

Architecture Licensure Path: Structural Analysis

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Abstract

Through a inductive analysis, this study reveals the structural problems in the architecture licensure path in the US. Since its inception, architecture licensing process has been lead by state appointed board of architectural examiners. The licensing exam and degree accreditation is written by a closely affiliated group of private corporations. Together these corporations serve as sole contractors recognized by the state boards. Board members are both public and professional individuals charged with health and safety of the pubic. Majority of the board members in all fifty state boards actively served as agents of the licensing exam vendor and accreditation body. Collectively the licensing process can be deduced to a state sponsored monopoly on the profession compromising public safety and the interest of the candidates.

Keywords: licensing, accreditation, architecture education, state board of examiners, government monopoly, anti-trust, architecture schools, NCARB, NAAB, AIA, ACSA, ABA.

Part I: Organizational Problem

This part of the study examines the structure of the architecture licensure process and the key players in four US states as of 2018. This multi-site study uses both official public and private entity records for purposeful sampling; thus the selected states contain largest population of licensure candidates or applicants. A descriptive case-study method is used to compile data on the qualifications and affiliations of each board member in all fifty state board of architectural examiners to support the hypothesis posed in the introduction. For reliability, the following internet search were performed: (a) state board websites; (b) state board of examiners' business or personal websites; (c) Social media accounts, such as LinkedIn or Facebook, created by the board members; (d) Letters, memos, or meeting minutes issued by the state board, exam vendor, and accreditor indicating a potential bias or collusion to hinder competition; and (e) government documents available for public scrutiny.

The themes identified support the following the case study: **Architecture licensure process is a state sponsored monopoly (cause) compromising public safety and candidate interest (effect).**

In order to frame the current structure of architecture licensure process, the next will introduce the history in the development of the profession.

Part II Literature Review

Vitruvius is the first known educational theorist to propose an educational epistemology for architects in the first century B.C. (Vitruvius, 1486/1960). In his Ten Books of Architecture, Vitruvius proposes the need for a skillful and knowledgeable architect. He states that an architect must be familiar with an array of knowledge areas: (a) two dimensional representation of

buildings; (b) geometry; (c) history; (d) philosophy; (e) music; (f) medicine; (g) astronomy; (h) law. Vitruvius' writings now serve as the first quasi-accreditation standard for architecture schools. In 1485, Alberti became the first to establish the need for oversight over the practice of architecture. He also introduces the concept of ethics which is translated into a code of conduct adopted by most board of examiners today (Wasserman, Sullivan, & Palermo, 2000). Albterti's states that an ethical architect must possess professional experience. Today the state board of examiners require mandatory completion of experience hours to qualify for licensure (CAB, 2017). Alberti further added to the precedent set by Vitruvius by stressing that an architect must: (a) perform structural stability testing through three dimensional model; (b) receive advise through critique from other architects. Both of these principles are mandatory components of architecture curricula today (Alberti, 1755/1987). While Vitruvius and Alberti further focused on materials and methods of construction in their respective books, Palladio became the first to author to publish standards for building construction with strict set of rules for scale and dimensions. These rules serve as a model for the modern day building codes which govern the architecture profession (Palladio, 1570/2002). Table 1 below summarizes the development of the architecture profession.

Table 1

Development of Architecture Profession

Theorist	Year ^a	Theory
Vitruvius	80-15 B.C.	Accreditation Material Standards Occupancy Category
Alberti	1485	Code of Ethics
Palladio	1570	Building Codes

^a Date noted for authoring by original author. Translation year is noted in the reference section.

In 1857, following the industrial revolution, the American Institute of Architects (AIA) was formed in Illinois by a group of practicing architects seeking to standardize the profession. According to American Collegiate Schools of Architecture (ACSA, 2012), Massachusetts Institute of Technology (MIT) became the first university to establish a formal architecture degree program in the US soon thereafter in 1865. Instead of gaining inspiration from the industrial revolution, the first three American school models were based the Ecole des Beaux Arts of 1648, a French movement that valued arts and crafts above engineering and mathematics thus the later was never incorporated in the US curricula (Draper, 1977). Subsequently, the most influential architects of the time were running an apprentice based training of architects in their office. Such was the training of Frank Lloyd Wright who trained under Louis Sullivan (Wright & Walker, 1963). The apprenticeship concept was embraced by architecture schools and became the core component of school curricula (ACSA, 2012). A summary of the first schools of architecture in the US is provided in Table 2.

Table 2

First Schools of Architecture in the US

School	Year	Epistemology
Académie des Beaux-Arts	1648	Classical Architecture & Arts
Technical University of Munich	1833	Engineering-based
Massachusetts Institute of Technology	1865	Arts & Crafts
Cornell	1871	Arts & Planning
University of Illinois at Champaign	1873	Vocational Crafts
Harvard School of Design	1874	Theoretical Research Labs

Part III Organizational Theory

Soon after formation of architecture degree programs, licensure process was established. Illinois Architecture Licensing Board became the first board of examiners to grant credential based architect license in 1897. Enumeration of the first three architecture boards is provided in Table 3 below.

Table 3

First State Boards of Architecture Examiners in the US

Board of Examiners	Year
Illinois Architecture Licensing Board	1897
California Architect's Board	1901
Texas Board of Architectural Examiners	1937

The AIA led the path to licensing and accreditation with the forming of the National Council of Architecture Registration Boards (NCARB) and National Architecture Accreditation Board (NAAB) as affiliate organizations. Table 4 breaks down this organizational structure.

Table 4

Architecture Affiliate Professional Organizations^a

Organization	Year ^b	Purpose
AIA ^b	1857	Professional Membership
ACSA ^b	1912	Educator Membership
NCARB ^b	1919	Licensure Examination Vendor
NAAB ^{b, c}	1940	Accreditation Body

^aWasserman, Sullivan, & Palermo, 2000.

^bAIA = American Institute of Architects, ACSA - American Collegiate Schools of Architecture, NCARB = National Council of Architecture Registration Boards, NAAB = National Architecture Accrediting Board.

^cThis table does not include independent non-affiliated organizations such as the American Board of Architecture formed in 2014 as the second accreditor of architecture schools in the US.

At the time of this study NCARB serves as the sole exam vendor and NAAB as the sole accrediting body of architecture schools as part of this affiliate relationship (Wasserman, Sullivan, & Palermo, 2000). State board of examiner seats were strategically nabbed by the affiliate organizations creating the leading monopoly on the profession. An analysis of member qualifications and affiliation for the three state boards with the largest population of licensed architects is presented in Table 5.

Table 5

2018 Board of Architectural Examiners for Three Largest Practice States

Title	California	New York	Texas
Board President	Sylvia Kwan ▲ ○ ■	Nicole Dosso ▲ ○ ■	Debra Dockery ▲ ○ ■
Vice President	Tian Feng ▲ ○ ■	George H. Miller ▲ ○ ■	Chad Davis ▲ ○ ■
Architect	Barry Williams ▲ ○ ■	Michael Samuelian ▲ ○ ■	Jennifer Nicole Walker
Architect	Jon Baker (past president) ○ ■	Jitendra Vaidya ▲ ○ ■	Charles H. Anastos
Architect	Pasqual V. Gutierre (past vp) ○ ■	Anik Pearson ▲ ○ ■	Robert S. Wetmore
Public Member	Matthew McGuinness (past president) ■	John P. Sullivan ▲ ○ ■	Chase Bearden
Public Member	Ebony Lewis ■	John Tobin ▲ ○ ■	Sonya B. Odell
Public Member	Robert C. Pearman	Marcella C. Stanley ■	Paula Ann Miller
Public Member	Nilza Serrano ■		
Public Member	Denise Campos		

▲ Architecture Degree

○ Architecture License

■ Agent of Vendor

According to Wasserman (2000), all fifty US state board of examiners are now members of NCARB supporting licensing exams solely offered by this vendor. Furthermore, all fifty states have recognized NAAB as the only accreditor of architecture programs (Wasserman, Sullivan, & Palermo, 2000). Due to accreditation's interstate nature, the US Department of Education serves as oversight over accreditation bodies. Accreditors recognized by Secretary of Education have met compliance with the Higher Education Act through a rigorous multi-step review process conducted by the USDOE. NAAB is not listed on the USDOE website database as a recognized accreditor. As the state board members are agents of NAAB, a state sponsored monopoly exists in accordance with anti-trust laws enforced by the Federal Trade Commission (Weber, 2012).

Without state or federal oversight, anti-trust violation are inherent in this type of organizational structure (Weber, 2012). NCARB's tax documents with the US Department of Treasury Internal Revenue Service indicates licensing exams are their primary source of revenue (IRS, 2012). According to NCARB (2016), architecture license is taking an average of twelve years to obtain from start of professional education.

Licensing candidates surveyed as part of this study express frustration over stringent exam grading practices, low pass rates, and lack of transparency. The results of the survey are divided by NCARB practice areas and presented in Table 6. These practice areas will be discussed in another study. According to this survey, NAAB accredited school graduates lack of knowledge on topics posed on the licensing exams.

Table 6

Quantitative Data for NCARB Practice Areas: Survey of NAAB graduates conducted from 2015-2018

A.R.E. Divisions & NCARB Practice Areas	Responder Percentage Totals	Number of Responders	Content Taught in NAAB Schools	A.R.E. 2017 Passrates
Construction Documents	1420	56	25%	52%
Programming, Planning & Practice	880	35	25%	52%
Site Planning & Design	540	21	26%	64%
Building Design & Construction Systems	540	16	34%	62%
Schematic Design	30	1	30%	81%
Structural Systems	40	1	40%	59%
Building Systems	410	13	32%	59%
Construction & Evaluation	645	16	40%	61%
Practice Management	90	16	6%	50%
Project Management	235	18	13%	59%
Programming & Analysis	40	13	3%	53%
Project Planning & Design	300	5	60%	50%
Project Development & Documentation	240	4	60%	56%
Cumulative Numbers	5410	215	25%	58%

Although AIA and its affiliate organizations publish annual reports, the only independent study on the state of architecture schools as they relate to the profession was conducted by the Carnegie Foundation in 1994. This report is informally referred to as the Boyer Report. The report indicated a lack of alignment between practice and NAAB accredited degree programs (Boyer & Mitgang, 1996). Meunier echoes this sentiment by calling for a drastic shift in school paradigm to align with the evolving practice of architecture. He believes stagnancy in architecture schools are a direct result of faculty focus on theoretical constructs rather than reality (Meunier, 1987). This study's initial hypothesis is that architecture schools suffer from minimally qualified instructors holding at most a graduate level terminal degree. The study's further hypothesizes that a lack of doctorate level educators in architecture schools has resulted in scarce academic research as a means to advance curricula through innovation over time.

The next section includes recommendations for prospective policy and research as the next logical step to correct the deficiencies in the architecture profession.

Part IV Recommendation

Policy. Here is my recommendation for systematic policy changes: (a) a competitive accreditation process with federal oversight must be introduced in to architecture schools. Only through competition; hence innovation, can destratification of curricula occur; (b) ethics must be placed at the forefront of all public policy decisions. For this, removal of the exam vendor, accreditation body, and their affiliate organization from public office is essential (NCARB, 2009). Furthermore, policy revisions must outlaw state sponsored monopolization of architecture by any private groups. Licensure must become a state affair for the professionals by the professionals of each state; (c) federal funding must be allocated to encourage doctorate level

research in architecture schools. Architecture must be listed as a Science, Technology, Engineering, and Math (STEM) degree on the federal roster; and (d) focus must be given to reprofessionalization of the architecture industry. Policy must be put into place at a state level to hold architecture schools accountable for graduating reasonably qualified and skilled architects, not artists or interns. Architecture graduate must be accepted into the profession with open arms upon acceptance in to a degree program. Internship titles must be only be used concurrently with a collegiate setting. Institution must revise their curriculum in consultation with educators trained specifically in the licensure process of the decade to ensure all facets of the profession are addressed not just once but in a repetitive manner throughout the curriculum. Graduates must graduate as licensed architects. Licensure Upon Graduation™ (L.U.G.) must become the norm for architecture schools (Hanlon, 2012).

Research. Extensive research on other cognitive intelligence types identified by Gardner, besides spatial intelligence must be conducted to identify other dominant intelligence types present in architecture students, if any. Such research should guide the development of *thought-based architecture curricula* in place of art-based curricula that currently exists. Causal effect analysis of such curricular revision should be conducted through predictive models to ensure re-professionalization of the architecture profession on an ongoing basis. **For architects to thrive once again, public perception of architecture must shift away from pure art and veer towards building science.**

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