

Double (Hunch) Negative: Blending Practice/Research/ Teaching and the Critical Imagination

"In 1969, a young former abstract expressionist decided he was done with painting, went out to the middle of nowhere, set off explosives that displaced 244,000 tons of rocks, and made two 30×50-foot trenches that contained nothing....In our hyper-contextualized world of the tagged and displayed, relying upon "nothing" and "nowhere" as aesthetic constructs seems near dead....To get closer to the point: land art acts as a bridge between sculpture and performance art; the body of work enlists the body of the viewer. Double Negative may be just as still as a Rodin, and, as with a Rodin, I have to bring myself to it—but "bringing myself to it" is a far more dramatic enterprise, and, when I'm there, I'm an even more performative element than I would be in a museum—searching for it, walking around it, getting stinking hot."
Merridawn Duckler, 2016¹

"Double Negative creates a feeling of tension in between its walls. Its "void" is immeasurable in importance. You "feel" the void, sense in detail the change of texture in the walls. The void within the landscape has become the "program" of experiential space."
Eric Strain, 2019²

INTRODUCTION

In Duckler's account of Michael Heizer's Double Negative, the viewer becomes a part of the overall experience of scale, of site, and the knowledge of place. In a sense, perception, feeling, and scale hold a very complex relationship in the eye of the participant, and this brings Heizer's earthwork closer to architecture than one might expect. This correlation between experience, scale perception, and placemaking can enrich the educational experience, thereby affecting the balance of forces that exist between academia, practice, and research.

At least, that is the hunch that drew us to the 2019 Antwerp ACSA/EAAE International Teacher Conference. By discussing how a blended set of practices (practice/teaching/research) enabled a mutually reinforcing dialog between the making of ideas, buildings, and landscapes, this paper will present design practice and the practice of design education as inter-related activities. Through our collaborative efforts, we have worked to make the space of inquiry a continuous field that reaches across conventional divisions between the academy and practice. Within this field, research helps ground "the hunch" while "the hunch" tempers the formality of research.

Our hunch is this: that a case study of a recent design think-tank will illustrate how we see:

- expertise developed in the academic environment can be incorporated into an inquisitive professional design practice;
- the studio (both academic and professional) as a thinker-space that should not follow a commercial agenda nor should it become a space absent of craft and speculation, urge and fascination, skill and imagination, criticality and

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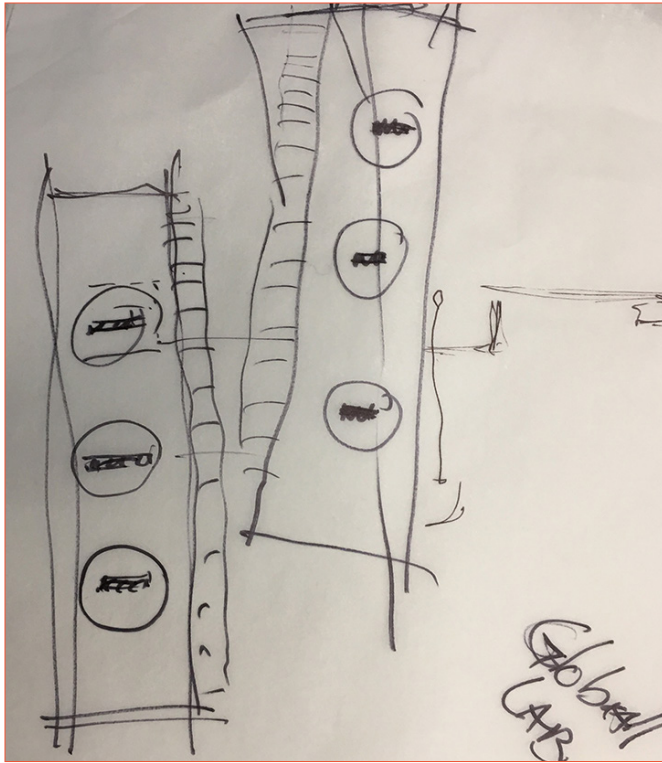


Figure 1: The Initial Hunch - science labs should be distributed everywhere.

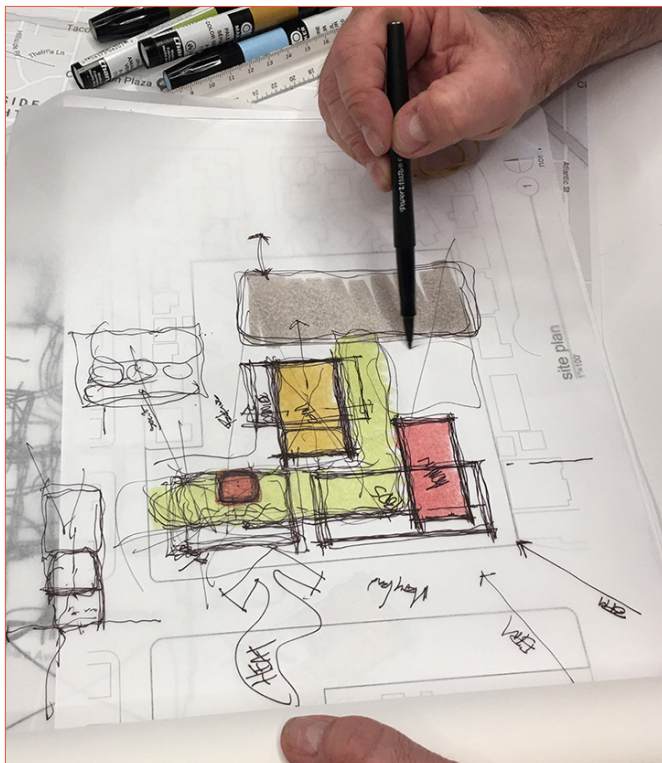


Figure 2: The classroom module blurs indoors and outdoors as the design matures.

creativity, individual formation and social consciousness

While our pedagogical approaches draw from a variety of disciplines, we ground our work, and that of our students and student interns, within the discipline of architecture.³ In this sense, we bring an interdisciplinary approach to specifically architectural practices. This is not to say that we do not question the limits of the discipline; rather, we test the limits of established architectural models from within the discipline in an effort to critique, re-build, and extend those very same models in practice settings. Given this framework, we seek to instill in student interns a desire to question and explore ideas, issues, and technologies of implementation such that a rigorous process of thinking and acting through design becomes attainable.⁴

It should be pointed out that we do not believe in simplistic formalism or nostalgic ideation. We do not think that a 'divine inspiration' mindset serves most students well neither in the studio nor the office.⁵ Nor do we believe in the innate or essential qualities of a given thing, place, or time. Each of these ideological frameworks has a great deal of currency, but neither offers fertile ground for inquiry. The divinely inspired, or the model of the creative "genius," relies too heavily upon unchallenged personal idiosyncrasies, while the quest for essential characteristics has long been a discredited charge—we live in a world of far too many compelling systems of value to claim universal agreement on such issues.⁶ Similarly, we do not rely upon conventional notions of architecture-as-service; all too often, the conventional wisdom of the professional world fails to exhibit wisdom in any convincing fashion and, therefore, fails to provide a promising vehicle of intellectual exploration. Rather than revert to techniques of inquiry that we see as limited, we encourage our students and our office interns to approach their design processes by reformulating them as processes of investigation—i.e., as research agendas. It is through the close study of the contexts within which architecture exists (both as a discipline and as a practice) that potential sources of inspiration to fuel a design process may emerge.

Put simply; research can spark a hunch and vice versa.⁷

THE "HUB"

One point of clarification: this case study focuses on a meeting held in the offices of assemblageSTUDIO in Las Vegas, Nevada, in January of 2019. assemblageSTUDIO was founded by Eric Strain, the first author on this paper, as a flexible practice able to nimbly expand and contract as project demands dictate or as office workloads necessitate. In this instance, the second and third authors were invited to join assemblageSTUDIO in Las Vegas for a 2-day work-session focused on the conceptualization of a proto-type for the Global Community Alternative High School (GCAHS). GCAHS will house an innovative curriculum that blends STEM-based learning with a wide range of cultural strengths represented by the school's multi-ethnic and international student body. This 2-day session involved three student interns, all of whom are enrolled in the School of Architecture at UNLV, two full-time intern designers and each of this paper's authors.⁸

Our new interaction sphere, as we regard it, the HUB, is intended

to simulate an academic studio environment in which faculty and students (in this case, practitioners and interns) discuss alternatives and pursue ideas through rigorous and intense scrutiny grounded in a collaborative process. Thus, over two days, the team discussed precedents, reviewed literature, and nurtured a notion that multiple buildings were more appropriate than a single structure. While various approaches were explored, the overall consensus repeatedly returned to schemes that focused upon campus-like in which landscape, architecture, and interiority were interwoven. In this sense, Double Negative—Michael Heizer’s earthwork in the Nevada desert, served as a precedent—not in terms of the uses of the building nor in the sense of form-making; instead, Heizer’s project provided a frame of reference for an experience of a “void”, or of the space between things, that represented an opportunity to create meaningful places within the school. His quote that “there is nothing there, yet it is still a sculpture” translated—in our architectural languages to an idea that the “nothing” in the GCAHS program would still result in meaningful architecture.⁹ In essence, this was our first “hunch.”

INTUITION AND PRACTICE

GCAHS will be a unique institution within the Clark County School District that will address the needs of a largely immigrant population of 400 students speaking over 20 languages—many of whom will arrive at the school after traveling directly from detention facilities along the US/Mexico border. In fact, the Principal of the school told us that,

“Students who attend Global come from countries such as El Salvador, Nicaragua, Mexico, Honduras, Guatemala, Thailand, Philippines, India, China, Columbia, Costa Rica, Spain, the Nations of Africa, and Brazil. Many of our students have traveled for months to arrive, and many have not been educated beyond elementary school. Many of our students do not have family or have witnessed some traumatic event in their lives.”

Principal of the Global Community Alternative High School

Given these circumstances, the school must function not only as a place of learning but also as a place of recovery. So, somewhat unusual programmatic elements are needed within a broader integrated educational environment: a large kitchen and social space and a library to be accessed on evenings and weekends, for example, alongside science labs and classrooms. Additionally, the school will house an in-take center to help students transition into the city and school system and to offer social services such as mental and physical health assessments. This wide range of educational, social, and client needs (including to break down institutional barriers—both physical and perceived) sparked our hunch that the GCAHS should not be one large facility but instead a campus of intimate spaces (some enclosed, others open). In this sense, the school’s imagery and environments would be non-institutional, break from the imagery of “governmental facilities” and instead provide a welcoming destination that nurtures through integration with nature.

In this sense, the HUB provided students with an opportunity to put research into action – to critically evaluate various environmental

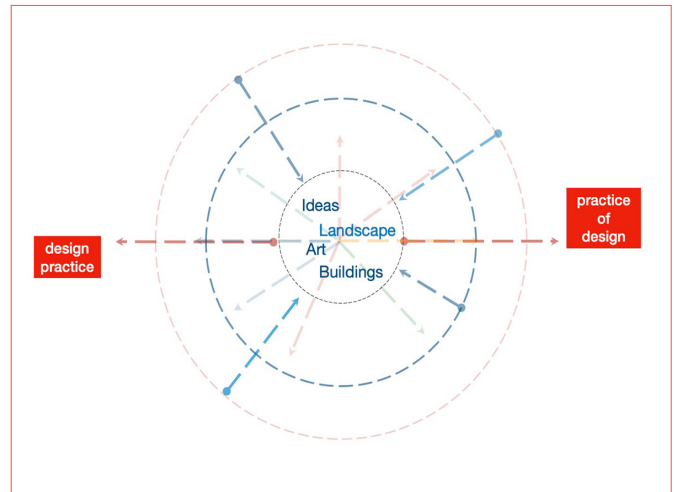


Figure 3: “Hub” diagram.

behavior studies through the lens of a specific case (the GCAHS) that will impact real constituencies. As faculty who straddle practice and the academy, this teaching strategy allowed us to position the HUB as a space in which student interns could “prepare for the world, in the world.”¹⁰ This discussion points to the strengths of hands-on learning environments in the development of critically reflective practitioners and in addressing the dual dilemma that often plagues the academic environments.¹¹

To be clear, we relied upon a straightforward definition of the word “research” as we entered into the HUB (these definitions are taken from the American Heritage College Dictionary, Third Edition):

Research: 1. Scholarly or scientific investigation or inquiry; 2. Close careful study.

It is through the careful study of the contexts within which architecture exists that potential sources of inspiration can emerge and fuel a design process. Put another way, we encouraged the office’s student interns to immerse themselves in all forms of information regarding their topic at hand and, from that immense field of information, specific and often unique points of departure could be identified. In this case, our collective interest in a combination of open and enclosed spaces was reinforced by detailed studies of the benefits of outdoor spaces and views relative to mental health.

From a pedagogical perspective, this approach affords points of departure that may engage a critique and a challenge, a resonance, and an extension, or a reference to a parallel but seemingly unrelated position. In all cases, the work that emerges is immediately engaged in a dialog with information, data, precedents, and cultural flows that characterize the state of the art across many fields. And, this approach encourages a

form of reflective practice that the often referenced the 1996 “Boyer Report” emphasized.¹² While this is not a new approach, the importance that reflexivity holds for architectural education and, by extension, for future practitioners, is its involvement with not only practical needs but also a wide range of scientific, social, aesthetic, political, and environmental foundations of architecture, which are not easily captured through the teaching of disembodied skills and facts. Therefore, our HUB meetings aimed to position student interns as partners in extending the knowledge base of the profession through an exercise in reflective practice.

Again, this is not a new approach or idea. What we borrowed to define our HUB was the view that design education can occur in a collaborative and demonstrative manner. In other words, the learning environments proposed by Boyer (and others) require critical engagement with both an intellectual and a professional milieu. However, such a vision is rarely materialized. As the architectural educator, Dana Cuff has illustrated, design exercises are “composed for didactic reasons, so complex problems are simplified, variables are isolated for study, and a series of educational experiences are coordinated.”¹³ The academic setting, thus, often removes problems from contextual constraints to clarify and focus upon specific issues within a coordinated set of learning experiences. This combination of factors distances the classroom from practice, which limits the capacity of design education to address complex social questions. One unintended result is the dual dilemma we alluded to above: (1) intellectual distancing enables a form of reflexivity limited to an individual student’s problem-solving skills; and (2) the problem-solving skills of students remain too limited to be applicable in environments increasingly characterized by diverse and often competing constituencies. For this reason, our approach to the GCAHS meet-up was intended to overcome this dual dilemma by addressing issues of public import as both scholars and emerging professionals through research, critical speculation and active collaboration—collaboration intended to level the playing field between practitioners/academics and students/interns.¹⁴ This is one way that we blended research from fields such as environmental psychology and the environmental sciences into our design practices, which are based upon experience, precedent and intuition in ways that shift the focus from (as the conference call for papers asked) ‘what can be done’ to ‘what ought to be done’.

INTERDISCIPLINARY POACHING

A hunch, a gut feeling—both can be useful when grounded in concrete experience and information. In this case, our hunch was not just based upon Heizer’s Double Negative but also on a previous project, the Lynn Bennett Early Childhood Educational Center—a 20,000 sq.ft. educational and research facility located on the campus of the University of Nevada Las Vegas.

Lynn Bennett was developed as assemblageSTUDIO’s submission to an invited competition for this UNLV facility, which serves both as a daycare for the children of faculty and as a research center for the School of Education. In Lynn Bennett, the idea of a campus within a campus afforded a contrast to other proposals; of the five invited teams, our proposal was the only one to break the program apart

and to provide a set of inter-related buildings and open spaces (the remaining four entries each proposed conventional classroom buildings). Our proposal reflected an intuitive sense that children need access to outdoor play and that views to the outdoors can inspire learning. This sensibility, at the time, was not rooted in research but rather in the first-hand experience with our own families.

When faced with another opportunity to explore alternative models for education facilities, our experience with Lynn Bennett, coupled with our more recent exposure to emerging literature focused on natural systems and well-being, we attempted to build upon the intuitions that drove an earlier design process. But, with one difference: we (each member of the team—including the student interns) consciously searched for research and information to “fact check” our initial intuitive response.

As alluded to above, we believe that an immersion within a field of information can spawn unique points of departure for a design process that may critique and a challenge, resonance, and an extension, or a scatological reference to a (seemingly) unrelated position. In the case of our recent engagement with the Global Community Alternative High School, our intuitive hunch built upon the client’s desires to break down institutional barriers, both physical and perceived. In this sense, the school’s building imagery and environments were to be non-institutional and needed to break from the imagery of governmental facilities. More importantly, the school would need to provide a welcoming destination that nurtures the well-being of its students through integration with nature.

Our interpretation involved imagining how voids in a building could become something that defines the architecture—much like Double Negative helps define its place in the world. Voids, in this sense, became the vehicle of our hunch that we could bring the indoors of the school together with the outdoors. This approach also integrated technology with the students’ multi-cultural strengths to create a

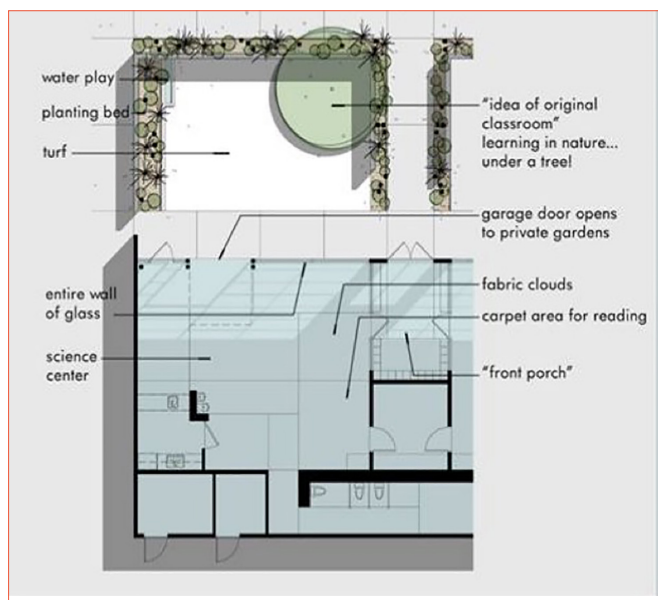


Figure 4: Lynn Bennett classroom module

collaborative set of non-traditional learning environments including exterior spaces, visual interconnectedness, and spaces that help nurture, heal and restore.¹⁵ The fact that a significant segment of the school's population will arrive after essentially being incarcerated at the US/MX border, the need to avoid conventional institutional architectural imagery was crucial. By removing their potential discomfort with institutional facilities, our hunch was that students would more easily involve themselves in the school and the opportunities that it will provide. And, this would enable us to integrate natural environments to provide opportunities for students to recover from mental fatigue, to perform at higher academic levels, and sustain their attentional capacities.¹⁶

This conversation regarding the de-institutionalization of our approach to the design of the GCAHS continued beyond the two-day work session, via on-going email communications with the design team:

"I had a recent trip to Taliesin to listen to the lecture of David Adjaye and it got me thinking and I would be interested in your feedback... After the lecture I walked the grounds of Taliesin for some time... walking through intimate courtyards with various buildings opening into them...planted walks that connected each building to the next...a direct connection of each space to the landscape, creating an extension of space both visually and physically in some cases...Taliesin never stops inspiring, the connection to landscape and the intimacy of buildings to that very landscape...materials and forms that provide a sense of scale and connection to earth/landscape. It got me thinking back to our Lynn Bennett project at UNLV as well asto the principal's discussion over the fear of governmental buildings and how it has caused some to shy away from enrolling. So, keeping with the idea of rethinking educational spaces/classrooms, we are considering an option...that becomes much less intimidating...a design that would allow every space to have direct access to the outside to increase the space of the classroom as well as making a direct connection for each space to the landscape as if you had a series of small buildings all connected through a series of walks/courtyards...less iconic in scale but more of this place and about enabling education to occur not just in a classroom but in the extension of class in the courtyard or walk ways between...in a small way more iconic in creating a building about the kids and their needs instead of our egos..."

Eric Strain, email communication to the design team
(Jan. 29, 2019)

This approach helps move our practice away from conventional values in the marketplace, or that may lie in an architecture-as-service model. This approach maintains a connection to criticality, to craft, to imaginative engagement, and to hunches. For example, early research by Wilder into the value of intuition in mathematics suggested that "the more experienced the mathematician became, the more reliable did his 'intuition' become" and that intuition is, in many ways, "an accumulation of attitudes (including beliefs and opinions) derived from experience, both individual and cultural."¹⁷ In this sense, intuitive capacity grows as people grow culturally and intellectually. Wilder,

in fact, went on to suggest that students might learn principles and grow intuitive skills through an encouragement to guess and experiment—to act on hunches. This, he proposed, was a model for discovery through a learning process and it is not dissimilar to what is often asked of students in a normative design studio situation. In our case, it was not dissimilar from our HUB interaction.

More recent research into the role of intuition relative to creativity reinforces the idea that educated guesses represent a form of intuition rooted in expertise (and experience). In their essay, "Understanding Intuition: The case for two forms of intuition," Dorfler and Ackermann argue that "intuitive insight" is what helps produce new knowledge through interpretation of complex challenges and as compared to "intuitive judgment," which is tied to past experience and the application of expertise to well-defined problems.¹⁸

Design challenges, like the development of a proto-typical alternative high school, are generally not well-defined problems; instead, they are more like the "wicked problems" that Rittel and Webber spoke of in the 1970s.¹⁹ As such, our design process focused on the built environment for its restorative and educational value and for potential experiences that may be greater than what meets the eye.²⁰ For example, Berto's research into mental fatigue points that exposure to restorative environments helps restore attentional capacity, and this has been quantitatively documented through various studies in environmental psychology.²¹ This research is connected to that focused on Attention Restoration Theory, which suggests that contact with nature directly impacts attentional functioning.²² Many studies in this area have found that contact with nature to be related to attention in adults but this one study in particular focused on Attention Deficit Disorder (ADD) in children. In their study, Taylor, Kuo and Sullivan noted that the "'greener' a child's play area, the less severe his or her attention deficit symptoms."²³ They also point to both empirical and theoretical work in landscape architecture and environmental psychology that highlight several potential benefits of natural environments in the well-being of children such as "providing privacy, mental stimulation, and sensory stimulation and supporting important developmental activities such as play, creative forms of play, and exploratory and divergent thinking."²⁴

CONCLUSIONS

This paper has attempted to illustrate the ways that research from fields such as environmental psychology was blended into our design practices based upon experience, precedent and intuition in ways that (as the conference call for papers stated) advance the research of the faculty/practitioners, thereby shifting the focus from 'what can be done' to 'what ought to be done'. This distinction between what can and ought to be done is informed by working through not-so-well-defined problems and by engaging interdisciplinary research through the design process. In our view, this is one way to maintain a model of reflexive practice that benefits from a HUB-like environment. And, judging from comments from one of the interns on the team, we may have achieved a small measure of success in this regard:

"Rather than seeing two or more designs compromised into a single

concept, as is standard in academic group work, the new high school concept evolved organically as many different inputs were weighed and then incorporated. It was a revelation to see intelligent and collaborative discussion shape the direction of a project instead of the combative bickering that I am used too.”

Student Intern comment share via email in May of 2019.

We should be clear: we do not expect that students will emerge from our HUB as fully formed reflexive practitioners armed to save the world through their intuitive and intellectual capacities. Critically engaged and reflective practitioners are what we hope our students and interns will continue to become as they move into professional environments. This kind of reflexivity will augment their abilities to address the needs of diverse constituencies that are increasingly unlikely to be from a similar background, cultural milieu, economic circumstance, and even mindset. In a sense, we aimed to avoid the imbalance of the knowing technocrat leading the unknowing other (or the master architect leading the apprentice).

The alternative, for us, is something that builds upon the scholarly culture of design as a discipline and upon the on-going accumulation of knowledge in ways that builds an office/studio culture and identity. This is akin to what Dohr described as a “practice group” in which collective expertise is developed through shared values, norms, practices and traditions.²⁵ Like Dohr, we believe that designers in the 21st century will need new abilities to understand, collaborate, and share knowledge across a wide range of perspectives—and this will require an intuitive ability to integrate academic expertise within an inquisitive professional environment.²⁶

Notes

1. Merrydawn Duckler, “Somewhere on the Road to Nowhere: Double Negative at Length,” accessed on the web at <http://atlengthmag.com/art/somewhere-on-the-road-to-nowhere-double-negative/#fn3>
2. Eric’s thoughts emailed to Jose following a full day charette on the Global Alternative Community School, January 10, 2019 (6:20AM).
3. It should be noted that all interns at assemblageSTUDIO are paid employees and their participation in this charette was a paid activity. assemblageSTUDIO does not support unpaid models of internship.
4. One way of demonstrating a “process of thinking and acting through design” is to illustrate how discussions at assemblageSTUDIO were coupled with sketches in real time, which attempted to capture ideas around the table. In this sense, the act of drawing while discussing design directions is a form of process—not unique, by any means, but perhaps more intentional.
5. While research into the creative process and things like inspiration is still emerging, studies in the human sciences has begun to tackle the topics; importantly, research increasingly points to repeated effort (i.e. practice) in the creative process as equal to, if not more important than, creativity. See: V.C.

- Oleynick, T.M., et. al., “The Scientific Study of Inspiration in the Creative Process: Challenges and Opportunities” in *Frontiers in Human Neuroscience*, Vol. 8, (2014) article 436. 1-8.
6. See: T. Dutton and L.H. Mann, *Reconstructing Architecture: Critical Discourses and Social Practices* (Minneapolis: University of Minnesota Press, 1996).
7. Research into things like hunches has typically been framed by notions of intuition, which have been shown to be the result of a significant amount of processing in the brain. In this sense, the brain is a large predictive machine, constantly comparing incoming information and experiences against stored knowledge in order to predict what may come next. This is known as a “predictive processing framework” that often enables scientists, for example, to pursue a hunch through rigorous testing that is built upon extensive experience. See: A. Clark, “Whatever next? Predictive Brains, Situated Agents, and the Future of Cognitive Science” in *Behavioral and Brain Sciences*, Vol. 36, No. 3, (2014) 181-204.
8. The student interns were: Jaclyn Roth, Shane McNie, and Adam Radamis; each were the third year of their architecture program at UNLV; Eduardo Gonzalez participated as did Mirella Garcia from UNLV’s Landscape Architecture program—both were full-time employees after and UNLV alumni.
9. Michael Heizer quoted on Nick Tarasen’s website: <http://doublenegative.tarasen.net/double-negative>
10. N. Cantor, “Academic Excellence and Civic Engagement: Constructing a Third Space for Higher Education.” *Baylor University’s 2014 Presidential Inaugural Lecture Series*, Waco, TX. 6–8.
11. See: D. Cuff, *Architecture: The Story of Practice*, (Cambridge: MIT Press, 1992).
12. See: E.L. Boyer and L. D. Mitgang, *Building Community: A New Future for Architecture Education and Practice*, (Princeton: Carnegie Foundation for the Advancement of Teaching, 1996).
13. Cuff, 65.
14. See: A. Latham, “Liberal Education for Global Citizenship: Renewing Macalester’s Traditions of Public Scholarship and Civic Learning,” Occasional Paper sponsored by Project Pericles, (Macalester College, 2003) <http://www.macalester.edu/pericles>
15. Students in this school often have been detained at the US border and often released without a parent; so, many of these students arrive and have only the school to call their home. Faculty, in this sense, often have to provide additional support services and become essentially a family figure for the students that they see. The clients expressed a desire that the school help support the students and the work that the faculty must perform.
16. See: R. Berto, “Exposure to Restorative Environments Helps Restore Attention Capacity” in *the Journal of Environmental Psychology*, Vol. 25. (2005) 249-259.
17. R.L. Wilder, “The Role of Intuition” in *Science*, Vol. 156, No. 3775

(May 5, 1967) 610.

18. V. Dorfler and F. Ackermann, "Understanding Intuition: The Case for Two Forms of Intuition" in *Management Learning*, Vol. 43, No. 5. (2012) 556.
19. See: H.W.J. Rittel and M.M. Webber, "Dilemmas in a General Theory of Planning" in *Policy Sciences*, Vol. 4, No. 2 (June 1973) 155-169.
20. See: K.G. Scholl and G.B. Gulwadi, Recognizing Campus Landscapes as Learning Spaces in *Journal of Learning Spaces* 4, No.1. (2015) 53-60.
21. R. Berto, 249-259.
22. See: A. F. Taylor, et.al., "Coping with ADD: The Surprising Connection to Green Play Settings" in *Environment and Behavior*, Vol. 33, No.1, (2001) 54 -77.
23. A.F. Taylor, et al., "Coping with ADD: The Surprising Connection to Green Play Spaces" in *Environment and Behavior*, Vol. 33, No.1 (January 2001). 55.
24. *Ibid.*, 58.
25. J.H. Dohr, "Continuing the Dialog: Interior Design Graduate Education Inquiry and Scholarly Cultures" in the *Journal of Interior Design*, Vol. 33, No. 1 (2007) v-xvi.
26. While this idea needs additional development, we believe that by bringing in research from disciplines like environmental psychology, we can model a way of practicing that is academically grounded but still open to a rich design process—and that this is something that can be shared with our interns.