me work in association with each other. Moreover, my complex nervous system enables me to entertain a variety of potentialities at play in any given encounter and to exert my will to some extent on the present's becoming. My becoming is not simply conformal, in which the past is basically recreated. I am capable of

the production of complex expressions of novelty,[96] meaning simply that I, as a subject immersed in relational process, possess the capacity to select for and decide against immanent potentialities that may push beyond the production of sameness. I am a relational subject and, yet, so is an atom. Whether simple or complex, all is relationally constituted and, as I argue below, indebted.

But first, it is necessary to build upon my previous discussion on subjects/subjectivity/subjectivation in Chapter 3 (see page 94) by revisiting a few elements of Whitehead's relational process ontology, as these elements are instrumental for my conceptualization of the idea of ethical becoming. The first is Whitehead's (1978: 220-221) notion of "prehension", an operational feature of the process concept. Prehension is concerned with the grasping or ap*prehension* of an object (e.g., an individual "datum"[97] in Whitehead's terminology) by way of what Whitehead calls a subject's "subjective aim," or how the subject "feels" or demonstrates "concern" (i.e., a provoked compulsion to act) toward an object. As a becoming-subject interacts with data, it is affected by these data and *prehends* them, thereby creating something new: the subject (or, in Whitehead's terminology a "superject"), which is a concrete actualization of potential (Stenner, 2008; Whitehead, 1978).

The way in which a becoming-subject is affected by and prehends data can be characterized as "negative" – a "decision" that limits or excludes potentialities – or "positive" – the "feeling" that embraces a potentiality for inclusion in a process of becoming (Stenner, 2008: 99). According to Whitehead (1978: 29), once a newly constituted subject becomes, it "acquires objectivity" – it is "immortal objectively" – as a datum (i.e., a past becoming) to be prehended by the new becoming-subject within a subsequent present. Here, the subject is perpetually and processually constituted through its relationships with the affective force of

[96] Here, a question arises: "where does this ability to create novelty come from?" It is difficult to answer without considering the role of "God" in Whitehead's speculative metaphysics. For Whitehead (1978), the need for God arises through his operationalization of relational process as reality. Whitehead's God has a primordial (mental) and a consequent (physical) nature. The primordial nature is the origin of each subject's subjective aim (i.e., how and why a subject feels/perceives/acts the way it does). God provides direction or the creative impulse for all becoming (i.e., beauty as an aesthetic foundation of reality), and it is a receptacle for all potentialities and all past becomings. The consequent nature can be thought of as its physical feeling or prehension of the entirety of all becoming within every present as a single, universal datum. Here, God's feeling of the world moves the physical experience of the universe to the mental "storage" of past becomings and its inherent latent potentialities. One could think of Whitehead's God as the universal and permeable receptacle receiving/prehending what is actual and distributing, with a will to beauty, what is potential.

[97] As regards the simple physical feelings (i.e., prehensions) of actual occasions, it may be sufficient to talk about prehension of a single datum (i.e., the immediate, objectified past). However, with a more complex becoming subject, like a human, it may be more accurate to speak of multiple prehensions of *data*. Throughout this chapter, I tend to use "data."

its own past and of all the other subjects it encounters in the present. The becoming of a subject within the present is, as Deleuze (1993: 78) puts it, "a prehension of prehension" by which he means that the subject should be conceptualized as a unification of many iterations of itself since, as it proceeds through each of a continuous series of events, its "many become one and are increased by one" (Whitehead, 1978). What this indicates is that the affective elements of the past that populate the aggregated line of inheritance flowing through the history of that continuously constituted subject's becoming-self continue to reverberate through each succeeding present moment, exerting influence over the manner in which that subject responds to and prehends the new data encountered in its experiences of a shared world. What Deleuze (1993: 77), following Whitehead (1978), refers to as a perpetual "extension" of an emergent subject along a continuum of events echoes John Dewey's (1938/1998) concept of an experiential continuum and his formulation of continuity and interaction as fundamental elements of all experience. As my argument for ethical becoming proceeds, I detail some of the axiological and epistemological implications and requirements of a relational process ontology and describe their ethical relevance and consequences.

Ethical Becoming and Its Key Components

As the term suggests, *ethical becoming* refers to becoming in an ethical way.[98] Generally-speaking, becoming is a process by which individual subjects (human/non-human; conceptual/material) are relationally fashioned and refashioned. For a becoming to be ethical, any subject must subject its becoming process to reflective thought, must be practice oriented, and must aim to actualize diverse potentialities. Ethical becoming, moreover, proceeds from a critical consideration of the question "How ought one live?" Ethical becoming implies that an answer to that question must be sensitive to consciously living in and recognizing the continuously unfolding and relationally pluralistic character of the present. It also requires reflection upon and consideration of one's reservoir of experience and values in and for one's future becomings. Thus, any subject's ethical becoming must include reflective (re)fashioning of itself in relation to a diversity of affective forces, or data, within any given present.

Table 2 summarizes the five key components of my ethical becoming concept. Each component builds from Whitehead's relational process ontology that establishes the self and

[98] While everything may become, it is possible that only humans, with their complex nervous systems, have the evolved capacity for reflective thought necessary for *ethical* action.

Table 2. Brief descriptions of each component of ethical becoming as a concept

Component	Description
Relationality & Indebtedness	Subjects are not fashioned in a vacuum; their actualization is *indebted* to the relational data that contribute to their becoming.
Harmony & Potency	Each subject's relational indebtedness, creates in it an obligation for it to direct its aspirations toward the creation of actualities that: are inclusive of greatest possible difference (*harmony*); and contain intense, or complex, affective force (*potency*).
Care	Since all subjects are (re)made through encounters with plurality, it is necessary reflectively to practice *care* for difference to ensure that what becomes is harmonious and potent.
Freedom & Reflective Thought	Through the capacity for *reflective thought* in action, subjects express their *freedom* to fashion their selves and what they co-create through their relations with their selves and others.
Ethical Inquiry	As a mode of creation, *ethical inquiry* provides a heuristic that applies direction and intention to the natural process of becoming.

others as continually-becoming subjects. I unpack these components in the subsections that follow the table.

I now turn to unpacking these components. In the first subsection, I show how ethical becoming is concerned with the experience of relationality, particularly regarding what counts as an actor within a relational process; and how a subject may be considered indebted to other such actors for their role in that subject's constitution. Given that individual subjects are relationally constituted by other actors who are reciprocally constituted, in the second subsection I explain how it comes about that every becoming has value within a creative process. Here, I use Henning's (2005) *Ethics of Creativity* – which, like my work, is heavily indebted to Whitehead – to examine how the becoming of harmonious and potent actualities (i.e., concrete achievements/fulfillments of potentiality, or becomings) occurs through the inclusion or exclusion of other valued actualities. In the third subsection, I draw on Tronto's (1993) *Ethic of Care* to argue for the imperative of providing care throughout this process. I use the fourth subsection to explain that carefully navigating one's trajectory through processes of actualization requires capacity for reflective thought with a dispositional sensitivity toward fashioning one's self as well as others' selves with care and with consideration given to safeguarding harmony and potency. In that subsection, I explain that it

is through such principled reflective thought that one can wield one's freedom consciously to fashion one's self, others' selves, and the things one makes/designs. Finally, in the fifth subsection, I draw on Dewey (1988) to show that *ethical inquiry* provides a frame in which to situate and direct *reflective thought* toward considerations of relational *indebtedness*, *value*, *harmony*, *potency*, and *care*.

Component I: Relationality & Indebtedness

Ethical becoming involves, first and foremost, a relational process. Reflective thought (see Component IV) is subsequent to one's experience of relational encounters. Any effort to conceptualize the componential constitution of ethical becoming, therefore, needs to begin with relationality before proceeding to considerations of how one thinks about all to which one relates.

As a core feature of relationality, and in alignment with Nyamnjoh (2017a), I argue (1) that the becoming subject is perpetually incomplete and indebted to everything that constitutes it and (2) that what counts as a lender/creditor extends beyond the boundaries of human relationships. Specifically, Nyamnjoh (2017a: 61) recognizes "incompleteness as our fundamental ontological status," by which he means that one's perpetual becoming is marked by its interdependence on all with which it relates. Each relational encounter is followed by another relational encounter. In short, one becomes and becomes and becomes, never achieving completion.

Drawing on the literary works of Amos Tutuola, Nyamnjoh (2017a) clearly articulates African notions of subjectivity (and, more generally, reality) as ontologically privileging incompleteness over completeness, the latter of which remains a hegemonically persistent holdover from colonialism and its rationalist-modernist tendency. For Nyamnjoh (2017a: 2), incompleteness insists that reality is "dependent on interconnections, relatedness, open-endedness, and multiplicities." Incompleteness, moreover, "harbours emancipatory potentials and inspires unbounded creativity" (ibid.). In chorus with Nyamnjoh and Whitehead, I argue here that it is in our perpetual becoming, in our inability to be finished, that we encounter the fundamental creativity of such a processual reality, as well as the relationality that constitutes us and leaves us indebted.

To further elaborate on this ontology of incompleteness, and its relation to indebtedness, Nyamnjoh dwells on the image and narrative of the Skull in Amos Tutola's (1952) *The Palm-Wine Drinkard*. A brief telling of the Skull narrative is as follows: a

"complete gentleman" walks into town and manages to capture the heart of a young woman, who, until his arrival, had rejected all suitors. She agrees to leave with him to return to his village. Throughout their travels the *seemingly* "complete gentleman" makes periodic stops along the way during which he removes parts of his body and returns them to their lenders. This repeats until he is nothing more than a disembodied skull. Nyamnjoh (2017a: 70) uses this tale to conceptualize the human subject as a "composite being," which is "always, somehow, indebted to someone or something for being what [it] claims to be."

What one becomes – and whatever successes one may claim to have achieved – are actualized only via the potentialities available and, at times, intentionally given within a cosmos of interdependent multiplicities. In previous ethnographic work, Nyamnjoh (2015, 2016, 2017b) described the phenomenon of an individual's successes remaining unrecognized until "they can demonstrate the extent to which they have actively included intimate and even distant others…in the success in question" (Nyamnjoh, 2017a: 18). Both Nyamnjoh (2017a) and I (Fore, 2013) acknowledge the importance of *growing* this capacity to both boldly acknowledge and warmly embrace the contributions of others to our own becoming, and that doing so is ethical, especially within, and in spite of, the contexts produced by hegemonic structures, discourses, and ideologies.

Guattari's (1995: 29) ethico-aesthetic paradigm leads us to understand ethics as concerned with making a "choice in favour of the richness of the possible, an ethics and politics of the virtual…It is a choice for processuality, irreversibility, and resingularisation." Since becoming depends on a processual engagement with plurality, how one relates to those differences is of key ethical concern. By consciously recognizing the potentialities latent within each present moment, one opens oneself up to novel forms of subjectivity that starkly contrast with configurations of subjectivity that reproduce the established power relations and ideologies of capitalist modernity. This vision of ethics can be framed within the broader project of the "reconstitution of the subject" which, for Braidotti (2006: 128), is focused on "empowering processes of becoming" by minimizing, if not eliminating, the self toward the goal of proliferating a multitude of potentialities – derived from human and non-human sources – for actualization in new expressions of a prehending subject.

That said, the individual human subject is not the only thing created within, and acting upon, the present – other subjects affect and become, as do broader collectives and potential solutions to shared problems. Here, Latour's (2004b: 75) notion of more-than-human actors as "actants," or "interveners" that are capable of "modifying[ing] other actors"

within present encounters is important. In this thesis, I have described as affective force what Latour (2004b) called the capacity of actants to modify. Latour addresses such affective force when focusing on the activities of an actual "body," he asserts that "to have a body *is to learn to be affected*…put into motion by other entities, humans or nonhumans" (Latour, 2004a: 2, emphasis in original). Such a body, moreover, is the body of an "articulate subject," which is a subject that "resonates with others, is effected, moved, put into motion by new entities whose differences are registered in new and unexpected ways" (Latour, 2004a: 5). By acknowledging the affective force of such actants, we become aware of the ethical significance of the role each actant plays in a given encounter.

Bryant (2011: 26, emphasis in original), for example, addresses the ethical in terms of the unification of multiplicity within and through "the moment of the ethical" in which "an organized or stable situation has become *unsettled*." Bryant (2011: 29) also asserts that ethical work is concerned with "how a collective is to be assembled or composed in light of the appearance of … strange new actors." As regards individual ethical practice, these "strange new actors" (e.g. the subjects/actants and affective forces comprising the present) are to be taken seriously as participants in the formation of a "new collective." The relations that Bryant (ibid.) is referring to here are those involving the "non-human actors that play such a significant role in perturbing collectives." For Bryant, such actants are precisely what is concealed through the process of ethical fetishism.

More than just having to be taken seriously, however, I suggest that these actants should be recognized and valued as wielding significant affective force in the becoming of the human subject which is constituted through all of its relationships with the others inhabiting an "external" world. Returning to Whitehead's philosophy, every entity (i.e., actant) is a prehending subject and a prehended object. If a human subject can prehend (be affected by or feel) an animal, a plant, a mineral, or an abstract idea, then *anything* can be a source of potential for an actualization. In taking actants seriously, and in justly valuing them for their constitutive role, one could potentially begin to address the problem of ethical fetishism.

At this point, perhaps a concrete example is usefully constructive. Think back to the example of Carmen in Chapter 2. In Beth's course, Carmen engaged with the Kheprw Institute, which served as a "client" and whose personnel were interested in receiving architectural plans for a desired project. Carmen and her peers met with KI personnel to fully assess the scope of their project and the specific features that they desired for their future

headquarters. Along with concern for client desires, Carmen also encountered the constraints and allowances of the International Building Code (IBC) and the Zoning Code and grappled with a novice understanding of the 3D modeling Revit software required for the course, while also considering Beth's guidance and expectations, peer perspectives, and her own highly complex and idiosyncratic experiential history. As Carmen designed her initial floor plans, she prehended all of the following: relevant portions of the IBC and Zoning Code; Beth's insights from her own experiential history as a professional architect; peer ideas about design principles/styles; technical support from peers who grasped particular Revit functions more rapidly than she; KI's expressed vision for the property as well as KI's building specifications; and the relevant beliefs and values she, Carmen, had stored up in her own experiential history, including her empathy for her close friend with autism, her struggles with competitiveness and bullying, and her abiding care and concern for her boy scouts. Her reflective thought on these myriad components facilitated her creating a particular design concept and a corresponding design configuration. Carmen then presented this initial design to her client, who prehended the design, its features, and its rationale, and provided (re)formative feedback. The student prehended this feedback and used it to rework her design. All of this also merged and constituted Carmen as a subject throughout the design process, which led to a final design iteration that was an assemblage of the components negotiated (reflectively thought through) and mobilized by her. While the example described here suggests a single reiteration, in practice, throughout the duration of the course, there were innumerable becomings or iterations of not just a design but of Carmen and of the objects/subjects to which she related. Whether it was her own constitution as a subject, her design, or the others to which she related, all are indebted to the others for what they became.

Throughout this thesis, I have sought to identify design actants and the affective forces they wield. However, in doing so with students like Carmen, it became apparent that, while they might have been able to narrate the relations of design, they were not necessarily able to move beyond the bounds of the rationalities and discourses of capitalist modernity. This is where the ontological grounding of processual becoming and incompleteness, alongside an axiological movement toward indebtedness, becomes important. This importance arises because it is insufficient merely to recognize or be willing to experience being moved by the affective force of everything one encounters. Given the influential role of the "outside" in constituting the subject, should not each subject go further to adopt a cosmology of relational process and incompleteness and a humble posture of indebtedness and concern for beauty? In other words, should our reflective thoughts as related to our

everyday experiences be framed in considerations of our own perpetual incompleteness and becoming, as well as our unavoidable indebtedness to an "external" world without which we could not become?

While Nyamnjoh's ontological perspectives should not be characterized as Whiteheadian, Guattarian or Latourian, the scholarship of each parallels that of the others. Considering one's indebtedness to such actants in one's becoming – and the becoming of all that one co-creates – initiates a movement from Whitehead's ontology of relational processes and Nyamnjoh's ontology of incompleteness, to an axiology of such ontologies. This movement is necessitated by the presupposition that, for something to be lent or borrowed, it must have some *value*. If one is an *ethical* subject, one must interact with, and have concern for, the valuable relations that have influenced what one has become. Therefore, to be an ethical subject, one must see and be aware of one's debts and the ethical significance of those debts. I consider the ethical significance of indebtedness, as understood through an aesthetic lens, in the next subsection.

Component II: Harmony and Potency

Since all becoming is relational, each individual subject has "some value for itself, for others, and for the whole" (Whitehead, 1968: 111). Henning (2005: 57) refers to this as a "triadic theory of value." All becoming subjects have an inherent importance or value that should be considered and accommodated (when possible) in order to ensure the most harmonious and potent actuality, that is, a "'stable system' of 'moral relations'" (Henning, 2005: 143). According to Henning (2005: 144), this necessitates a series of obligations that demand one's action be directed toward "the greatest possible universe of beauty, value, and importance in each situation possible." Here, we see a mode of valuation that is not dependent upon the capitalist abstraction of value and is capable of being inclusive of Nyamnjoh's notion of indebtedness.

I now develop that point by utilizing Henning's (2005) *Ethics of Creativity* to argue that ethical becoming is dependent upon one's (1) acknowledgment of the value of each of the entities one encounters and (2) openness to including those entities in harmonious and potent (i.e., sufficiently intense, complex, and alluring) actualities. Before discussing harmony and potency, however, we need first to acknowledge that they constitute a conceptualization of beauty put forward by Henning (2005), following Whitehead (1967, 1968) and Hartshorne (1970). Here, I aim to focus on what it means for an actuality (i.e., a becoming) to be harmonious and potent.

Following Henning (2005), the achievement of beauty is created through *contrasts* encountered within a pluralistic present. Utilizing Charles Hartshorne's (1970: 305) diagrammatic representation of beauty (see Fig. 19), Henning (2008: 128) describes beauty as the "ideal mean between, on the one hand, unity and diversity [vertical axis] and, on the other hand, simplicity and complexity [horizontal axis]." For Henning (2008: 129) the vertical axis represents "harmony" while the horizontal signifies "intensity," or as I prefer, *potency*.[99] Beauty is achieved when harmony and potency reach their ideal mean. When seeking harmony within a given encounter the available data could be so plentiful as to be chaotic, thereby producing significant uncertainty and, with it, fear and stagnation. That means that sometimes diversity is ignored in favor of one's perceived comfort with a homogeneity that has no use for the values held in and the potentials offered by difference. Following Whitehead (1967), Henning (2005: 113) describes this as "anesthesia" which, he says, "results from an individual's failure to act on opportunities that would increase the depth of its beauty." This is at the heart of what Pomeroy (2012) referred to as the "anesthesia of repetition" born from capitalism (see Chapter 6). With anesthesia, a commitment to an "undiversified" and "superficial" unity (i.e., the status quo) is upheld (Hartshorne, 1970). One perpetuates and reproduces anesthesia in pursuit of a comfortable homogeneity, thereby stifling novelty and the generation of beauty. To this, Henning (2005: 113-114) adds that an individual may also commit "violence" by actively and intentionally destroying entities that could have otherwise contributed to a deeper achievement of beauty.[100]

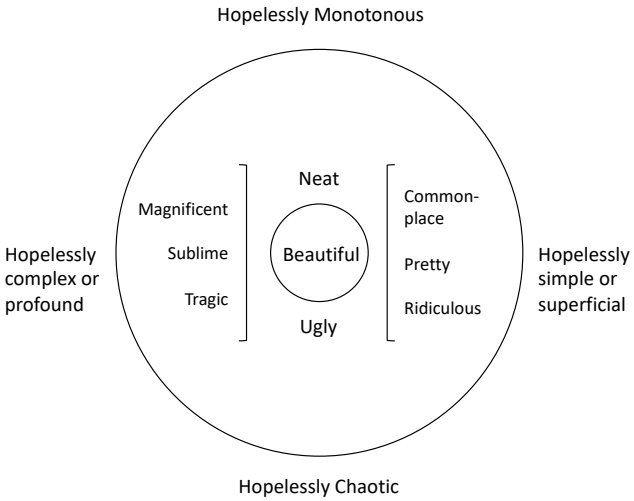

Figure 19: Hartshorne's diagrammatic representation of beauty

[99] While both Henning (2005) and Hartshorne (1970) use the word *intensity*, for the conceptualization of ethical becoming, I prefer the related word *potency* as it better connotes the affective force of an actuality to influence or modify other becoming subjects.

[100] One example of this is the anthropogenic extinction of species, which, with greater care and concern from humans, likely could be prevented. Elimination of an entire species may force a new limit on what beauty can be created in the world. With that said, violence, while destroying another entity, may at times be necessary. For example, the beauty achieved by the diversity of animal life on the planet is only possible through the

While a great diversity of entities may well be perceived as discordant and tempt one to work toward anesthesia or violence, such diversity can also liberate one to deepen the harmony and potency of a becoming subject by assembling contrasts that enhance the values present within an actualization. It may be useful to think of potency as the affective force of a beautiful actuality. While a unification of diversity may have some level of harmony, there is also a chance that such harmony could lack efficacy in luring other becoming subjects to feel or prehend it. That is because, to achieve beauty, each harmonizing part must have a unified potency that draws one to it and that mediates its contributions to future actualities. If one is able to eschew practices of anesthesia and violence in pursuit of the beautiful, it becomes possible to recognize how a subject, Carmen for example, holds value for her own becoming, as well as for the becoming of others and the cosmos. In this, I see the potential for indebtedness to take root. Everything has value within and offers contributions to the aesthetic process of creation. All subjects/actants have value and all are indebted to others for without those others, the achievements of becoming are impossible.

As Henning (2008: 129) indicates, the aim of any experience must be to "include as much diversity as possible without sacrificing the unity of experience"; it must also be to avoid the superficiality of the overly simplistic (i.e., low intensity) and the ungraspable profundity of an unwieldy complexity (i.e., high intensity). In order to achieve the harmony and potency of a beautiful actuality, Henning (2005: 146) argues for an ethics of creativity that necessitates five obligations: (1) beauty, (2) self-respect, (3) love, (4) peace, and (5) education. For the obligation of *beauty*, one's action must be directed toward "the greatest possible universe of beauty, value, and importance in each situation possible" (ibid.). The obligations of *self-respect* and *love* demand that one "maximize the harmony and intensity" of both one's own experiences and the experiences of all that one encounters, respectively (ibid.). The obligation of *peace* asserts that, unless the greatest beauty possible in a given experience is threatened by a failure to destroy another entity, one should refrain from such destructive actions. The obligation of *education* demands that one should always be striving to grow their "aesthetic horizons," meaning that one must actively seek *awareness* of both the values present in any given encounter and what kinds of beautiful actualizations are possible therein. For ethical becoming to occur, effort must be exerted to recognize and meet these obligations.

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destruction/consuming of other plant and animal life for the nutrition of individual entities, as well as for the evolution of a species and of broader ecosystems.

When working to fashion harmonious and potent actualities, one is acting as a creator, not merely of oneself but of numerous others, both actual (e.g., human and non-human others) and virtual (e.g., ideas, plans, designs, abstract knowledge). Considering the above description of beauty, how does a design(er) achieve beauty? Returning to the example of Carmen, her creation of a beautiful design should not be assessed only according to the surface aesthetics of a style, though that is surely a part. Rather, the nuanced ways in which she assembled together the plurality and complexity of the design must be considered when assessing its beauty. As a designer, Carmen was entangled in a process of negotiation, which included working with the "voices" of several different entities. Did she consider and seek to include as many of her client's desires as possible? If she did not, her client might not feel the potency of her design. Did her design reflect the exigencies of the IBC and Zoning Code? If not, future becomings will be forestalled until the design harmonizes with the safety obligations of the code. Did it also reflect appropriate technical knowledge? If not, her floor plans will be incoherent (and will lack potency) for builders. Did the style she chose reflect KI's mission and vision? For example, if the client's operations were often fluid and, in practice, personnel informally met and brainstormed throughout the day, would it make sense for Carmen to have selected a floor plan that included several closed conference rooms and private offices? Or, would an open floor plan be a better fit? If Carmen failed to consider and include these things, her client might not be lured to select her design as is. Did the space Carmen designed allow for an increase of potentialities through interactions within it and does it facilitate growth? If not, the client might not be drawn to the design for it does not possess adequate features for future growth. Did she consider and include her own past experiences in her design? If not, the design might not manifest the thoughtful care and vulnerability that nurtures and sustains relationships. If one falls short in response to any of these questions, there might be opportunities to be attentive and expand one's awareness in order to improve one's "aesthetic horizons." How all of this is coherently and effectively assembled leads to an achievement (or not) of beauty. Surely, Carmen was unable to prehend *everything.* However, doing so would not necessarily have led to beauty but, quite possibly, to chaos and to a complexity that would have been overwhelming and impractical. Balance, or the ideal mean, must be achieved. As this chapter proceeds, I argue that care practices of reflection and inquiry are needed to accomplish a balance of harmony and potency, which is the achievement of beauty.

Component III: Care Practice

Though not framed as such by Henning, the fulfillment of his five obligations demands a substantial amount of care for oneself (see Component IV), as well as for what one encounters, to ensure the achievement of maximum harmony and potency in new actualizations. So, how can care practices contribute to such achievements? According to Tronto (1993: 103) care practices include "everything that we do to maintain, continue, and repair our 'world' so that we can live in it as well as possible." Caring, in this sense, is an exercise not only in self-building but also in world-building, a world-building that explicitly includes more-than-human actants (*ibid*.). It means that, within encounters, one is *attentive* to the needs of others, accepts *responsibility* to attend to those others' needs, is *competent in* providing care to address those needs, and is sensitive to care-recipients' *responses* (Tronto, 1993: 127, emphasis added indicate each of Tronto's four elements of an ethic of care).

Whilst recognizing that all four elements are important, the element of responsiveness to care is most important in encounters where one has set one's sights toward creating harmonious and potent actualities which may thoughtfully address the needs of another with appropriate care. The care's responsiveness element is most important when one is focused on beauty because it is within responsiveness that one can witness both the value and affective force of care that is given. It is also because, within an economy of intimacy, a care recipients' responsiveness to given care (i.e., affective force) fulfills a reciprocal obligation to return care. Whether conscious or unconscious, a care recipient's response affects a caregiver in some way; and that in turn affects the character of their future interactions and also all of what is potentially created from those interactions. Expanding upon this: caring demands a careful and empathic prehension of others in whatever one is co-implicated in making, whether that making is of one's self as an individual subject, of the other as another subject, or, for example, of a design (e.g., a technology, a policy, an intervention, an architectural document, etc.) that may prove useful in addressing a collective problem.

The above treatment of responsiveness is admittedly an elaboration of Tronto's (1993: 135) conceptualization, which is more concerned with recognizing the vulnerability of the care recipient, due to the potential for abuse. As a subordinate part of this component of ethical becoming, practicing responsiveness is not about merely recognizing that care recipients actually respond – and that this is important because they are in a state of vulnerability; it is that their response has the power to affect the care giver or, in other words, to contribute to their growth/becoming. It shows that exchanges occur within care encounters

where the parties involved are fashioning each other and their ideas around how and what care should be performed (Fore, 2013). Put differently, relations are designed through care.

Drawing now on Ingold's (2013: 108) work on *making*, one could think of responsiveness in terms of what he calls "correspondence," by which he means that one is compelled to answer to the movement of a world (i.e., the care that is given and its effects/affects) that one is always in the process of feeling. This then leads to the question: Is it possible to correspond with the world, to recognize indebtedness, to work toward beauty, and to provide care without the capacity for reflective thought? The next subsection explores the necessity of reflective thought for undertaking ethical endeavors and achieving ethical becoming.

Component IV: Freedom and Reflective Thought

Any realization of ethical becoming – as well as any attempt to address the problem of ethical fetishism – requires reflective thought in order to fashion a self that is committed to recognizing indebtedness, to continually achieving harmony and potency, and to practicing care – all of which are undergirded by a relational process ontology. According to Foucault, it is thought that constitutes one's freedom to enact the process of fashioning one's self. As he says (1997: 117): "Thought is freedom in relation to what one does, the motion by which one detaches oneself from it [i.e., one's actions], establishes it as an object, and reflects on it as a problem." In other words, reflective thought follows experience and makes it possible for one to consider critically all of the actors/actants that have played a role in the experience, what the ultimate results of the experience were, and how, given these results, one might modify one's attitudes and actions in the future.

Such reflective thought is essential each time a subject exerts efforts to relate to itself, or to provide *care* to itself; it is one possible technique to be practiced toward the becoming of an ethical subject. Foucault (1997: 284) further unpacked ethics when he described ethics as "the considered form freedom takes when it is informed by reflection." Moreover, much of his late scholarship during his "ethical turn" was concerned with reflective thought (e.g., through meditation, reading, writing, conversation), which was a key focus of the ancient Greek practice of *care of the self*. As Foucault (1997) stressed, the purpose of such care of the self was and still is to know oneself and reflectively to actualize oneself with and through others and in relation to one's desired (and contextually contingent) direction of change.

For example, were one concerned with maximizing harmony and potency and with providing care for the diversity through which this might be achieved, one must utilize one's

capacity for reflective thought to be able to make one's practices the objects of critique. By critiquing one's own practices, one employs a technology for iterating one's self and what is created through one's practices. If, upon assessing one's previous actions, they are found to be inappropriate for the context, one can then adjust one's practice to meet that context in a new, possibly more effective, way.

Returning to the example of Carmen: if – upon translating her experiences with KI personnel, the IBC, her peers, her instructor, and her own subjective history – Carmen had created a design that was deemed insufficient by her client or instructor, she would have had to consider the feedback, explore how she should respond, and then respond. Without guidance, a student like Carmen might engage in this iterative process with little critical thought on how and why the client's needs should be met. Thus, the how and why of the process might remain unconscious to her and she might uncritically enact habits based upon assumptions about the client/designer professional relationship; or, far worse, she might blindly accept all feedback and thoughtlessly rush through another iteration in pursuit of a grade that is believed to be the key to getting a job with a good wage. Consequently, I propose that students need to be introduced to appropriate reflective frameworks for thinking through such experiences in order to be able to respond in ethical ways that address relationality, indebtedness, and beauty.

It would be naïve to assume that such reflective prowess can be attained without a teacher's or facilitator's guidance. A guide, teacher, or facilitator is needed for a student to perfect and provide direction to such a process of caring for the self, a process that is integral to caring for others. As Foucault (1997: 287) indicates, an individual who is still learning to care for their self is in need of "a guide, counselor, or friend, someone who will be truthful with [them]." In educational settings focused on design processes, such guidance should provide students with direction on how to reflectively fashion the self, and the practices that may define each, in relation to a desired direction of change. Before exploring the role of education in the practice of ethical becoming, however, it is important first to explore ethical becoming's final component, *ethical inquiry*.

Component V: Ethical Inquiry as Mode of Creation

Ethical becoming's fifth component, ethical inquiry, serves as a heuristic structure for reflectively directing the process of becoming and the careful meeting of present needs. As conceptualized here, ethical becoming assumes the use and modification of thought and action through participation in, and reflection on, meaningful encounters – each of which

comprises multiple intervening forces – that continuously fashion new subjects. As one proceeds through such becoming, there is potential for one to *inquire* thoughtfully into how one might ideally live, think, act, and create. Albeit building upon Dewey's (1988) description of ethical enquiry, my present focus on ethical becoming is oriented towards exploring how one might ideally live, participate, and interact with others along an experiential continuum that itself comprises a multitude of moral situations. It involves, in part, conscious reflection upon one's prior experiences and how those mediate who one becomes and what one (co-)creates.

Ethical inquiry, as imagined from within the ethical becoming concept, is a process of critical inquiry in which, when immersed in present encounters of moral significance, a subject acts (e.g., makes and implement decisions) according to their conscious knowledge of their moral values, their past applications of that knowledge, and their observations of the present needs of – and interactive actants within – the moral situation (Dewey, 1988: 172-186). Such ethical inquiry leads to experiential data collection and analysis and, in turn, to a refashioning of the subject and to reflective production of new resolutions, knowledge, and ethical valuing (Dewey, 1988: 179-181).

While Dewey never created a prescriptive structure for ethical inquiry, he described five important features of it that deserve consideration in greater detail. The first is that ethical inquiry must include the practice of "*moral traits*" – such as "the virtues or moral excellencies" (Dewey, 1988: 174). Such moral excellencies are important, says Dewey, because there is never one end that, if pursued, will sufficiently address all situations. For example, the pursuit of the utilitarian end of the greatest good for the greatest number will not be the soothing balm for all moral situations.

For the ethical becoming concept, harmony, potency, and care are not static ends that are finally perfected or ever reach completion; rather, like moral excellencies, they are "directions of change" (Dewey, 1988: 181). While one may aim to achieve harmony, potency, and care in one's life, attainment of these directions of change are not final; one grows in one's ability to achieve an ongoing harmony, potency, and care in the world one participates in actualizing. As Dewey (ibid.) asserts, "growth" – or, for the purposes of this thesis, "becoming" – "is the only moral 'end'." One's attained skillfulness in achieving beauty and care in the world is not an end in itself; rather, these skills "are marks of growth [i.e., becoming] and [the] means to [their] continuance" (Dewey, 1988: 185). This speaks directly to the idea that students' ethical capacities, like those of all others, are emergent. Consequently, one's refinement of how one engages in an ethical becoming process cannot

be achieved in a degree program, let alone a single course. Everyone's ethical becoming is a lifelong pursuit.

Secondly, Dewey (1988) argued, ethical inquiry requires one to reflect deeply upon, or build *awareness* of, the multitudinous elements comprising a dynamic and pluralistic moral situation. Such awareness begins through careful observation of all the subjects contributing to a present problem and thoughtful analysis of how those subjects are contributing. Similarly, for Freire (1970/2000: 109), developing awareness of this "situationality" is achieved in dialogue with others, and – much as with Dewey (see below) – critical awareness of a present situation (i.e., awareness of historical, social, political, and economic contradictions) allows subjects to identify problems and "intervene" in pursuit of a new state of affairs that may offer liberation from a hegemonic status quo. Here, I see ethical awareness as being deeply concerned with the concrete reality of a given situation, as well as with cultivation of a working knowledge of how the beliefs and values of capitalist modernity affect the situations in which we find ourselves. If educators cultivate this critical, ethical awareness, they can assist their students – like those considered in this study – to think and act beyond the standards and practices of professionalism alone and, thereby, to participate in the co-creation of alternative modes of thinking and doing. Students are fully capable of conceiving such alternatives, as demonstrated in my discussion of the ethico-aesthetic valuings articulated by Sasha, Annie, and Dakota in Chapter 5. Encouraging them to do so is surely an imperative for educators who are not simply technical trainers.

Thirdly, once one has achieved sound awareness of a situation, Dewey argues, one must make a *judgment* in which one must identify what should be done in each unique situation. Fourthly, he adds, this judgment leads to active *experimentation* during which one's judgment may be confirmed if the evidence, or the consequences of the experiment, supports its validity (Dewey, 1988: 179). And fifthly, he points out, if the consequences of such an experiment refute one's judgment, this constitutes a "lesson in wrong methods" that should lead to a new *iteration* of the faulty judgment, a deeper awareness, and another experiment (Dewey, 1988: 180).

Ethical inquiry is also beneficially thought of as a care practice. When I say this, I mean that Tronto's four elements of care could serve as the animating moral excellencies for the ethical inquiry process. In order to build awareness of the ethical significance of the present, we must be attentive. If we are to make judgments about what to do in the present, we must boldly take responsibility for particular needs and problems. Once we take responsibility and make a judgement, we must experiment with that judgment by competently

enacting it. After such experiments, we must account for the response or results of the experiment and iterate upon our thoughts and practices accordingly. *Caring ethical inquiry* comprises *attentive awareness*, *responsible judgment*, *competent experimentation*, and *responsive iteration*. In putting that into practice, we need also to keep in mind our respective indebtedness and maintain a dedication to the maximization of beauty in what we create. This formulation creates an educational landscape which orients learners toward ethical concerns.

Summarizing the Entanglement of Ethical Becoming's Five Components

To summarize the above concisely, it logically follows from the five components of ethical becoming that:

(1) one's correspondence with the world begins with the recognition that one is a relational creation and is, therefore, indebted; this indebtedness presupposes that everything has value;
(2) due to this value and one's indebtedness, the multiplicity present in any encounter should be, to the best of one's ability, safeguarded to ensure that actualizations achieve a harmonious beauty that is potent/intense;
(3) care practices must be introduced to ensure that present needs are addressed and that the ideals of harmony and potency are achieved in what is actualized;
(4) reflective techniques are needed for one to exercise the freedom to thoughtfully fashion oneself, others, and that which one makes with sensitivity to indebtedness, harmony, potency, and care; and
(5) one's freedom to fashion in this way is beneficially directed through an ethical inquiry heuristic in which one must direct one's growth in decision-making and practice using moral traits and dispositions, increase one's awareness of the many entities playing a role in a given encounter, make a judgment about what should be done, enact that judgment as an experiment, and iterate on one's judgment based upon the outcomes of the experiment.

Ethical becoming could be thought of as a process of reflective inquiry and caring practice that seeks to recognize indebtedness and perpetuate the becoming of harmonious and potent actualities. As one accounts for, and strives to justly include, the diverse entities comprising a present encounter, one must inquire. When one inquires into all that comprises that encounter, one must reflectively account for one's self in all its complexity, traveling from one's experiential past along its lines of inheritance. As one brings past experience and

future-oriented intentions to bear on any particular dynamic present, one conducts work that necessarily shapes new becomings, which – though potentially not mirroring one's desired outcome(s) – are objectified and become part of the becoming subject's experiential continuum. In fashioning a response to the world, one fashions one's self. Everything is in correspondence. There is no clear inside or outside. There is no disentangling from the world. That which one makes – whether that be one's self, others, or designs – resists closure, is contestable, and is open to modification.

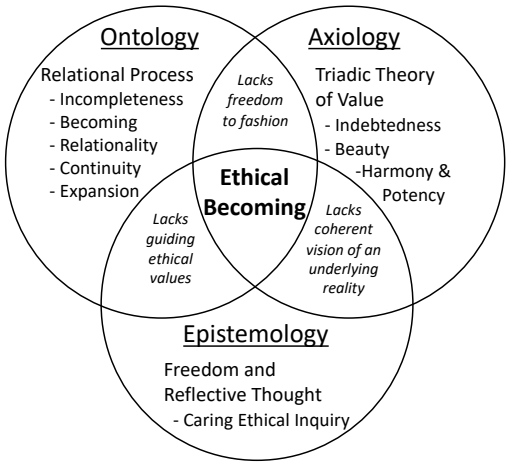

Figure 20: The onto-epistemic framework of ethical becoming, including its ontological, axiological, and epistemological commitments.

As I have examined the entanglement of ethical becoming's five components, it has become clear that it is also important to consider how these components may map onto philosophical branches, namely ontology, axiology, and epistemology. My argument is that ethical becoming (see Fig. 20) is fully realized at the intersection of an ontology of relational process, an axiological commitment to a triadic theory of value, and an epistemological approach founded in freedom and reflective thought. Without the intermingling of all three, our approaches to thought and practice in the present potentially may lack the freedom to fashion, a sense of guiding ethical values, and even a coherent vision of an underlying reality, particularly one that enables the endurance and expansion of the pluriverse. Such a diagrammatic representation could also be made for capitalist modernity; and doing so, would be fairly simple if one were to refer to the Escobar's (2018) four beliefs of modernity. It was this capitalist-modernist framework – particularly related to professionalism – that captured much of my student interlocutors' meaning-making of design experiences. I raise this here to suggest that, if capitalist modernity's culturally hegemonic system of thought and practice is to be challenged, coherent and actionable alternatives or counter-hegemonies must be proposed, supported, and then used to inform teaching and learning efforts.

I argue that mapping these philosophical relationships is important – particularly for critical education theorists and interested practitioners – in order to operationalize ethical becoming as a coherent, counter-hegemonic system of thought and practice that can be integrated into educational contexts. I now explore what ethical become might look like were it introduced into a course.

Educating for Ethical Dispositions and Practice via Authentic Experience & Reflection

In concluding the section on reflective thought (Component IV), I asserted that guides, teachers, or facilitators are necessary to help becoming subjects learn to fashion their selves in ethical ways. In the context of ethical becoming, this guidance should, I would argue, strongly encourage learners to consider deeply all of the following: the reality of their relational connectivity; their indebtedness; their commitment to harmony, potency, and the practice of care; and their use of a heuristic for ethical inquiry capable of leading to new expressions of the self, of others, and of plans or designs addressing collective needs. The present section briefly explores the importance of experience – and reflection on such experience – when students are situated within disciplinary contexts that hold potential for encounters with significant diversity and a plurality of needs that all require negotiation. It concludes by considering critical reflection in experiential contexts and suggesting several philosophically informed reflective prompts to draw out student reflection. Before proceeding, I must acknowledge that community engagement, a simulated kind of experiential learning, is the context, as throughout this thesis, for the examples I present. That does not, however, mean that community engagement – or interior design/architectural technology education – is the only context in which ethical becoming is relevant.[101]

The centrality of reflective thought and inquiry to ethical becoming means that ethical becoming should be understood as a learning process, specifically one that benefits from educational environments conducive to creating experiences of cultivation, or what Dewey calls growth. For Dewey (1938/1998: 28-29), such cultivation is multi-directional and students need consequently to be directed in ways leading to "continuing growth in new directions" rather than having opportunities stymied or possibilities for experience foreclosed. From that, it follows that educators are tasked with constructing environments conducive to experiential learning because those provide ingressions into new becomings, new understandings, and new potentialities for future experimentation. Within such environments, Dewey (1938/1998: 31-32) suggests, experience works as a "moving force," with the quality of any subsequent experience – one now "moved" into – ultimately determining the value of preceding experience. For example, if one classroom experience

[101] I have already begun exploring, with several colleagues, how ethical becoming – and ethical education, more broadly – might operate within place-based and field-situated educational contexts in the environmental and ecological sciences (see Fore et al., 2018; Nyarko et al., Forthcoming) and lab-based contexts in biomedical engineering (see Hess, et al., 2021).

leads to a new educational experience in which students' knowledge is further developed, the instructional strategy used within that initial experience warrants continued utilization by instructors. If and when this occurs, it may breed a spirit of pedagogical experimentation within Deweyian education, producing a dynamic and emergent classroom environment.

Whenever an educator constructs a fecund environment, they wield power to exert social control within the classroom. For Dewey (1938/1998: 61), that power is appropriately used to establish learning opportunities within what he calls a "social enterprise" in which each student has "an opportunity to contribute and to which all feel a responsibility." Following a similar line of thinking, Lave and Wenger (1991) situate learning within "communities of practice" in which understanding is acquired dynamically by being constructed through contextually relevant practice. Such "communities" (e.g., disciplines, trades, etc.) in which that kind of meaningful practice is situated provide learners with opportunities for "legitimate peripheral participation" as they move along a knowledge continuum from novice to expert (ibid.). Legitimate peripheral participation modifies the learning focus from "learn[ing] *from* talk … to learn[ing] *to* talk" within social environments and events that are meaningful to the discipline or skill being taught (Lave & Wenger, 1991: 109, original emphasis). Moreover, it connects students with actual disciplinary practice, which – as Pantazidou and Nair (1999) have indicated – is inherently ethical since everyday disciplinary practice demands care for and engagement with plurality. In such situated and experiential learning contexts, students participate in ethically-significant relationships and conflicts that can be carefully addressed using a variety of disciplinary tools and skills relevant to the particular interaction. Experiences constructed from engagement in such learning environments can then be reflected upon using the lenses of philosophical ethical theories as tools for reflection-in-practice, thereby making explicit the otherwise implicit ethics within disciplinary practices.

Reflection deserves emphasis as a central assessment tool in any ethics-centric pedagogy, especially experiential and community-engaged pedagogies. Reflection is necessary in these experiential learning contexts precisely because, as Dewey asserted, growth is multidirectional. Yet, since growth is not always positive and becoming is at times unbecoming, requiring students to engage in structured reflective thought can enable educators to assist students to critique their experiences.[102] In an interior design education

[102] Educators too need to develop capacity in themselves for ethical inquiry, critical reflection, and critique of their experiences. To this end, several colleagues and I have co-created a four-year Faculty Learning Community (FLC) comprising faculty of IUPUI's Earth Sciences and Biomedical Engineering Department (see

context, guiding students through sound reflection practices can help them to engage critically with what they have designed, how their designs affect others (both human and more-than-human), how and what others contributed to their design, and how they are fashioning themselves – as designers and as humans – through their embodiment of what they value.

A practitioner interested in using an ethical becoming framework must remember that critical reflection should cultivate development of a praxis (i.e., reflection and action) in students, leading ideally to an "emergence of consciousness" and, as a result, a capacity for "critical intervention" (Freire, 1970/2000: 81). Within the idea of ethical becoming, reflection is a necessary feature of ethical inquiry; and ethical inquiry is a process that can potentially address social issues and foster emergence of something new: an alternative to the status quo. Students must be enabled, first, to deepen their awareness of the complexity of the situations in which they are immersed.

One way my student interlocutors might have been supported in developing critical awareness is if they had been provided with reading materials introducing key ideas and concepts that might prompt them to interrogate their experiences and understandings of reality in new ways. Examples providing alternative "lenses" (not professionalism) to make meaning of their design experiences might have been selections from Tronto (1993), Henning (2005), or Nyamnjoh (2017a). Such an approach can enable students to construct their own critical consciousnesses, which they can then use to make judgments about how to act toward a particular problem, to experiment with those judgments, and to iterate on the outcomes. My student interlocutors did reflectively inquire throughout their design processes. However, more intensive scaffolding of reflective assessments (i.e., critical frameworks used as lenses for the interpretation of experience), might have moved them beyond professionalism to be able to construct alternative meanings of their design experiences.

I have thus far generally identified how and why critical reflection should occur. Now, I ask: what specific form might this guided reflection take? One option can be found in Ash and Clayton's (2009) DEAL (*Describe*, *Examine*, and *Articulate Learning*) framework for critical reflection in experiential learning environments. Following this framework means giving students reflective prompts at moments throughout a course, prompts intended to encourage students to thoughtfully *describe* a specific course experience so that they might

Fore et al., 2018). The FLC's curriculum and theory of change model are accessible on the NSF-sponsored Online Ethics Center (Price et al., forthcoming).

then thoroughly *examine* that experience. Such prompts need to be aligned with, and designed specifically for achieving select learning goals and their assessable objectives. Following those steps, explain Ash and Clayton (2009, p. 41), instructors need to prompt students to *articulate* what they have *learned* and also how that can be abstracted and applied to future experiences, thereby helping to refashion and build upon knowledge they have experientially constructed.[103]

Ash and Clayton (2009: 29) identify three learning goals within experiential learning: *personal growth*, *civic learning*, and *academic enhancement*. Each is germane in experiential/community-engaged education contexts utilizing reflective assessment strategies. I suggest that they are also relevant to courses seeking to introduce or facilitate ethical becoming.

First, the personal growth goal may be achieved through processes of reflective thought which are central to any pedagogical application of ethical becoming as an educational concept. While not framed specifically that way by Ash and Clayton (2009), this personal growth learning goal within an ethical becoming framework could support learning objectives that in turn support personal development related to relational interactivity, reflective thought, and ethical inquiry – all ways to create subjects that are critically conscious and capable of reflectively pursuing alternatives to capitalist modernity and the hegemonic status quo. Second, the civic learning goal resonates well with an approach to ethical becoming that focuses on: (1) reflective thought within an ethical inquiry framework; (2) the relation between Whiteheadian harmony and potency; and (3) an ethic of care's dedication to caring for difference. Third, Ash and Clayton's (ibid.) academic enhancement goal also aligns with ethical becoming, I suggest, because one can easily see development of *competence* – a key element of care (Tronto, 1993) – as an academic enhancement. To provide care, I argue, and in concert with Tronto, one must do so competently. For example, technically incompetent architects or interior designers would have difficulty providing appropriate care to their clients. This means that the content knowledge and skills in which interior design/architectural technology students are expected to develop competence can become the means through which they provide care for particular problems.

[103] Clayton and Ash (2005) also acknowledge the importance of instructors being able to reflect critically. For example, they assert that faculty need to be supported in the cultivation of their own capacities for critical reflection on their teaching. Doing so helps faculty to understand themselves as educators and to demonstrate for students how critical reflection works.

Considering Ash and Clayton's personal growth goal leads to the questions such as: How can instructors cultivate their students' dispositions to care for their selves and others? What reflective prompts might be used to facilitate such a process? Might they be prompts encouraging students to engage in a "reflexive process through which one presents to oneself a certain way of acting or reacting, asks questions of it [and] examines its meaning and goals" (Faubion, 2001: 97-98). Might taking such a focus reframe design practices to be concerned as much with technical designs as with the design of an individual subject's identity – in the case of my student interlocutors, as an interior designer and a citizen? Examples of potential prompts for the *Commercial Construction* course ethnographically studied for this thesis might be:

- What principles/morals/values do you try to live by? What, if anything, do you do to ensure that you are living according to these principles/morals/values?
- Do you have a role model who exemplifies your principles/morals/values? If so how, if at all, do you work to be like them?
- How have you worked in order to live according to your principles/morals/values in your interactions with this course's community partner?

Now consider Ash and Clayton's goal of civic learning: instructors could aim to design prompts that challenge students to reflect on their feelings, thoughts, and practices related to how they negotiate, value, incorporate, and care for plurality toward the achievement of harmony and potency within the particular community-based context in which they are designing. As stated earlier, such reflective prompts must be coupled with efforts to familiarize students with some kind of conceptual framework and to accompany students as they apply that framework to a critical analysis of their experiences. Ethical becoming and its components, for example, can provide concepts (e.g., relationality, indebtedness, harmony, potency, care) for these reflective purposes. Beyond academic reading assignments, instructors could also introduce such concepts through various media, including podcasts, music, poetry, literature, and film. Were Beth, for example, to introduce a reflective strategy based upon ethical becoming in the *Commercial Construction* course, potential prompts might include:

- How do the future users of what you design define the problem and why does it matter to them?
- How were you affected by the community partner members' concerns over their problem?
- How do you plan to incorporate your client's knowledge, beliefs, needs, values, and aspirations into your design? Are there any of those that you have found to be completely incompatible with your design idea? What was it about them that made them incompatible?
- Have you included as much diversity of thought and experience as possible into your design to ensure it is harmonious?
- To what extent and how does your design manage to lure people to engage with or respond to it? In other words, does your design have intensity and potency?
- How have the members of the community partner received and responded to your care/design?
- How have you addressed feedback from the members of the community partner into your design?
- As you have gone about the design process, in what ways have you been caring for members of the community partner?
- In retrospect, was the expression of care you enacted sufficient to meet their needs as they arose in the context in which you were working?
- Was the care offered by students/community partners/other parties at any time, or in any way, inappropriate? If so, do you feel that this inappropriate care negatively affected your design efforts?
- Where do you place yourself (e.g., your past experiences, beliefs, interests) in your final design?
- Where in your design is:
    - the community partner?
    - the technical content you have been exposed to in the course?
    - the broader social context?
- How, if at all, do you imagine you might apply in your future practice what you have learned about (1) the design process and (2) the role of ethics in design?

Such prompts are designed with the intention to enable students to develop their potential to systematically interrogate their ethical thought and action. If students are made aware of select components of ethical becoming, and instructed to put them into reflective practice, they could include in their written responses critical considerations of ethical values (e.g., harmony, potency, attentiveness, responsibility, competence, and responsiveness). As they make meaning from their course experiences and consciously challenge the tendency for ethical thought and practice to be captured by capital and fetishized, they might then reveal and revalue the relations that constitute reality.

Since ethical becoming is necessarily emergent, students, and hopefully graduates too, need repeatedly to practice the skills to navigate the process. Although students can ethically become within their degree programs, there is, however, no ultimate realization of the ethical subject, no moment that, when reached, ends the process of becoming. For that reason, instructors need to introduce these ideas and repetitiously to offer guidance through such processes and to do so from very early on in students' education. Doing that will ensure that students form strong, reflective habits that they can carry and further develop throughout their lives.

Educating for Ethical Becoming: An Example

To illustrate the ethical becoming concept and its utilization in architectural and interior design education, this section offers an example of how Scarlett (see Chapter 4) could have, through a reflective assessment strategy, been guided to an engagement with the components of ethical becoming.

As Scarlett designed her initial floor plans (e.g., color plans and interim presentation plans), she prehended KI personnel's vision for the property, the building specifications, Beth's insights from her own experiential history as a professional architect, peer ideas about design principles/styles, technical support from peers more attuned to Revit, and her own experiences, beliefs, and values. Her reflective thought on these myriad components facilitated her creating a particular design configuration. She then presented this initial design to KI's personnel who prehended the design, its features, and its rationale, and provided formative feedback. Scarlett prehended this feedback, or the parts she felt relevant, and used it to revise her design along with her evolving understanding of the IBC. All that she prehended merged together and constituted her as a subject throughout the design process while leading to a final design iteration that was an assemblage of the components negotiated

(or reflectively thought through) and mobilized by her. While this description suggests a single revision, in practice, throughout the duration of the course, there were innumerable becomings or iterations of not just the floor plans designs but of Scarlett and of the objects/subjects to which she related. Whether it was her own constitution, or those of her designs and the others to which she related, all were indebted to the others for what they became in any present moment.

Now think about Scarlett undertaking one specific act of design: creating a double door in Revit. When doing that, she prehended data which contained KI personnel's expressed interest in double doors at the front of the house. She also prehended her knowledge of how to technically create a double door in Revit, and the obligation, via the IBC, that doors flow with the path of egress. The number of positive prehensions in this event are innumerable, so it is important to stress that these examples are in no way exhaustive. These three prehended data were further actualized in the Revit file – itself a prehension of prehension – containing the design of the double door. What each subject actually *is*, in the immediate present, is a becoming assemblage or unity of a plurality of prehended data relevant to the present event.

I am confident that Scarlet was unable to prehend *everything.* However, doing so would not necessarily lead to a potent harmony but, quite possibly, to chaos and to a complexity that would be exceedingly overwhelming and impractical. Scarlett's creation of a harmonious and potent design should not be assessed only according to the surface aesthetics of a style. Rather, the nuanced ways that she, with great care, assembled the plurality and complexity of the design need to be considered when assessing whether what is created is harmonious and potent. As a designer, she was entangled in a process of negotiation which included working with several different entities' "voices." How she assembled this all, coherently and efficaciously, could lead to an achievement (or not) of an artifact characterizable as beautiful insofar as both Scarlett and others deemed it harmonious and potent.

To ensure that Scarlett enhanced her awareness of her indebtedness and that her efforts to create were directed toward care, harmony, and potency, Beth could have constructed a reflective strategy that included assessments (e.g., journal entries) prompting Scarlett (and her peers) to explicitly identify and consider the value of the many actants that influenced their designs. Scarlett could have then been guided in her efforts to fashion reflectively her designs and herself in ways that value difference and are attentive to the myriad affective forces driving her decision-making, as well as to those actants/forces she

may have neglected. Designing ethics-related prompts could also have helped Scarlett to resist converging on decisions that incorporated minimal diversity. For example, she could have been asked to reflect upon the extent to which she considered and sought to include as many of her client's desires as possible, as well as whether her design accurately reflected the exigencies of the IBC, which exists to ensure safety. Scarlett could have also been prompted to reflect critically upon the technical skills and knowledge she utilized to address the problem and whether she did so competently.

Putting this in terms of Tronto's four elements of care, Scarlett could also have been asked to reflect upon how, if at all, she (1) was *attentive* to KI's needs regarding a design; (2) took *responsibility* for those needs by working to create a thoughtful, harmonious, and potent design; (3) addressed those needs by creating a design with a *competence* relative to her level of content knowledge and technical skill mastery; and (4) heeded the *responsiveness* of the client to her design, leading to further design iterations. If – upon translating her experiences with the client, the IBC, her peers, her instructor, and her own subjective history – Scarlett recognized she had created a design that KI's personnel or Beth deemed insufficient, she would have needed to consider that feedback, to explore how to respond, and then to respond.

To ethically become, one must reflectively inquire in ways that recognize the centrality of connectivity and indebtedness, are inclusive of care practices, and demonstrate a commitment to directing becoming toward harmony and potency. Aiding a student's critical reflection on their continuously evolving design throughout the semester, and utilizing an ethical becoming framework, a course instructor can help students learn: (1) to negotiate values; (2) to increase their awareness of the actants populating relevant design encounters; (3) to make contextually-appropriate judgments; (4) to experiment with such judgments; and (5) to iterate, based on feedback, if their design choices have failed to meet the client's needs. Seen through an ethical becoming lens, design iterations are the results of failed experiments, or failed attempts to assemble into a unified and potent creation all the disparate differences present within an encounter.

This ethical becoming approach can provide opportunities for students to think beyond the standards of professionalism and engage with ethical and aesthetic values – such as indebtedness, harmony, and potency – in ways that animate care and inquiry practices and that thereby obstruct the capture of care by capital. While there were exceptions, my student interlocutors often leaned heavily on the beliefs and values of capitalist modernity to make meaning of their design experiences. By providing students alternative onto-epistemic frameworks for reflecting on their thought and practice, educators could help students to

unveil and justly value the relations that constitute them and their designs and, in doing so, disrupt ethical fetishism.

Conclusion: From Ethical Fetishism to Ethical Becoming

My main argument has been that ethical becoming, both as an onto-epistemic framework and as a pedagogical aim, is a concept that can be put to work to provide a way to challenge and potentially to overcome ethical fetishism. The capitalist mode of valuation, together with hegemonic beliefs and assumptions associated with capitalist modernity, conceals and devalues relationality and converts our constitutive experiences into ghosts that do no more than haunt our everyday realities whilst leaving us vexed by contemporary problems that we cannot address without our acknowledging and justly valuing relationships. In this concluding chapter, I have argued that a relational process ontology is necessary to disrupt ethical fetishism; and that axiological commitments to new and inclusive modes of valuation, as well as commitments to recognizing indebtedness and the pursuit of beauty, can be built upon such an ontology. These are metaphysical and axiological principles that inform how and why we should strive to create knowledge. A relational process ontology frames knowledge and its construction as deeply relational and ethical, a reflective and caring inquiry into the processive unfolding of existence.

As I have demonstrated through my ethnographic data, elements of both ethical fetishism and ethical becoming co-occurred during students' design processes. At times students lingered on modes of thought and practice that concealed and devalued relations. At other times they embraced ethico-aesthetic potentials and empathic connections. Unsurprisingly, in the context of a capitalist-dominated university, the logic of the *Commercial Construction* course was aligned more with reproducing capitalist modernity's beliefs and values than in challenging them. My argument is that explicitly bringing the concept of ethical becoming into the course could offer students reflective frameworks for pursuing alternative ways of understanding architectural and interior design work and of how those disciplines' knowledge and skills can be used throughout the ceaseless becomings of an ethically conscious subject. Because students might, at times, rationalize their ethical, political, and economic practices and thought in terms of the analytical frameworks to which they are introduced, educators must be strategic regarding which such frameworks they privilege in their courses. For those who might, as I do, wish to see change, the frameworks through which we develop our own and our students' subjectivities must be transformed. As

educators, we need reflexively to work to inspire our students to recognize the relational process of reality, to see becoming as an incomplete project, and to embrace the relationality to which they, like everyone else, are indebted for their perpetual becoming. We need therefore to support our students to inquire with great care and criticality into the exigencies of the present in pursuit of beautiful actualities. This is ethics; and education, as well as all other disciplines, must be in service to it.

For students in engineering and other professional programs to engage fully in ethical becoming, they also need to be exposed to, and have to interact with authentic environments that demonstrate disciplinary relevance and that provide them with opportunities for complex encounters with and between diverse actants. For them to examine the ethical elements of these complex relational encounters, students need to be guided through reflective practices that are carefully scaffolded in courses and have been explicitly designed to develop students' mindfulness of their own respective implication in a variety of becomings, whether of their own selves, of others' selves, or of their designs. Providing instructional strategies and appropriate assessments (e.g., reflective prompts) that encourage students to explore the complexity and fluidity of their own subjectivities, and of the things they design, may help them to recognize the value of, and articulate the power wielded by, all of the actants to which they must relate.

Without intentional efforts to introduce alternative onto-epistemic frameworks into students' critical thought, ethical fetishism will likely be reproduced and relationships concealed and devalued. Any hope of our responding ethically to the ills that threaten the ongoing harmony and potency of reality requires us to acknowledge and to justly value the relations that constitute us and our present. The work of education must now be directed toward the drawing out of the latent capacity within students for consciously prehending the creative value that all actants hold for themselves, for the becoming of others, and for the becoming of the cosmos. Through such education, educators and students could collaboratively recognize their shared indebtedness and the critically-conscious care we must provide in return to all that has constituted us and the world we inhabit. What becomes must not be captured by the trappings of capital and the beliefs and values of capitalist modernity that distort the concrete experience of reality. We must tear through that veil and intervene by actively and critically inquiring into worlds otherwise. Then, perhaps, our becoming will become ethical.

Appendix A: Observation Protocol[104]

Over-riding question for observations: What are students doing, saying, and producing?	
Student Practices	Description and Examples
1. What are the regularly occurring communicative practices in the course settings? Put Differently: What are the ways that students communicate/interact with their instructor, their peers, and their community partners? What is communicated?	Examine the ways students communicate (verbally or representationally) with their collaborators. Examples: question-asking, generating/interpreting writing, group discussions, body language.
2. What forms of relational potential are regularly occurring in the course settings? Put Differently: What are the ways that students engage with difference? How do they imagine potentialities, embrace the potential of difference, and actualize that potential?	Examine the ways that students deal with the newness of present events and the potential latent within those events. Examples: group discussions, problem-solving, thinking out loud, responses to community partner requests/ideas
3. What are the regularly occurring reflective practices enacted by the students in the course settings? Put differently: What are the ways that students reflect upon their experiences (e.g., memories of actualized potential) and assess their value?	Examine the ways that students reflect upon previous knowledge and experience. Examples: reflective group discussions, statements that reveal the use of previous knowledge or experience
4. What discourses, values, and beliefs are regularly embodied in the course settings? Put Differently: How do students act in relation to their knowledge, values, and beliefs?	Examine the ways that students apply knowledge, test their beliefs, and seek to actualize their values. Examples: group discussions, question-asking, problem-solving, experimentation
5. What are the regularly occurring creative practices and flows of desire in the course settings? Put Differently: what are the ways that student desires inform/influence creative practice and direct that practice toward "the good," however it is personally defined?	Examine the ways that students seek to creatively produce that which is deemed ideal by themselves or others. Examples: group discussion, identification of ideal forms during design process, responses to community partner requests/ideas
6. What are the regularly occurring practices of subjectivation that *appear* to reproduce the student as the subject of a dominant ethical/moral discourse *or* produce the student as subject in radically new ways? Put Differently: How do students remake their selves in the image of normative forms? How do they transcend them?	Examine the ways that students act through, with, and beyond their cognitive selves, other subjects and objects, and normative discourse to (re)produce their selves. Examples: interactions with others, group discussion, behavioral alignment with shared values, practices of considering difference, use of imagination, application of innovative ideas
7. What are the affects and memories that are brought into present events in this course setting? Put Differently: How does a student's past experiences affect their behavior?	Examine the ways that students emote and feel (how they are affected by the past and present moment) and how this affects their participation in course events. Examples: discussions of emotion and feeling, body language, identification of discomfort, practices of coping with challenges.

[104] My observation protocol was adapted from Carlone (2012: 17).

Appendix B: Initial Life History Interview and Follow-up Interview Protocols

Initial Life History Interview

1. What brought you to this course?
    a. What are your academic and career goals?
        i. What specifically do you think draws you to this trajectory?
    b. What role did your own education and learning play in your to pursue your academic/career goals? Your family? Other social institutions?
    c. Can you think of any particular experiences that have influenced your identity/identities?
    d. How has your feeling toward your academic career goals changed over time?
2. How would you describe yourself as a person? How would you describe yourself as a student? Would you describe yourself as an ethical person?
3. Do you think that there is a difference between ethics and morality or are they synonyms?
4. What do you value most in life?
    a. How successful are you at living these values? Does striving to live according to these values help you make choices?
    b. Would you think of this as "the good"?
    c. Is there someone in your life that you feel is an exemplar of these values?
5. Do you have any community service/volunteering experience? If so…
    a. How did those experiences make you feel?
    b. Why did you choose to participate in such experiences?
    c. How do memories of those experiences influence your present actions and your future plans?
6. When you look back on your education and career, what do you want your legacy to be?
7. Can you describe a time when you feel you were particularly successful at collaborating with others? Unsuccessful? Have you ever had to design something with someone else's needs/desires in mind?
8. Can you describe a time when you felt particularly successful at providing care to someone? Unsuccessful?
9. How do you reflect upon yourself and your actions? How do you bring yourself to account for your successes and failures? What role do your own memories play in this?
10. When you are in the middle of an event, within the present moment, with little time to reflect, what do you think guides your practice — emotions, beliefs, knowledge, experience, etc.? In other words, how do you interpret and act in relation to immediate sensorial experiences?

Follow-up Interview

1. How did you feel when interacting with the community partner? Was it comfortable? Challenging? Energizing?
2. At any point, did your interactions with the community partner cause you to see things in a different way?
3. How would you describe the specific needs of the community partner? How would you characterize their challenges and needs? How do you understand the everyday life they are attempting to address with their work?
4. What do you think of the community partner's mission/vision? How do you feel about being a part of that?
5. In our first interview, you described your values as _____ (*repeat values to them*). Was there a time when you were engaged with the community partner or your classmates that you felt as if you were living/embodying those values? If so, what was the event?
6. In our first interview, you described a volunteering experience in which you _____ (*repeat narrative to them*). Was there a time when you were engaged with the community partner or your classmates that you felt you drew on the memory or what you learned from that experience? If so, what was the event?
7. In our first interview, you described a time when you provided care to someone: _____ (*repeat narrative to them*). Was there a time when you were engaged with the community partner or your classmates that you felt you drew on the memory or what you learned from that experience? If so, what was the event?
8. I observed _____ (*a somewhat negative interaction between the student and the community partner and/or peer*). How did you feel about that? How did that interaction inform your future action (i.e. your design project)? Why do you think you interpreted that experience that way? Do you think that your environment (i.e. home, school, broader society) contributes to that perception and your behavior? How do you think you overcame any challenges? How did your response(s) act to nurture something you would call "good"?
9. I observed _____ (*a somewhat positive interaction between the student and the community partner and/or peer*). How did you feel about that? How did that interaction inform your future action (i.e. your design project)? Why do you think you interpreted that experience that way? Do you think that your environment (i.e. home, school, broader society) contributes to that perception and your behavior? How do you think you overcame any challenges? How did your response(s) act to nurture something you would call "good"?
10. When reflecting upon this course, do you feel as if you have progressed ethically? Do you feel that you have progressed as an engineering student?
11. Has this course helped you develop a sense of ethical action and what that entails in your academic/career trajectory?

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