

Introduction

My talk today will be about my own thoughts regarding architecture education. My intention is not dictate a method for others to follow, but rather to open up a discussion of a topic that is central to many of us. I will begin with the findings of a study made by the Carnegie Foundation for the Advancement of Teaching on architecture education known as the Boyer Report. I will then discuss the work of Donald Schön as it supports the report’s general conclusions. Though I see much merit in Schön’s proposals as well as the assessment made by the Boyer Report, I would argue that a more nuanced approach is required. I will propose, therefore, that a means of architectural education as based on the Socratic method is a more constructive way of architecture education. The discussion that follows is based primarily on early Socratic dialogues and I will specifically use the *Charmides* to discuss the issues that I believe are relevant to studio pedagogy.

Boyer Report

Published over ten years ago, the Boyer Report had two intentions. The first was to examine the problems and possibilities of architecture education as it has evolved through the 20th c. The second was to study the disconnect between education and practice as well as between architecture and other disciplines. It is clear from both recent reports and anecdotal evidence that this latter point has not been resolved. Various states have reported low numbers of architecture interns enrolling in the IDP (Intern Development Program) and eventually sitting for exams. Architecture students have been increasingly entering into more diverse fields due to opportunities that did not exist twenty, ten, or even a few years ago. Disenchantment with the relatively low salary compared against the time commitment required, the minor role that architects play in the development and construction industries, and the financial risks involved in opening an office surely contribute to this. Academia’s response has been slow if not misguided. The most notable change has been the ratcheting up of degrees. Presently, in the majority of architecture schools the first professional degree is an M.Arch and is earned only after at least six years of study. The professional B.Arch is being

outsourced and stripped of its “professional” status. The bigger question that remains is the definition of what it might mean to educate a professional architect, specifically in the context of a construction industry that views the architect as a bother, if even at all. Though it is not possible in a paper of this scope to address each of these issues, I do believe it valuable, at least, to rethink our educational approach.

Ten years ago, the Boyer Report suggested the following. I quote.

“The education of students about the scientific, social, aesthetic, political, and environmental foundations of architecture, should not be about ‘teaching’ disembodied skills and facts. The standards should stress active inquiry and *learning by doing*, rather than the accumulation of facts from texts, required lectures, or design problems handed ready-made to students. Further, students should be partners in extending the knowledge base of the profession through *reflective practice*. Learning to define problems, asking the right questions, and weighing alternative approaches must be at the heart of architecture study.” (p. 72)

The Boyer Report makes a diagnosis but does not offer a cure. It offers “the what,” but not “the how.” (Gilbert Ryle: “knowledge-how” or “knowledge-that”) To find the “how” not mentioned in the Report, one needs to look to Donald Schön’s writings from the 1980’s. The allusions to “learning by doing” and “reflective practice” in the Boyer Report quote were surely provided by Schön, the Ford Professor of Urban Studies and Education at MIT and later chair of that university’s Department of Urban Studies and Planning. Schön’s major study was presented in two works. The first part, *The Reflective Practitioner* (1983), questions the epistemological foundations of “practice.” It is a critique of the prevailing epistemology of practice that recognizes professional competence as the “application of privileged knowledge to instrumental problems of practice.”

Schön’s critique of professional knowledge addresses two concerns: technical rationality and specificity. “Technical rationality,” he explains, “holds that practitioners are instrumental problem solvers who select technical means best suited to particular purposes. Rigorous professional practitioners solve well-formed instrumental problems by applying theory and technique derived from systematic, preferably scientific knowledge.” In this way—Medicine, Law, Business, and Engineering—are exemplars of professional practice. It also follows that successful professionals construct their own problems to be solved.

Homelessness, for example, may be seen by many different professions to be a problem, as Schön defines it, of different domains: economic, social, educational, architectural, political, etc. Each profession may support their domain with data (facts and figures) appropriate to their argument. A problematic situation is named, framed and therefore becomes solvable according to the domain appropriate to the particular profession. Schön is critical of this type of professional specificity as he understands the issues that these fields purport to solve are never so simple as to be reduced to instrumental problems. Homelessness is an issue that relates equally to education, economics, and architecture, for example. Regardless, professional specificity is given precedence and authority to act. Ironically, this specificity often reduces the role of the architect to a conductor of building trades and consultants.

In the second part of his study, *Educating the Reflective Practitioner* (1987), Schön suggests that the architecture studio is an ideal model of education for professional “reflective practices” in which students, in partnership with their coach/professor, learn-by-doing. Schön describes what he perceives as a typical studio desk crit and then analyzes the interaction between student and professor. He believed that the interaction demonstrated in a desk review develops a tacit knowledge that he refers to as “professional artistry.” It is a type of knowledge that is similar perhaps to musical improvisation or cooking in that one is able to continually re-frame the issue at hand and to imaginatively respond to changing conditions. The knowledge gained is not deductive or analytic, but rather demonstrative. This is accomplished through tactics similar to coaching in which the professor/coach demonstrates, through drawing and dialogue, how he (the professor is always “he,” the student, “she”) would approach problems relating to site, program, form, scale, etc.

Schön’s version of studio, however, is problematic in that he sees it only as a mirror of practice in which the professor is the more experienced and advanced designer who acts also as client by setting the criteria by which the project shall be judged. There is the illusion of a “real” project, though the reality could not be further from the truth. A studio project rarely, if ever, goes beyond very initial planning phases and almost never is a project able to be built from final drawings. Indeed, there are many differences between the studio and an office environment to include: lack of client negotiations, funding issues, consultant

relationships, time constraints, as well as the economic reality of running an office. To assume then that the same parameters exist and that the professor is able to act as both client and lead designer is dubious at best. Further, Schön's description of the relationship between the docile student and all-knowing professor is fraught with old-fashioned, if not at least politically incorrect, power and gender biases. It is easy to imagine the studio described by Schön as producing disciples who do and say as the professor did. Notwithstanding these issues, I would like to build upon Schön's work and propose a more nuanced approach to dialogue between the student and the professor. To do so, I will describe the Socratic Method.

Socratic Method

The "Socratic Method" is characterised as a way of pedagogy by means of question and answer, distinguished from lecture-based instruction. Plato referred to Socrates dialectic as *elenchus*, from the cognate *elenchein*: to refute, to examine critically, to censure. Socrates never described his "method," so to speak, (Plato only names it as such in the middle dialogues, specifically the *Republic*) nor did he make an elenctic inquiry into its nature. If one looks back to the earlier dialogues one finds a common manner to Socrates' inquiry. In each of the dialogues, Socrates and an interlocutor search, though never find, an answer to "What is x?" (temperance, nobility, etc) These "aporetic dialogues" follow a standard pattern: an interlocutor claims knowledge of something, which is then refuted by Socrates.

Gregory Vlastos has outlined a typical interaction:

1. The interlocutor, "saying what he believes," asserts p, which Socrates considers false and targets for refutation.
2. Socrates obtains agreement to further premises, say 'q' and 'r' which are logically independent of p. The agreement is ad hoc: Socrates does not argue for either q or r.
3. Socrates argues, and the interlocutor agrees, that q and r entail not-p
4. Thereupon Socrates claims that p has been proved false, or at least not true.

In the case of *Charmides*, the discussion revolves around the meaning of temperance (*sōphrosunē*). The discussion begins with Socrates returning to Athens after years of service in the army. Upon his arrival, he

asks about the state of Athens and if there are any youths particularly wise or beautiful. Charmides, one such beautiful and wise youth, arrives just as Socrates is asking his questions. Socrates is overwhelmed by Charmides's presence and begins to fawn over the boy. As Charmides is described as being temperate, Socrates presses him to define the term. Socrates compliments Charmides' ancestry in an attempt to indulge his ego. Charmides cannot agree, however, as it would reveal pride – the opposite of temperance – nor could he lie and be untrue to himself. Therefore he does the only thing he can do, he blushes. Charmides then attempts a definition. He says temperance is “good” and that it has qualities similar to “quietness” and “modesty.” Socrates quickly shows both definitions to be fallacious: quietness is not good in wrestling after all; modesty is not good when one is needy. Charmides then attempts to define temperance with a borrowed definition: “doing one's own business.” Socrates refutes this as well, giving the example of a craftsman who may be temperate though he often makes things for others.

It is revealed that this second definition belongs to Critias, the future tyrant and uncle to Charmides. Critias proposes and then defends his definition by making a distinction between the doing, making, and working of one's own craft. Socrates refers back to the agreed upon first part of the definition—that temperance is a “good” quality—and then expands this proposition to involve doing good both for others and for oneself, but quickly shows that people often do not know which of their actions will be beneficial in the way that they intended. Thus, it seems possible to be temperate without knowledge of the result of one's temperance. Critias objects to the suggestion that one may be temperate without knowing temperance. He then quotes the Oracle at Delphi and claims “self-knowledge” to be the definition of temperance. Socrates and Critias then decide that if temperance is a type of knowledge, then it must be a type of science. Critias suggests that temperance is a “science of a man's self.” Socrates questions the effect such a science may have. Critias then accuses Socrates of simply refuting everything that is said. Socrates claims that this is the way of discussion and has nothing to do with Critias in particular. It isn't personal; rather, it is precisely how the argument should proceed. The two argue a bit more and then consider the conversation dead. Neither, it seems, has been able to arrive at a suitable definition or use-value for temperance. Charmides, however, has not been dissuaded by the argument and has decided that he will continue to see Socrates and pursue the true meaning of temperance.

Though no suitable definition has been reached, there is much to take from the dialogue. There are three characteristics that I will now elaborate upon. First, Socrates' elenctic approach is *reflexive* (in that the content is not objectifiable as a result or separable from its method); second, the basis of the discussion is *non-propositional* (in that the refutation is based in what is stated by the interlocutor and not on preconceived definitions), and; third, the knowledge gained is indeed *practical*. The second two rely upon the first and each of these characteristics is interconnected with the others. Most importantly, I believe that each has interesting implications for studio education.

Reflexive

At the end of the *Charmides*, no definition for temperance has been given. As nothing is determined with any certainty, one must ask, what is the point of the *elenchus*? The answer—for me and for many others—is that meaning is present, but not in a deductive proof for the definition of “x.” Rather, the meaning is found within the process of the dialogue process, within the search. Socrates' “knowledge of temperance” has content, but not as an answer or definition; the content, rather, is in the reflexivity of the dialogue. Temperance is not literally *defined*, but is actually *exhibited* in the dialogue. This knowledge is neither wholly subjective nor objective: true knowledge is not to be revealed solely in personal introspection (represented by Charmides' blush), or as an objectified result to be reported (Critias' sophistic definition); rather it is given in the character of the inquiry carried out.

The essential nature of Socrates' dialectic is that it is refutive. He does not assert a preconceived premise and argue it to a conclusion; rather it is through refutation that the initial assertion by the interlocutor is put into question. Socrates' elenctic method does not prove, however, that the statement by the interlocutor is false, only that it is not true under the given premises. Further, the interlocutor never offers (or more likely, is not able to offer) a counterargument to Socrates' statement. As I mentioned, the elenctic method is understood to be the opposite of a lecture. In this way, the flow of information does not come top down from the professor to the student, but rather it is given in the conversation. This dialogue is bounded by orality; by the rules, though often unnamed, set out within the conversation. The shape of a conversation is

constantly in flux, though it is always defined by a particular temporality. Neither previous arguments nor history affect Socrates' questioning; there is no court of higher opinion to fall back upon. For Socrates, historical precedent is simply not discussed.

Architecture, of course, is a craft; it is not simply dialogue. In the way that Socrates can display temperance, one cannot exhibit "museum," for example. I would not try to argue that. That distinction, notwithstanding, one may exhibit a way of questioning that does aim towards a specificity of intention in an architecture project. One may ask, for example, what is the nature of a museum? What are the qualities of light appropriate to the museum? If calm but present, is it like the Kimbell? Or the Menil Collection in Houston? Further, how might a visitor interact with the work of Rothko, or of Stella? Each of the responses has structural, material, formal, historical, situational, financial, temporal, and other implications. What is important to recognise is that there is never one answer that is unanimously "good" or considered to be a universal truth. There is not one universal nature of a concrete wall, for example. What is important is that the students' questions and responses develop in an engaged way so as to achieve a certain level of specificity in intention. This can be understood through drawing, modelmaking, as well as speaking. In this way, the student may develop a similar, and hopefully rigorous and iterative, way of questioning his or her own work that is grounded in an open dialogue with historical precedent and technical performance.

Non-propositional

Essential to the inquiry is that Socrates privileges the *topic* of discussion raised by someone other than himself. He was clearly not lecturing to the youth of Athens, but rather, the conversation begins only when the interlocutor has stated a personal belief. Socrates can then ask, what is "x"? And, how then is that personal belief defined? This is important for two reasons. The first is that Socrates does not name the topic. In the *Charmides*, it is the description of the young Charmides as temperate that begins the conversation. And secondly, this establishes a personal stake for the interlocutor who must take responsibility for their nature, actions and beliefs. Later in the dialogue, Socrates refers to Charmides as "a wretch" for proposing Critias' definition over the potentially more difficult but rewarding possibility of

thinking on his own. Even as Charmides takes on the view of another, he is expected to defend it as his own.

The lesson of the *Charmides* can be carried over into architecture education. Architecture students enter into school with a very real knowledge of making, of building, and of experiencing architecture. We all live, work, and play within and around buildings. Rather than considering students as blank slates, it is important to build upon their knowledge from an early start. Socrates, however, does not allow Charmides to be content with his unreflective blush. It is essential to delve into and make specific, the intuitive understanding that students possess. In the same way that Socrates critiques Critias' propositional knowledge, the Socratic Method is also appropriate for the more advanced students. Regardless of how the studio is organised, whether a programmatic approach or a more thematic inquiry, it is the responsibility of the student to develop his or her own way of working. It is their task to develop and name their own questions. Once the student has stated something in which he or she believes, it is possible to question and develop what that might mean. The relationship between student and professor can then be called *mautic*, in that it implies a way of teaching that urges a student to become aware of ideas latent in their own experience.

***Practical* (“knowledge-how” rather than theoretical “knowledge-that”)**

Socrates' elenctic search for quiddity—the thing-ness of things—was essentially focused on self-understanding. I contend that self-knowledge is understood in the way one inquires. As Schmid has pointed out, “The Socratic dialect challenges him (the interlocutor) not only to acquire the correct moral opinions but to *question himself* and *think for himself* and develop his own moral rationality.” In this way, the discussion was not simply for instruction or content, but to instill a way of investigation. It is this type of knowledge that I would call “practical.” It is a knowledge that cannot be passed on like facts and figures, similar to water in a vessel. It is practical in that it can be shown or performed and not expressed as a result separate from the student. It is exhibited in practice.

An analogic example may be the knowledge of swimming. It is very difficult to describe to someone outside of the water, how to swim. To teach a baby to swim, they are thrown in the water. Their first instinct is to begin moving and get their heads above water to breathe. After that, the instructor shows that by moving their arms and legs in certain ways, they are able to move more efficiently in a direction. Once someone becomes a proficient swimmer, their bodies are able to make tacit adjustments to new conditions. This can be taught, but the knowledge cannot be communicated verbally, only. It is knowledge, similar to Socrates' *elenchic* that is found in action; knowledge gained by making, and to put the discussion back into the studio, it is a knowledge gained through *architecture-ing*.

Conclusion

I have described the Socratic Method as a model for the dialogue on which a studio may be based. This approach supports Schön's understanding of the professional as one who is able to solve well-formed problems. In this way, architecture is certainly a "reflective practice," but I would argue that the knowledge gained from the Socratic method leads to a *reflexive* practice in that it reveals a world rather than proves a solution. There is an exhibited specificity in such inquiry but not a specificity that relates to established domains or technical expertise. Rather, professional precedence and authority to act are given by the opening up to the complexity of our lived experience. In this way, the value of the work is not in a definitive answer or final project, but rather it is in the non-propositional knowledge acquired through open inquiry with the world. In this way, an architecture education may prepare a student for many paths; as a developer, as a contractor, as a sculptor, and even for work in an office. Finally, I would propose that the value of an architecture education lies in the ability of the student to become professional in that they are enabled to take responsibility for their own education and begin a career of life-long learning. The task of the professor, then, is to develop a way of questioning within the student, which is analogous to the examined life: the only life, according to Socrates, worth living.