Architecture University, Incorporated

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Abstract

In the mid-1990s, urban sociologist Robert Gutman argued that the field of architecture was comprised of two discourses. In universities, one discourse centered on the history, theory, and culture of architecture, and at firms, another centered on pragmatic issues of construction and business. The strength of architecture as a field, he suggested, was predicated on bridges between the two. This article considers the rise of three different "university" initiatives within architecture firms that complicate Gutman's observed divisions, including "Gensler University," "Albert Kahn University," and "SHoP U" at SHoP Architects. By considering the history and scope of these initiatives in tandem with changes to accreditation criteria of architecture schools in the United States, the article makes visible some of the misalignments between academia and practice, and it raises new questions about what it might take to educate architects who can transform a profession otherwise gripped by the hands of corporate capitalism.

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It is now common knowledge that universities in the United States function like corporations. Inside their pastoral campuses and behind their ivy-covered facades, administrators boast about their billion-dollar fundraising campaigns while they replace longstanding allegiances to "culture" with spirited pursuits of "excellence" – an empty signifier plucked from the lexicon of business. Less known is how corporations, including architecture firms, now borrow the university moniker for educational initiatives. "Gensler University" teaches architects about management, leadership, and business; "Kahn University" fills in educational gaps about tools, techniques, and professional standards; at SHoP Architects, a more ironic "U" provides workers with a bottom-up platform for strengthening the firm's culture.[1] This article compares these recent "university" initiatives in tandem with changes to national accreditation criteria for architecture schools in the United States. In so doing, it makes visible some of the chronic and fundamental misalignments between academia and practice, and it raises new questions about what it might take to educate architects who can improve or transform a profession gripped by the hands of contemporary corporate capitalism.

In the mid-1990s, urban sociologist Robert Gutman argued that the field of architecture was comprised of two separate discourses. One was based in the academy and centered on the history, theory, and culture of architecture, and another was based in firms and centered on more pragmatic issues of business, clients, and construction. The strength of architecture as a field, he suggested, was predicated on bridges between the two sites (Gutman, 2014). While there have been efforts to better connect the discourses from within academia over the past three decades, including by architecture schools with cooperative programs that blend working with learning, Gutman's site-based assumptions (schools vs. firms) are complicated by the simultaneous corporatization of universities and rise of "universities" within corporate firms.

This article explores how, over the course of the twentieth century, academic institutions, architecture schools, and the accrediting bodies that oversee them have increasingly bowed to competitive markets, conformed to the arc of capitalism, and adopted the

rhetoric of corporations. As a result, architecture firms have been left to fill in educational gaps on their own and to retrain architects to fit their own needs. Some firms now teach their employees about the so-called "real world" of business and construction because, they suggest, architecture schools still do not go far enough in preparing students how to use capitalism's tools. On the other hand, some firms create educational programs that focus on collective empowerment because they believe architects are still taught in school that individuality is the primary way to thrive in a market-based profession. Yet as Gutman and broader theories of cultural production suggest, transformation within a field such as architecture requires active feedback between both positions, as well as collective empowerment from within. Rather than waiting for change within academia, these "university" programs reject the "school vs. firm" divide and, despite their differences and corporate jargon, reveal how private firms may be better positioned to take on larger educational roles – training architects who are not only committed to the profession's continued advancement, but who also have the skills and know-how to transform it. At its core, this article suggests that if, with careful oversight, students can earn state-recognized educational credits within practice, then architecture schools and accreditation bodies may be forced to reconsider how their educational offerings are distinct from profit-seeking businesses. If the offerings of schools and firms become redundant, then a third type of independent institution may help architecture "universities" to start anew.

Corporate universities
"Corporate universities" in the United States first began as postwar training programs within industrial organizations whose rapid growth depended on a new class of managers. Many were modeled after military training initiatives, including the Army's "training with industry" program, in which businesses, such as architecture firms, offered six-week courses to officers to learn about management, science, technology, and engineering (Cayer, 2019). Since the mid-century, these initiatives have proliferated and evolved, and companies have increasingly adopted the "university" name without a standard definition. In 1993, there

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were nearly 400 "universities" within corporations across the United States; by 2001 there were 2,000, and by 2017 nearly 4,000 – more than the number of traditional degree-granting institutions (US Dept. of Ed, 2020; Forrest, 2012).

Yet why have corporations utilized the "university" name – even if only rhetorically – for educational initiatives that bear such little resemblance to traditional universities? On the one hand, this slipperiness can be explained etymologically, since the word "university" is derived from the Latin *universitas,* implying "whole" and "relationality," while "corporation" is derived from *corpus,* meaning "body." Taken together, it is not surprising to find "universities" in large firms where the management of people and resources is necessary for economic survival or where a concerted effort is required to develop and maintain a unified social culture between employees and offices.

The cyclical tendencies of corporations, as they responded to market conditions by centralizing and the decentralizing over the course of the twentieth century, also mirror the historical cycle of concerns within universities. During the 1960s and early 1970s, for instance, new campuses were constructed to support the decentralization efforts of universities as faculty and students alike questioned the transcendental definitions and compartmentalization of academic disciplines, as well as scientific definitions of "reality" and "truth." Architecturally, universities followed industrial organizations that moved their central urban headquarters to sprawling suburban campuses after World War II (Mozingo, 2014). These included Kresge College at the University of California, Santa Cruz in 1971, the Freie Universität Berlin in 1963, and the Medical Faculty Housing at the University of Louvain in Belgium in 1970, which were finished just in time for their enrollments to balloon. On the other hand, unlike corporations, which were defined by the midcentury as legal entities for individuals to collectively conduct business and earn profits, universities shouldered a cultural legacy distinctly *not* about money (Drucker, 1972). Therefore, as universities replaced their cultural missions with economic ones over the course of the twentieth century, some businesses co-opted the university name

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for training programs that could improve or obscure their own economic position, while others used the name for educational programs that socialized workers for the sake of collective empowerment.

GE University

General Electric (GE) is often cited as one of the earliest organizations to develop an economically-motivated corporate university, and it has directly influenced architecture firms like Gensler. GE's CEO Ralph Cordiner believed that a decentralized, economically diverse corporate structure would best help the firm maximize and sustain the company's rapid postwar growth. After converting 15 centralized departments into 100, Cordiner realized that GE's managers were not familiar with decentralized organizations. Instead of ousting employees, he purchased the Hopf Institute of Management and surrounding land in Ossining, New York in 1954, where he developed a 52-acre campus known as "Crotonville" (Chesto, 1997). There, he created the Management Development Institute with a 13-week Advanced Management course at its center. The company invested $1.5 million in 1955 to expand and reimagine the Institute, which Harry Hopf founded in 1922 to train "management engineers" (General Electric, 1978: 4). The Institute included a 150-year farmhouse with an expanded library and gardener's cottage that overlooked the Hudson River. Cordiner hired the New York architecture firm Frederick G. Frost, Jr. & Associates – a firm known for schools, such as the brutalist Martin Luther King, Jr. High School (1969-75) and the Graduate Faculty Center at the New School for Social Research (1969-1972) in Manhattan (New York Times, 1955; 1991). Frost and Associates designed an "Education Building," a "Residence Building," and they converted Hopf's farmhouse into a recreation building with a pool, table tennis, and card tables (General Electric, 1975: 8). *Fortune Magazine* described Crotonville in 1991 as the "Harvard of corporate America," and the campus's combination of learning and leisure seemed to "fool" or distract from Crotonville's economic interests. "It looks like a small, elite college," a *Fortune* editor wrote, like "an ivy-covered classroom building, a wooded, rolling campus. But don't be fooled – this place is 100% business" (Fortune, 1991: 43).

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Fig. 1 - "The Pit" at GE's Crotonville Campus. Source: Business Week, Mar. 4, 1961, p. 54.

The curriculum was described as "multi-functional," and courses were taught in an auditorium known as the "Pit" (Fig. 1). The multi-week Advanced Management course, which ran from 1956 to 1961, was open to anyone inside or outside the business and from anywhere in the world, though it was not free. The advanced course cost participants on average $15,000 (around $146,000 in 2022 dollars), and it focused on "generic skills" for managers – planning, organizing, integrating, and measuring – and the philosophies and practices of decentralization (General Electric, 1975: 10).

While the Institute continued under the next CEO, Fred Borch (1967-1972), Crotonville was less useful after the principles of decentralization took hold. By the 1970s, rising oil prices fueled inflation, and the training program needed to adapt. New seminars under Borch's successor, Reginald Jones, focused on managing inflation, rather than decentralization, though the courses seemed irrelevant by 1980. The next CEO, Jack Welch, sought to "revolutionize" and "renew" the campus. For him, "revolutionizing" meant renovating and expanding Crotonville.

Welch renovated the Pit, built a helipad for faster travel, and constructed additional housing for $46 million during the 1980s. However, he had a difficult time pitching the investment to the Board of Directors. The Board argued that it was a terrible time to invest further in the tired campus. GE's shareholder value was decreasing, and the company was downsizing as it was restructuring. Welch laid off more than 100,000 workers in his first few years, including the lowest-performing 10 percent of employees, for which he earned the nickname "Neutron Jack" by business journalists (Welch, 2001; Gelles, 2022). He also actively discouraged GE employees from joining labor unions. In a presentation of the proposed renovations to the Board, Welch crossed out an analysis of the campus's estimated return on investment. He explained instead that the return would be "infinite," "last forever," and "energize" the company (Welch, 2001: 171). By obscuring Crotonville's value while spending millions on new construction, Welch was investing in an *image* of economic activity under the guise of a "university" that masked GE's financial position and distracted from the joblessness many were facing. By 1984, GE's finances and stock value began to improve, though the success

was short-lived. Welch credited GE's economic rebound to his investment in Crotonville and the "excitement" about the new campus (Welch, 2001: 173).

Crotonville's curriculum was guided by a similarly vague metric of "excellence" that went hand-in-hand with courses focused on what he described as the "reality" of capitalist production. In a lecture to finance experts in 1981, "Growing Fast in a Slow-Growth Economy," Welch described four overarching goals of the program: "reality," "quality," "excellence," and a "human element" (Welch, 2001: 449-450). "Everywhere I went," he argued, "I was preaching the need for excellence in everything we did. My actions had to demonstrate it. The story of Crotonville is no different…We had to insist on excellence and be intolerant of bureaucracy" (Welch, 2001: 123-124).

Many believed that Crotonville offered perspectives that were not taught at traditional universities where courses were more focused on the *theories* of business and capitalism, rather than how those theories would be applied in real-time. GE Chairman Lawrence Bossidy, argued that "you get a better exposure to quantification at a place like the University of Chicago, but Crotonville might have a better management program. It's just so relevant" (Fortune, 1991: 43): relevant to those keeping the wheels of capitalist production spinning, rather than those trying to understand why or how the wheels got there in the first place. Building on GE's legacy of industrial production, Welch described Crotonville as a "people factory": "we build great people, who then build great products and services" (Welch 2001: 157). The "people" of GE were therefore both the company's workers and products who, like the Crotonville campus itself, might require a routine refresh for short-term economic gains.

Gensler University
By the early 1960s, one could learn how to manage a franchise at McDonald's Hamburger University or amusement park traditions at Disney University. At Motorola University, one could learn about manufacturing and management – earning an MBA in four weeks – beginning in 1979, and architects could learn how to manage an architecture firm at Gensler University by 1990.

Gensler's training program was a direct descendant of GE's Crotonville campus. First formed in San Francisco in 1965, Gensler incorporated as the firm expanded. Like at GE, Art Gensler worried that the company's growth would surpass the know-how of the firm's managers. Gensler hired the management consulting firm McKinsey to help structure the company's finances, recruitment efforts, promotion processes, and management methods. As a result, the firm adopted a "one firm firm" concept, which meant that studios that were defined by building type would run horizontally across offices and make the global company feel more like one. "People ask us, 'How do you control 4,000 people?'" Gensler explained. "The answer is, you clearly don't. You have management people that you trust and you work with and you respect. We bring them together a lot, and they share ideas and opportunities. There are training courses and programs for them" (Gensler, 2015: 320-321). Following McKinsey's recommendations, Gensler established a training program in 1990, later known as "Gensler University," which continues to serve as the company's "chief platform for leadership development" (Cassidy, 2018). Just as GE's industrial roots influenced the role and definition of its "people factory," Gensler University borrowed some of the terms of its own clients: banks, real estate developers, and corporate giants focused on economic "growth" (Cayer and Deamer, 2021). "I really enjoyed the fact that I was dealing with such professional people who went into buildings," Gensler explained in a 2015 oral history. "The IBMs, the Marconis, and the Potlatches. These big corporations… I worked with […] really quality people, [all] these super important CEOs" (Gensler, 2015: 120). As Managing Principal Julia Simet describes:

We realized that our culture was so important and we had to focus on people, getting the best people, the best talent, and *if we could grow the people, we could grow the firm* (J. Simet interviewed by the author, 30 September 2021).

Amidst the recession of the early 2000s, Gensler's Principals revisited the firm's training program as the company was restructuring and laying off hundreds of workers (Timberg 2012). They studied the history of Crotonville, including Jack Welch's work during the

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1980s, and hired Noel Tichy, prior Manager of Crotonville, with a former student. "He [Tichy] gave us advice on things like the team size, the importance of teams putting together projects that were of value to the organization and presenting this to management committees and to have it be important work that they're doing together."

Mimicking the metrics of GE, Gensler University was positioned as the firm's "hallmark of professional excellence" (Gensler, 2022). One program within Gensler University is called "NextGen," and it focuses on "identifying, assessing, and developing the firm's youngest leadership cohort." An annual cohort of Gensler employees from various offices meets three times during a span of six months to focus on "leadership development," and they learn about management through a range of formats – from "fireside chats" to presentations by CEOs of other companies.

Beyond the NextGen program, Gensler University includes additional programs that are organized by area, region, or office and help employees climb the managerial ladder of the company. A "G.MBA" (Gensler MBA) program for "client relationship leaders," for instance, focuses on more advanced topics of corporate finance, global organization, and business management. Further, Gensler intends to outline opportunities for the public to enroll in its training programs in the future, and it has similarly compared its courses with those required in architecture school but that do not go deep enough into the innerworkings of business. As Simet suggests, the focus of Gensler University most closely relates to the traditional "professional practice" class where theory meets the so-called "reality" of the job.

Kahn University
At Albert Kahn Associates, founded in 1895 in Detroit, "Kahn University" was launched in 2008 as a "clearinghouse for training, assessment of technical performance, [and the] establishment of corporate standards" (Fig. 2). The university emphasizes tools and technicality, and it reflects the organizational influence of the firm's earliest industrial clients, such as the Ford Motor Company. Kahn University is tasked with assuring "quality performance" and administering "technical directives across project teams."

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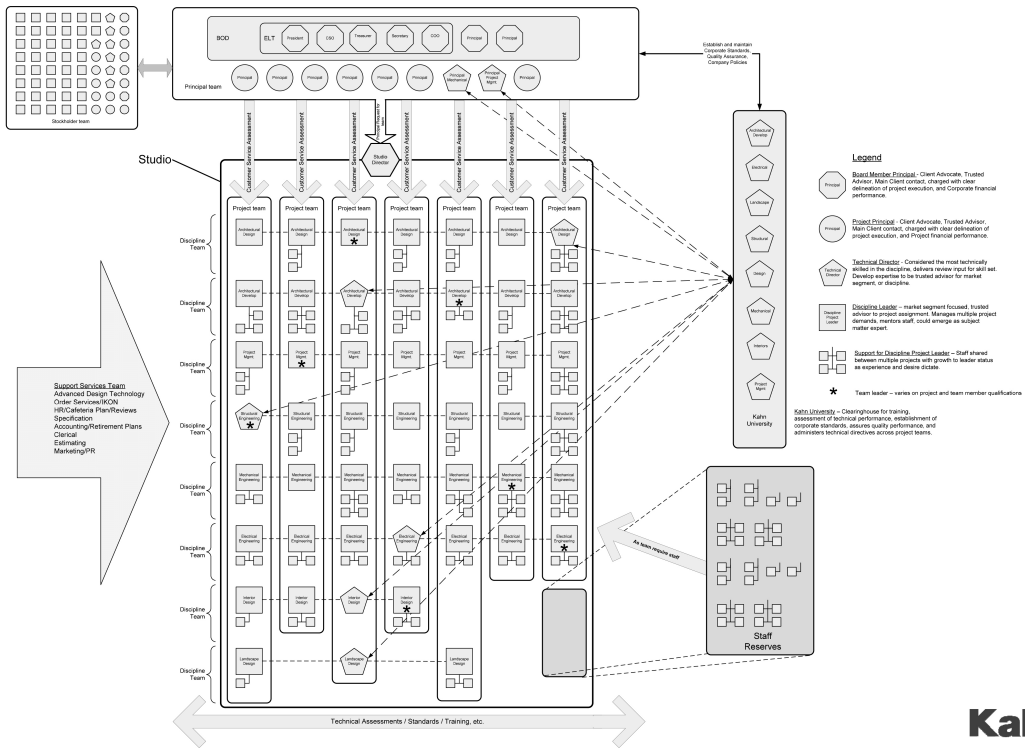
In the firm's "matrix organization," which was developed between 2008 and 2009, Kahn University is represented as a vertical band outside of the firm's "studio." It comprises "Technical Directors" who sit within each of the company's "discipline teams": architectural design, architectural development, structural engineering, mechanical engineering, electrical engineering, interior design, and landscape design. According to the matrix, Technical Directors are "the most *technically* skilled in the discipline," and they have "corporate responsibilities to establish *technical* vision, maintain *technical excellence,* consistency/standardization amongst the teams, and quality assurance on each projects [*sic*]" (Albert Kahn Associates, 2011: 2). In other words, it is the "university" that outlines the professional standards and metrics that ultimately drive shareholder value. The directors then teach those standards to others. Like at Gensler University, Kahn University was initially developed as an employee training program, though it is less exclusively fo-

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cused on management. The programs are, at present, more passively defined, and they focus on standards that were developed specifically by the firm over its long history, as well as those most closely linked to the regions the firm serves. They are largely based on archived resources that include presentations, reading materials, and how-to guides stored on the firm's server. If an architect has a question about local building codes or accounting protocol, for instance, there are materials immediately available.

Kahn University embodies the kind of knowledge they claim is essential to business and is not taught at schools. With such a long history, the firm now employs a corporate historian who suggests that:

Kahn University blends what employees learn at their respective universities with the latest practices and standards – it fills in any necessary holes while also building on the experience of a 125-year-old company. Many of our practices and procedures have been refined over time and convey something unable to be taught in a traditional university format… Within the industry, there is still a perceived value in hiring someone from a construction-type family background. These individuals learn things at the kitchen table growing up that are never taught in school and are extremely beneficial when they get a job. The biggest thing new graduates lack is experience in the marketplace. Those that pursue internships or co-ops during school have an advantage over those that have never stepped foot on a jobsite (Kahn Corporate Historian, e-mail with the author, 23 September 2021).

Yet architecture students are placed in difficult positions when firms prioritize the kind of market training or construction experiences that are not offered by most architecture schools. And when faculty and administrators *do* offer such experiences, it can come with a cost: cultural studies are marginalized or cut, while traditional design studios change topical focus without considering the fundamental conditions of capitalist markets. In both, students miss out on learning *how* – and not just *why* – to transform the profession.

SHoP U
Perhaps most unique among the educational initiatives offered by architecture firms is "SHoP U" at SHoP Architects in New York. In contrast to the economical-

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ly focused and top-down "universities" at Gensler and Kahn, SHoP U was created in 2015 by and for employees, affectionately known as "SHoPpers." The courses are more informal and socially defined. SHoP U operates independently from the firm's leaders, though it reflects a conscious effort by the firm's founding partners when they formed the firm in 1996 to oppose the age-old genius legacy of architecture. "Culturally, we share everything," one SHoPper describes. "We don't hoard assets. Open knowledge and sharing is fundamental to our work." [2]

Despite its uniqueness, SHoP U is like other firms with educational programs, since it formed in response to growth. As one SHoPper recalls, employees created the initiative "when SHoP was growing, which spurred a lot of concern about culture, and creating this was a way to help people get to know each other better and to develop the closer ties that were possible when the firm was 60 or 80 people, but not 150". The firm moved in 2014 into Cass Gilbert's Woolworth Building, which was considerably larger than the firm's prior office. Employees were concerned about how to "keep the firm's soul" in the new space. "It's the most enduring program at SHoP that [defines and] reproduces its own cultural DNA," one SHoPper suggests. "What you learn at SHoP U is how to be a SHoPper and appreciate the wide-reaching talents of other SHoPpers."

The spirit of these efforts is captured by SHoP U's tongue-in-cheek logo, which is based on a university shield with a Latin motto *veritas* or "truth." It resembles Harvard's. SHoP U's shield reads "pinball et veritas" in reference to both the social role of the firm's event space and a community pinball machine in the center of the office, which contrasts the more serious pursuits of "truth" once celebrated and protected by western universities (Fig. 3). Since 2015, there have been 74 courses offered. From bread to buildings, the classes focus heavily on "making": "Breads of India," "Pasta Making," "Bookbinding," "Extending Grasshopper," "Beginner Hip Hop," and "SHoP History 101." Mostly offered during the workday, some take place over several weeks, while others a single day or afternoon. SHoP Principal John Cerone serves as honorary Dean and helps to oversee them.

The educational programs at SHoP also extend beyond SHoP U. Local artists are invited to share their work

as part of a series known as "Art Talks"; vendors and consultants are invited as part of a "Tech Talk" series; contractors join for "Contractor Talks"; and projects are pinned up for curated firm-wide "Peers and Beers" discussions that function like high school science fairs. During the pandemic, SHoPpers also created educational opportunities for public high school students, such as a for-credit workshop series titled "Architecture is _____" at the Urban Assembly School of Design and Construction in New York City and a network of public schools in New York City. SHoPpers, alongside other partnered A/E firms, share their educational journeys as well as a typical day in the life at work with students bound for careers in architecture, art, STEM, or computer science (Seabrook, 2022; Urban Assembly, 2022).

Together, SHoP's educational programs aim to bring people together not only to transform the culture of the firm, but also the profession. As was widely documented with varying accuracy by the press, a group of SHoPpers initiated in 2021 the first union drive among architects in the United States since the 1940s. Organized as Architectural Workers United (AWU) with the assistance of members of the International Association of Machinists and Aerospace Workers, the group filed an election petition with the National Labor Relations Board in December of 2021 (AWU, 2021). Weeks later, in February 2022, the group withdrew their petition before the vote, acknowledging a lack of internal support.

In an initial letter to the firm's partners, AWU argued that they were advocating for systemic change to the profession and were responding to longstanding problems: the architect's "lack of value" in the building industry, "endless overtime and deadlines," and "normalized exploitation" of time and talent. "SHoP did not create the challenges that are systemic to the discipline of architecture," the letter stated, "but we believe that SHoP is the firm that can begin to enact changes that will eventually ensure a more healthy and equitable future for the generations of architects to come" (AWU, 2021; Scheiber, 2021).

While the AWU (AWU, 2022; Ling, 2022; Roche, 2022) cited a "powerful anti-union campaign" for the soured the drive, some SHoPpers suggest instead that there were fundamental questions – some as a result of or-
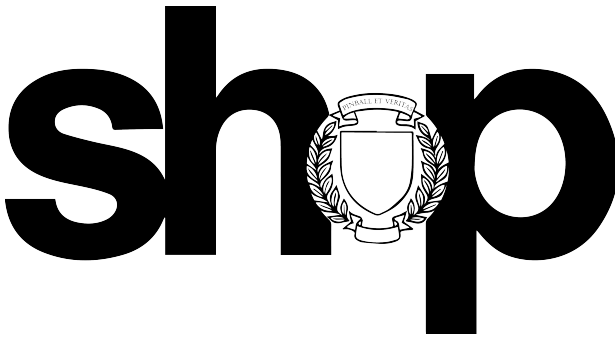
ganizing strategy and others oversights in architectural education – that were left unanswered and that remain vital to the firm and profession moving forward: "How would architecture adapt a standard client-consumer union model to suit a bid-based professional services model?," "What is architecture's relationship to capitalism?," "How would the firm be protected as it sticks its neck out as the first to unionize?"[3] As SHoP's educational initiatives and union drive reveal, cultural and structural transformation is difficult. However, these efforts are held back by holes in education and experience. "Architects are so nose to the grindstone and the education is so demanding," one SHoPper argued, "that the environment is not conducive to stepping back and considering how the profession or the world works, let alone how to begin to fix it. The initiative tends to fall to the individual". However, if structural change is even *more* difficult within universities that are now as indebted to corporate values as the largest and most unabashedly profit-driven firms, then educational initiatives like those at SHoP seem particularly well-positioned to educate or re-educate architects in practice. Rather than waiting for change in academia or distancing further from the business courses offered by firms like Gensler or Kahn, SHoPpers could learn from them without adopting a profit-centered position. While theories of change and organizing efforts are important first steps, teaching each other about the structures of the profession and the nature of capitalist markets may help architects and organizers more fully turn theory into action.

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team comprised 25 people, and it considered the values and demands of the profession (through the American Institute of Architects), academic institutions (through the Association of Collegiate Schools of Architecture, the state (through the National Council of Architectural Registration Boards), students (through the Association of Student Chapters/AIA), and the public.

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Conclusion

As some firms emphasize social culture and theories of change while they distance themselves from the innerworkings of capitalism, others emphasize the tools of business without a desire for collective empowerment or change. Architects are left with little common ground and therefore limited possibility for transformation. Even accrediting bodies and universities have lost any sense of balance. As many recent scholars have argued, including Chris Newfield (2008) and Bill Readings (1996), universities *are also* corporations. Tracing the history of Western universities, Readings argues that capital has superseded culture in universities as the guiding function. "Universities no longer care about ideologies or values or learning how to think," geographer David Harvey (1998) has argued, following Readings. Instead, he suggests, they operate as markets "for the production, exchange, and consumption of useful information – useful, that is, to corporations, governments, and their prospective employees."

Readings suggested that we find ourselves now with universities guided not by cultural production or reason, but instead by "excellence" – an empty signifier that has no referent and that makes agreement between and among everyone possible. In architecture, this case is made clear by comparing the goals of corporate universities with the goals of academic accrediting organizations. In the United States, the National Architectural Accrediting Board (NAAB) first began accrediting architecture schools after conducting a self-study in 1975.[4] The organization's first three goals were nearly identical to GE's of the 1980s, to: 1) assure the credibility of professional degrees; 2) encourage "excellence" among programs; and 3) to assure the quality of the educational program through self-assessment and self-identified improvements (NAAB, 1975). Yet NAAB has continued to absorb corporate rhetoric. Following revisions to the criteria in 2009 and 2014, the most recent conditions, released in 2020, describe "excellence and innovation in architecture education" as the top objective. "Excellence" is required to meet "minimum competency," and schools are no longer required to demonstrate that architecture students are "competent" in cultural studies or

humanities courses – courses in which the categories of public intellectual life have been debated for more than two hundred years – such as history, theory, research, ecology, equity, or inclusion (NAAB, 2020).[5] More like GE, Gensler, or Kahn than SHoP, architecture schools must now only prove that students are learning about "professional practice," "technical knowledge," the "regulatory context" of the profession, and "health, safety, and welfare." In other words, while architecture schools are encouraged to offer students with a wide array of "experiences," they are only required to *teach them* how to reproduce and maintain a status quo defined by the tools and techniques of capitalist production.

In the face of pressing inequalities and global crises, self-congratulatory rhetoric about "excellence" inhibits academic institutions and accrediting bodies from making structural change. While architecture schools may celebrate their campus improvements and technology upgrades, their clever initiatives and symposia, or their star faculty and student work, they are set free from any measure of accountability. Rather than turning their backs to the humanities, architecture schools seeking to empower students and encourage transformation may find themselves rejecting or transcending state-sanctioned minimums. For privileged institutions with the resources to go above and beyond, including hiring faculty or offering courses that are no longer "required," these changes may result in continued expansion. For less privileged institutions interested in change, difficult conversations about values and change could yield curricular or faculty cuts. While humanities courses such as the history and theory of business may, for instance, help to peel back layers of mystique and redefine the values of the profession, including them as core requirements for budding architects may require bold leadership from within.

If both architecture firms and architecture schools are motivated by similar economic goals, and if the achievements of their workers or students are measured by the same market-based categories, then two additional possibilities for promoting changes to architectural education may be considered. Firstly, if both institutions represent redundant systems,

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then state-sanctioned accreditation of one (schools), but not the other (firms), no longer makes sense. If students were allowed to be educated by architecture firms, resuscitating older apprenticeship models, then traditional architecture schools would be forced to reconsider how their offerings are different. Secondly, if both institutions maintain their redundancies, then a third type of independent institution – one focused on public life and cultural transformation – may help architecture "universities" to start anew.

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