A social scientist in the studio

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Abstract

Studio-based learning is now the standard in architecture education in the world as well as in Vietnam. The design studio is now not just a place to work or meet between lecturers and students or between students themselves to solve design problems, but has truly become a "home" for students in their study time at school. The teacher not only plays the role of a lecturer but also must be a social scientist and apply social science trends in teaching, especially teaching in cross-cultural contexts like Vietnam;this is truly something special. This paper will introduce several branches of particular interest to me such as ethnography, developmental psychology and cognitive science as they might pertain toarchitecture education, using the lenses of a school of applied social science,in order to re-examine local norms and expectations. Exposure to those fields has given me a foundation with many vantage points from which to reflect on architectural education in particular and schooling in the creative arts in general.

Key words: *Architectural education, design education, design pedagogy, expertise, studio culture, pedagogical content knowledge*

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Content

For over 45 years I have been immersed in architectural education, primarily in the northeastern United States, first as a student, then as a teacher, for a time as an administrative leaderat the Boston Architectural College, and, for the last 13 years, returning to teaching, in Hanoi, Vietnam.My 1984 graduate architectural thesis, at Harvard's Graduate School of Design, looked at the relationship between Japanese and Western space, as well as exploring a dialog between form and place-making traditions from east and west. Since 1989 I have had an independent architectural practice.

In the 2004 / 2005 academic year, as I turned 50, I became a full-time student again, at Harvard's Graduate School of Education, bending all mystudiesthere in the direction of design education, especially studio-based learning and teaching. The school of education seemed to me to be a school of applied social science, includingseveral branches of particular interest to me: ethnography, developmental psychology and cognitive science. Exposure to those fields has given me a platform with many vantage points from which to reflect on architecturaleducation in particular and schooling in the creative arts in general. Some of the perspectives I explored in my graduate research were ethnographic. Otherswere psychologically developmental, trained primarily on college students'cognition, while also including (younger and older) adults' attitudes towards cognition as they study and practice towards the ultimate end of becoming expert in their fields.

Ethnographers trying to understand the culture in a given settingcan look at phenomena like language, customs, norms, assumptions, rituals, and expectations characteristic of the setting. In a school of architecture, one-on-one discussion of creative work or public reviews of creative workwould qualify as norms; they are characteristic modes of interaction between faculty and students. Expectations about curricular sequences typical of schools of architecture might also help characterize the educational culture of schools in a region or nation. For some years now,I have come to think of myself, at leastsometimes,as being simultaneously a teacher andan ethnographer in my role as an educator. I certainly participate in the culture as a teacher and, from time to time, I try to stand back from the situation in order to try to understand it, and my work with students in it, better.

Psychologists can look for modes of thinking and feeling within groups as well as within individuals. Some developmental and cognitive psychologistshave examinedadults' and young peoples'self-theories regarding their own intelligence (Carol Dweck is one). Others have researched college students' and adults' beliefs, and the stages of development of those beliefs, concerning the nature of knowing (William Perry and Robert Kegan, respectively, for example). Some have explored the notion of multiple intelligences (sometimes referred to as MI) rather than a singular intelligence (sometimes referred to as G) to better explain the diverse ways of, and aptitudes for, learning among the individuals in a classroom (Howard Gardner is the founding researcher behind the multiple intelligence theory). Still others have looked in detail at the social scaffolding and constructing of new learning (Lev Vygotsky pioneered this way of thinking). Encouraging exploring, and not relying on telling,are concepts central to the mode of teaching and learning called Critical Exploration (Eleanor Duckworth's approach).Joining these approaches as building blocks leads towards the ultimate goal of forming expertise is my interest (K. Anders Ericsson is one of the most prominent of the expertise researchers, whose work I have consulted).

Exposure to these frameworks hasprovidednew reference points within my field of vision when I look at students and teachers at work (my own included)on learning and teaching in architecture schools. These frameworks sometimes seem to allow me to "go meta," as Howard Gardner used to sometimes say in his lectures; they seem to allow me, from time to time, to "stand back" from the world I am immersed in, a mental re-positioning Robert Kegan used to discuss in the context of his developmental theory. These frameworks might comprise ladders towards achieving critical distance.

This might be as good a point as any for me to apologize for the hubris of seeming to represent myself as a social scientist in the studio in the title of this paper.

Perhaps it is better thought of as half aspiration and half truth. I try to look at the world in these ways, sometimes, but I really have modest formal exposure to these fields, primarily through my degree studies in education, and several years thereafter, when I continued researching these areas independently. Since then I have continued to research and think about my work in ways that are influenced and inflected by these perspectives from the social sciences.

There are of course elements of the architect's work that overlap the social sciences deeply (assessing client needs for example, can be very much like an ethnographer's work). An architectural educator's practice joins professional topic field knowledge with an educator's perspective on learning and teaching (Lee Shulman's framing of Pedagogical Content Knowledge). This last part is the most extensive 'socially scientific' element of my resume, although most design professors (as well as most college professors, for that matter) have not beenschooled specifically in education, or in applying the related social sciences to learning and teaching.[1]

In the fall of 2007 I made my first trip to Viet Nam. I returned a number of times in 2008 and 2009 and moved to Hai Phong in the summer of 2010. I began to teach at Ha Noi Architectural University (HAU) in the fall of that year. Teaching at HAU adds cultural layers I only partially understand to the familiarpractice of teachingarchitecture.While I was introduced to some of the cultural currents of East Asia decades ago, through an early interest in Japan, a couple of architectural tours there, and some modest coursework in the area, I am still very much a novice student of the culture of Viet Nam. Inevitably I find myself exploring comparisons with my past experiences, Western and Eastern, while reflecting from time to time onthe worthiness of mypreconceptionsas well as my evolving new understandings.

Colleagues and friends in Viet Nam and America have, from time to time, asked me to compare my experience of architectural education in the two nations. That is part of the subject I would like to treat here, both indirectly and directly. I would like to treat the subject indirectly by talking about how I am looking at and thinking about the comparison, informed by perspectives from the social sciences, along the lines I introduced above, weaving these in with my longer experience as a design educator. I would like to convey more directly the comparative East / West impressions forming in my mind as a result of these perspectives.

1. An anthropologist steps into the room

While culture is the domain of anthropologists, design studio culture is an explicit subject for self-examination in every accredited school of architecture in North America – to engage self-study on studio culture is oneof the requirements for collegiate architectural accreditation.

The anthropologist can study a cultural issue or situation in many ways. One way is through being a participant-observer, immersed in the culture you are studying. For schools of architecture in North America, this is really the 'default' method, as the people doing accreditation-related self-study of studio culture are typically the students and faculty learning and teaching in the studios and the administrators that help coordinate the faculty's work. These "anthropologists in the studio"are living in the cultural "world"they want to analyze; they get to know the people in that place very well. They would need, if they applied an anthropologist's rigor to these matters, to examine the assumptions they themselves may hold as well as their own predilections and preconceptions. They would want to try to stand back enough from the situation they live in, in order to develop analytical understanding of it.

One very thoughtful example of participant observer research form isElliot Liebow's study of women in homeless shelters called Tell Them Who I Am.Liebow is absolutely immersed in the world he is studying, and develops strong feelings about the people he studied at these homeless shelters. Arguably this biases the work, but, at the same time, through empathy and personal contact, he develops deeper understanding. The 1996 report on architectural education prepared by Ernest Boyer and Lee Mitgang, Building Community: A New Future for Architecture Education and Practice, was a rare instance of educational experts from outside the design disciplines doing a thorough study of schooling in architecture. Their focus on studio culture, among many other focal areas, may have helped place a subject that was taken for granted onto the radar screen of accreditation leaders, and by extension, on the radar of architectural educators across north America.[2], [3]

When I think of myself as an anthropologist in the studio I find it productive to vary the scale of my studying. I can zero in on what I think of as the culture of an individual student or professor caught up in a particular, situated moment. For me this highlights the importance of getting to know students as individuals – an approach impressively well documented in Michael Armstrong's Closely Observed Children. It can scale up from there to the culture of groups and cliques that can form within a studio during a semester. The school itself, overall, can exemplify a culture (I think of the Cooper Union, when it was led by John Hejduk, based on its reputation, its publications and on discussions I have had with a graduate from that time).Further,the school can exemplify currents, traditions and standards within regional, national and international educational practices. [4]

In moving from the northeastern coast of the USA to the northeastern coast of Viet Nam, the cultural shift has been from a specific locale within'Western Culture' to an equally specific locale that I understand as both East Asian and Southeast Asian. The histories of cultural development and exchange in each setting exert strong influences on each place's presence. Architecture students learn how important it is to shift scale in order to understand a building's design. It can help the educator as well. Shifting one's point of view culturally by moving to the other side of the planet provokes growth of understanding (and, inevitably, misunderstanding) as well.

2. Pedagogical, physical and social cultural history

Indigenous architecture in Viet Nam can be seen in different ways. Travelling to farming and craft-oriented villages may provide a helpful window on early unselfconscious architecture, some of which is still active and extant. The Ethnology Museum in Ha Noi provides a collection of built examples from villages around the country. Archeological museums here take the history further back. Ho Chi Minh's house in Ha Noi is an exquisitely refined version of one indigenous type.Looking for the roots of Native American architecture can be more of an archeological exercise, since relatively little remains of the indigenous ways of living. Overlaid on Native American roots are the indigenous architectures of the generations of immigrants that people America.Overlaid on native Vietnamese roots are the cultures

of China, the more South Asian Cham people, the French, via the colonial period and then the cultures of the Soviet nations. Clearly the architectural cultures, from a historical perspective, are quite distinct, yet they speak to one another through the confluence of Vietnam's historical periods, as well as through contemporary, internationally modern, ways of working.

19th through 21st century modern technologies and cultural currents havecertainly flowed internationally around the world. Wrestling with reconciling these situated and international complexities of local rootedness and international modernity may be aided through Kenneth Frampton's well-published notions concerning critical regionalism – notions equally appropriate to the struggles of students (and practitioners) in Viet Nam and the USA.[5]

Interestingly, France casts a long pedagogical shadow in the USA as well as in Ha Noi. Students in the USA learn about researching precedents, developing a parti and charetting when they work all night to meet a deadline. In these respects, and others, they often learn in an atelier mode that has some of its roots in the Ecole de Beaux Arts' norms and expectations. In Ha Noi students still make watercolor renderings of classical Western architectural elements. They make drawings of historical examples just as students in the Ecole did. The curriculum of Hanoi Architectural University has beenstrongly influenced by Soviet models, along with contemporary international currents.

Architectural culture in a place is formed in significant part by the environment of the place. Students in each city and region learn from living in and on the streets and spaces around them. Boston's Commonwealth Avenue or Bulfinch Triangle become sites where students design their projects. Traces of Dutch, British, French and International Style architectures are found in Boston's historic fabric. Ha Noi has its Old Quarter, as well as many other traces of architectural, civic and planning forms which have become part of itsmix of legacies. In each school's landscape, urban or rural, these legacies and traces teach subsequent generations by experiential example. Globally, climatically and regionally, distinct local architectural histories help differentiate learning at one school from another, and one region from another.

3. Socially familial life

There is a socially familial quality to life in design studios that stands out as quite unusual in the US. While generations of students (like generations of, for example, medical students) have comparedthe rigors of their education to a military'boot camp' (since the physical and emotional demands can be extreme), at the same time the social support system among architectural students is extremely strong. Many students in the US end up 'living in studio' for long periods of time, only going home to 'crash' – to catch up on their sleep. Students who work side-by-side all night to complete their work form strong bonds that can last a lifetime.Students alsodigest theirlessons and struggles collaboratively, helping each other process and progress, giving advice to one another, while observing one another's ways of thinking and working – it is common for graduates in the US to say that they learned more from their fellow students than they did from their teachers.

Viet Nam enjoys a socially familial quality of life as a norm - this stands out for mevery strongly as quite extraordinary, especially when I compare it with life in the USA.Some anthropologists tie this East Asian characteristicof communality to traditional life in rice-farming villages. Viet Nam also has a relatively homogeneous population when compared to the cultural diversity of the population of the USA. As a result, more can be inferred when conversations and exchanges take place among Vietnamese students and teachers; less may need to be said explicitly. In contrast, the well-known reputation for 'frankness' in the USA – of people saying what they mean in more explicit terms – is perhaps, in part, a cultural response to the diversity of norms within the population and the resultant impracticality of leaving things unsaid.

Teachers and students trying to cross the cultural boundary between Viet Nam and the USA need to be aware of these 'cultures of communication' and try to be mindful of them, as best they can, in all of their complexity.

4. The developmental psychologist's sympathetic accompaniment

a) Self-theories

Carol Dweck, in her book Self-Theories, explains her research findings regarding students' self-theories about their own intelligence. I believe her findings can be extended and applied to students' theories about their own 'design intelligence' - what is often termed 'talent,'(however I know of no specific study of self-theories related to 'talent'). Dweck's studies showed that most students fall into one of two categories in terms of how they view their own intelligence. They either believe intelligence is something fixed – a quality you are born with - or they believe that intelligence is malleable and can be improved every time you learn something new. [6]

Her findings indicate as well that those with a malleable self-theory of their intelligence are more resilient in the face of difficulty (more willing to try again after mistakes or perceived failures). For those with a fixed theory, failures can be emotionally crushing;failure becomes like an indictment of lack of intelligence. Dweck explored trying to change people's self-theories from fixed to malleable by explaining the research to them. She discovered that many can be swayed to change their self-theory when they understand the research-based evidence. For me, these findings are as profoundly relevant in the Vietnamese studio as they are in the USA, and relevant to majors in any subject, for that matter.

Design studio culture in the USA and in Ha Noi often includes public reviews of student work. These critiques can be delivered with empathic care but they can also be delivered harshly, even cruelly. Over the years I have seen a number of students publicly break down in tears during such situations, and my experience is not unusual. Some students become cynical about design education as a defense against the feared or actual public humiliation. Others who keep their stress hidden may still feel like they are being crushed orfeel that they are losing face. Some of these student responses may have an East / West cultural component. On the other hand, the position of the teacher in East Asian cultural hierarchy is very high, compared to the west. That can strongly influence the dynamics of teacher and student interactions too.

In architecture school the value of Dweck's research might even be magnified: until more architecture faculty exercise empathetic care in their remarks, the ability to be resilient in the face of what may feel like public failure and humiliation is crucial for students of architecture. Students

who learn about Dweck's work may be better prepared for this. Faculty who know about Dweck's work may think twice before subjecting their students to potentially devastating criticism (or, in some cases, high praise).Dweck also indicts blanket positive feedback (like, "you are a very smart person") because, similar to blanket negative criticism, it reinforces a fixed view of intelligence. She advises being as specific as possible about evaluation of work; identifying the strengths and the weaknesses, not characterizing the person. To me, these are principles that can help teachers achieve more positive, sympathetic accompaniment of their students.[6]

b) College student development and adult development

William Perry studied the development of college students' ways thinking about knowing. Through longitudinal interview-based research with hundreds of college students, Perry developed his 'scheme' of stages of development. In Robert Kloss's review of Perry's scheme, he outlines 4 major steps along Perry's way: "dualism, multiplicity, relativism, and commitment in relativism." [Kloss, Robert J. (1994). "A Nudge is Best: Helping Students Through the Perry Scheme of Intellectual Development." in College Teaching. Volume: 42. Issue: 4]. According to this framework a 1st year college student, at the dualism stage, might be expected to think of learning as "received truth." Many first-year architecture students wish that their instructors would simply tell them 'the right way' to proceed – they want the received truth. It takes many of them a good bit of time to come to understand that they are learning a process (the design process) for finding their own valid ways to proceed.[7], [8]

Robert Kegan's work on adult development looks beyond the framework provided by Perry and, more fundamentally, by Piaget's pioneering work on childhood stages of development. Kegan's stage theory moves from birth through advanced stages of adulthood that can occur in old age. As such it is relevant to thinking about both students' and teachers' development. In Jennifer Garvey Berger's "Key Concepts for Understanding the Work of Robert Kegan," she notes that "older adolescents and the majority of adults" are at what Kegan calls the "Third Order." She goes on to explain, [9], [10]

"Those at the Third Order don't have an independently-constructed self to feel good about; their esteem is entirely reliant on others because they are, in many ways, made up of those around them. A villager at this Order is a model citizen and follows the laws out of loyalty to the others in the village (or his religion or his place of business or his family). He tries hard not to break the rules because he wouldn't want to feel he had let others down."

Many college professors, in Vietnamese and American architecture school, wring their hands over students who want others to tell them what to do. If they are familiar with Perry's scheme and Kegan's work,they can look at this as a common developmental phenomenon; an expected stage in students' development. This research is as relevant in Boston as it is in Ha Noi.

c) Cognition, multiple intelligences, critical exploration and expertise

Howard Gardner's multiple intelligence theory has been very influential in the K-12 educational community in the USA, perhaps because it conforms well to the world as educators' experience it in the classroom. Gardner's theory, and the researchit is based upon, indicates that intelligence is not singular but rather composed of multiple capacities: " 'I feel that what we call 'intelligence' is almost always 'scholastic skill' -- what it takes to do well on a certain kind of short-answer instrument in a certain kind of Western school,' he writes in an e-mail (to Joel Garreau, Washington Post Staff Writer, Washington Post, Sunday, June 11, 2006; Page D01). 'Other uses of intellect -- musical competence, facility in the use of one's hands, understanding of other people, sensitivity to distinctions in the natural world, alertness to one's own and others' emotional states etc. -- are not included in our definitions of intelligence, though I think that they should be.' " Gardner's research indicates a spatial intelligence which, for me as an architect and architectural educator, conforms well to the world of students in design school, where developing the ability to pre-visualize, 'solve' and manipulate spatial conditions is crucial. Gardner counsels for providing many ways in to subjects of study, so that the student favoring spatial intelligence can approach the problem that way, while the student who manifests musical intelligence, for example, is equally able to apply that perspective. This research is of value to any school of architecture in any locale or cultural context. Gardner's many invited lectures in China on this subject indicates the ideas can travel well to this side of the planet… [11]

The work of the Soviet psychologist Lev Vygotsky was 'discovered' in the West many years after Vygotsky's early death in 1934, when English translations of his writings became available. His notion of a "zone of proximal development"for learning has been quite influential and is very relevant to design pedagogy. When a student can solve a problem with some assistance from another person (let us say help from a teacher) there is a particular profile to the boundary between the student's knowing and unknowing that forms one edge, we might say, of the region of proximal development. By attempting to tailor assistance to the particularity of each individual studio student's profile – sometimes called "scaffolding in the zone of proximal development" – the student can be helped to move from being partially knowing to more fully knowing. This principle can, like Gardner's research, be applied in Ha Noi as readily as in Boston.[12]

In approaching this boundary and in considering the student / teacher relationship in scaffolding, the teacher must choose how much scaffolding to provide. One of my professors at Harvard's Graduate School of Education, Eleanor Duckworth, chose to minimize the amount of scaffolding and strived to eliminatethetelling ofanswers to students. Her work, which she calls critical exploration, relies on the student to do much more and the teacher to do less. The teacher is recast more in the role of the inventor's assistant, in some respects, providing some tools that might be useful to the principal inventor / studentto solve what might not otherwise be understood. The less telling the teacher did, the more discovering the student did. Professor Duckworth made the case that we deeply underestimate the capacity of students to discover. Her endless refrain, in modeling her teaching method, was, "tell me more." The spotlight of her attention was clearly a part of the power of the method. [13]

The aim of the preparation of an architect is to help the student towardssomeday becoming expert in the field – to wield the medium fully and fluently at a high level of facility and quality. Expertise has become its own field of study, with its own literature, and one renowned leader of research on expertise is K. Anders Ericsson. His 2007 publication in

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the Harvard Business Review on The Making of an Expert states "that outstanding performance is the product of years of deliberate practice and coaching, not of any innate talent or skill." He has also written about research that supports the notion of a '10-year rule' for the acquisition of sufficient experience (assuming the years of experience are truly challenging the person to grow, continually) for a person in any field to reach the international level of notable expertise [see his chapter on "Enhancing the Development of Professional Performance" in Development of Professional Expertise,edited by K. Anders Ericsson]. [14]

Again, this is helpful information for any student (or teacher) in the field, especially as they enter the workforce and consider at what point they may begin to reach the threshold when they might move out on their own.

5. Conclusion

Exposure to perspectives from the social sciences, trained on the activities of learning and teaching, furthers a deeper engagement in the work of fostering new knowledge for students. For me (and, I hope, for my students) these perspectives have framed and reframed the situations of learning and teaching in very productive ways.

I hope these observations aboutperspectives on learning and teaching can contribute to conversations about the relationship between educational practices in schools of architecture in Viet Nam and the USA. In my own work with students, these theories and others interweave in the continual, exciting dynamic of learning and teaching./.

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