

# Subsidiary Architecture: Multi-Firm Practices and the Blurring of Distinction Between Large and Small Firms

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**Over the past two decades, small architecture firms have begun to develop secondary firms to supplement their practices, including rendering firms, post-occupancy-evaluation firms, as-built drawing firms, and computer consulting firms. This paper examines how these subsidiary practices began primarily within large-scale corporations during the 1960s and 1970s, as well as how these practices are informed by histories of post-industrialization and moments of economic instability. Combining both historical analysis with interviews of firm owners and business leaders, this paper reveals how and why the tendencies of large corporations are now visible in small firms, and how these practices obscure traditional distinctions between small design-driven firms, and large, commercially motivated firms.**

## INTRODUCTION

Among industrial organizations, the forming of subsidiary companies—business entities that operate beneath a single enterprise—has a long historical tradition in the United States. While less common in architecture, subsidiaries began to characterize architecture practices during the 1960s, and they became defining attributes of many of the largest corporate architecture firms, including Los Angeles-based Daniel, Mann, Johnson, and Mendenhall (DMJM; now AECOM); Houston-based Caudill Rowlett Scott (CRS); Hellmuth Obata and Kassabaum (HOK); Perkins and Will; and Albert Kahn Associates. Many of these firms obtained economic prominence by developing and acquiring organizations that were historically separated, or distinct from the historical role of the architect, including computer processing, real estate services, graphic design, and finance. Since the 2000s, however, subsidiary practices have come to typify not only large, commercially-motivated practices, but also smaller, design-focused firms, as well. This paper examines this historical trajectory and the potential implications of subsidiary practices in architecture as they now characterize both large and small firms, and it illuminates how such activities historically coincide with periods of economic instability. Design firms have begun to develop multiple firms beneath their single umbrellas, including rendering firms, post-occupancy-evaluation firms, as-built drawing firms, and computer consulting firms, which, not unlike the commercially powerful versions that began during the 1960s, complement or support a primary architecture practice. Combining both

historical analysis with interviews of firm owners and business leaders, this paper considers how and why the tendencies of large corporations are now visible in small firms, and how these practices obscure traditional distinctions between small design-driven firms, and large, commercially motivated firms. The turn of both small and large firms to corporate subsidiary practices may suggest that size and rhetoric alone are no longer adequate for distinguishing firms and understanding design outputs; instead, they be more fully distinguished by the finer details of practice and their historical meanings: documents of incorporation, legal designations, and the unique combinations of enterprises.

## SUBSIDIARY PRACTICES: CORPORATE STRATEGY

The turn from economic precarity to economic prominence is not unfamiliar to histories of American architectural practice, though the tendency of architecture firms to organize as a collection of firms—the most extreme version of which can be characterized as a “corporate conglomerate”—represents a particularly late twentieth century model of architecture practice that has only recently been documented.<sup>1</sup> One such firm, AECOM, exemplifies this shift—a multinational corporate conglomerate that is presently comprised of nearly fifty diverse subsidiaries that range in service from architecture to finance, and it is publicly traded on the New York Stock Exchange as a Fortune 500 company.<sup>2</sup> Marked by its near 90,000 employees and \$18 billion in annual revenue, the firm has become the largest revenue-generator of any publicly traded company in Los Angeles, and it is rivaled only by those in neighboring cities, such as the behemoth entertainment conglomerate Walt Disney Co., based in Burbank, and the biotechnology company Amgen, Inc. in Thousand Oaks.<sup>3</sup> While I have detailed the specific historical conditions that have led to AECOM’s present formation in publications elsewhere, the firm ultimately grew from a small three-architect partnership in 1946, named DMJM, by developing and acquiring a diverse array of individuals and firms. By 1960, the partnership incorporated, and its services expanded to include engineering, planning, and construction management; by the 1970s, the term “conglomerate” surfaced within the firm, used to describe a growing “family” of affiliated and “subsidiary” firms that were developed or acquired beneath the firm’s corporate umbrella; by the 1980s, the firm had become a model of diversified practice that was studied not only by other architecture firms, but also by accounting and law firms, oil companies, and the US military.<sup>4</sup> By 1990, DMJM had



Figure 1. Office of Daniel, Mann, Johnson, and Mendenhall, Los Angeles, 1963. Photo by: Julius Shulman. J. Paul Getty Trust, Getty Research Institute, Los Angeles, CA.

become part of, as well as a managerial model for, an entirely new multinational corporate conglomerate of architecture and engineering firms, named AECOM, which was unprecedented in its composition, scale, scope, and capacity.

Subsidiary organizations at DMJM and later at AECOM were referred to as "Subs," and they were either international offices that were strategic geographic partners, or they were organizations owned or invested in by a DMJM partner.<sup>5</sup> These included Real Estate Technology, Inc. (Realtech), which was a subsidiary of the company Real Estate Resources.<sup>6</sup> Another important subsidiary company was Logicomp, founded in 1971 by founding architect Phillip Daniel, which was a data processing and computer service firm introduced initially for the US Army Corps of Engineers research laboratory.<sup>7</sup> The company provided and maintained all computer and communication equipment and services for DMJM as well as other independent companies, based on the firm's speculation that "computer aided engineering and architectural design" and "automation" would be the way forward.<sup>8</sup> Beyond Logicomp, additional subsidiaries during the 1970s included a space planning and interior design affiliate company, Associated Design, Planning and Art (ADPA), as well as a loosely defined company, Atadeco, which was initially established as a shell within which architects and planners first worked on aerial surveillance projects for the government with DMJM's own company airplane, and later it was used for construction contract management. By the end of the decade, DMJM had become a bona fide corporate conglomerate, including a package of geographically diverse firms and multidisciplinary services, with fourteen listed subsidiaries in Engineering News-Record that ranged in service from real estate to management to construction supervision to cosmic X-rays to computer data processing, and the shape of the firm itself—including its various subsidiaries, began to take on the shape of an entire urban economy.<sup>9</sup>

DMJM's trajectory—from a profit-sapping partnership to a lucrative corporate conglomerate—parallels the history of many commercially-motivated firms, including that of Albert Kahn, founded in Detroit in 1895, or Chicago's Perkins & Will,

founded in 1935. For Kahn, the firm grew from a small Detroit architecture partnership, Nettleton, Kahn and Trowbridge in 1896 to Albert Kahn Associates with 400 people by 1929 to Albert Kahn Associates, Incorporated with 600 by World War II.<sup>10</sup> Still an active practice, the firm, like AECOM, was re-defined after the 1990s as a "family" of many firms "comprised of multi-disciplined areas of expertise that make up the Albert Kahn Family of Companies. These disciplines [architecture, engineering, planning, design, and management] are part of seven companies that possess the same culture and approach to excellence required to carry on the Kahn legacy and address the growing needs of our clients."<sup>11</sup> Perkins & Will, a partnership established by Lawrence Perkins and Philip Will, Jr., in 1935 in Chicago, restructured as a corporation that has described itself since 1986 as part of a "family of partner companies," with services ranging from retail to transportation planning to healthcare technology to hospitality design.<sup>12</sup> The international "family" of companies to which it now belongs, the Dar Group, was formed by the Lebanese conglomerate Dar Al-Handasah in 1986, when it acquired Perkins & Will in order to "build a global portfolio of premium engineering and design brands."<sup>13</sup>

#### **DESIGN PRESENCE VS. CORPORATE POWER: SUBSIDIARIES FOR ALL**

At the core of these large commercially motivated firms is a practice of subsidiary incorporation that has not only come to characterize large architecture firms, but small design firms, as well. The term "subsidiary" does not inherently imply corporate dominance or capitalist power, however, just as it does not suggest an immediate commercial or capitalist motivation. The term "subsidiary" is derived from the Latin *subsidiarius*, meaning "belonging to a reserve, of a reserve, reserved; serving to assist or supplement," and from *subsidiū* "a help, aid, relief, troops in reserve."<sup>15</sup> Thus, at the risk of stretching the term too far by affixing it to business, a subsidiary practice may best be understood as a supplement to one's primary practice. Perhaps put another way, one could view the forming of subsidiary practices in architecture as an attempt by architects to use the



Figure 2. Office of Frank Gehry Partners, Los Angeles. Photo by: Robert Polidori, *System Magazine*.

very specific structures of corporations to reclaim domains of practice that were perhaps stripped away over time.

In 1982, Paul Goldberger of the New York Times articulated a commonly held position that a bold cadre of architects—from Michael Graves to Robert Venturi to Charles Moore and Frank Gehry—managed to speak with an “original voice” and stand out from this corporate crowd in the 1970s and 1980s because they were, according to him, “not corporate powers, but influential design presences.”<sup>16</sup> This distinction and friction between “design presence” and “corporate power” has long been understood as a key impetus for cultural production—from the theoretical (Pierre Bourdieu) to the more pragmatic (Magali Larson, Robert Gutman, Weld Coxe). In architecture, this division was emboldened during the 1950s and 1960s when, in 1953, Robert Venturi left the firm Eero Saarinen and Associates in Michigan because he “did not feel totally at home” in an increasingly bureaucratic setting; in 1959, when Peter Eisenman left the architecture corporation The Architects Collaborative after being “disillusioned” by corporate practice;<sup>17</sup> and when Frank Gehry left Victor Gruen Associates in 1961 to set up his own firm because “the place was becoming corporate...[and] more business-oriented.”<sup>18</sup> However, with time and shifting economic conditions, many of these positions have radically changed. Gehry, for instance, now prides himself in the business-like organization of his firm. In an interview published in 2004, he argued:

“I want to say something about how I run my world because it is very business-like, and you will probably be shocked to

hear that. People think that we’re flaky artists, and there is no bottom line, but I have a profitable office...You would imagine that offices like Skidmore, Owings and Merrill or KPF have this kind of business-oriented practice. I worked with a lot of those firms, and we are way ahead of them on these issues. We are way ahead of them technically, we’re way ahead of them organizationally, and it’s startling to me when I go to work with them. I just can’t believe it. I’m starting to say, ‘Wait a minute, what am I missing?’ I always thought of them as the business guys. I always thought of them as having their organizations together. I never thought of myself doing that.”<sup>19</sup>

Yet when one considers architecture practice not in terms of design rhetoric—descriptors of what a firm produces—or even the size of a firm itself, but instead in terms of a firm’s legal and organizational composition, by drawing on a firm’s corporate tax filings and documents of incorporation, then one begins to draw unexpected connections between types of firms that otherwise appear radically different in intention and output. Beneath the veil of Gehry’s 160-person “Gehry Partners, Limited Liability Partnership,” for example, is a more complex network of corporate subsidiaries than is publicly articulated or is immediately visible from the firm’s built projects, and it reflects the work and history of corporate ingenuity and power. This point serves not to discount the firm as an equally strong “design presence,” but it suggests that structural and organizational innovations in practice make possible innovations in design. As the firm describes itself in contracts, on its website, and in publications: “Gehry Partners, LLP, includ[es] its *subsidiaries and affiliates*.”<sup>20</sup> Indeed, “Gehry Partners, LLP” is not a legally registered name within the state of California, which suggests that the firm’s name operates as a rhetorical device more than as a descriptor of the practice itself. While the firm changed its name from “Frank O. Gehry Associates” to “Gehry Partners,” it is presently comprised of six active corporate subsidiaries and affiliate organizations registered in the State of California alone: Frank O. Gehry Associates Incorporated (1967-present); Frank O. Gehry Associates, II, Incorporated (2006-present); Gehry International, Incorporated (2002-present); Gehry Design, Limited Liability Corporation, (2002-present); and Gehry Materials, Incorporated (2010-present). In addition, Gehry Technologies, LLC operated from 2002-2018, until a “partnership” was announced between Trimble Consulting and Gehry Partners in 2014, in which Trimble purportedly purchased Gehry Technologies, including its modeling software and consulting rights, even though the legal name change and transferring of rights did not occur until 2018.<sup>21</sup> Even despite the purchase, however, five Gehry entities continue to operate as subsidiaries of Trimble Consulting, including Gehry Technologies Consultoria e Software Ltda. (Brazil); Gehry Americas Services S de RL de CV (Mexico); Gehry Technologies Americas S de RL de CV (Mexico); Gehry Technologies Netherlands BV (Netherlands); and Gehry technologies Middle East, LLC (Qatar).<sup>22</sup> Moreover, one of the partners and the present “Chief of Staff” of Gehry Partners, Meaghan Lloyd, holds a position on the Board of Directors of Trimble.

## KNOWN US-BASED ENTITIES ASSOCIATED WITH “GEHRY PARTNERS, LLP”

<b>Firm name</b>	<b>Legal form</b>	<b>State</b>	<b>Date of operation</b>
Frank O. Gehry & Associates II	Corporation	California	2006-present
Frank O. Gehry & Associates, Inc.	Corporation	California	1967-present
Gehry International, Inc.	Corporation	Delaware	2002-present
Gehry Design Services	Ltd. Liability Corp.	Delaware	2005-2012
Gehry Architects New York, P.C.	Personal Corporation	New York	2002-present
Gehry Design	Ltd. Liability Corp.	Delaware	2002-present
Gehry Materials	Ltd. Liability Corp.	California	6.2009-11.2009
Gehry Materials	Ltd. Liability Corp.	Delaware	2010-present
Gehry Technologies	Ltd. Liability Corp.	Delaware	2002-2018
Trimble Consulting Group	Corporation	Delaware	2018-present*

\*Gehry Technologies was listed under Trimble Consulting Group from 2005 until 2018, after which Trimble became independent, though it still includes Gehry firms internationally.

Figure 3. Known US-Based Entities Associates with Gehry Parnters, LLP. Data source: Office of California’s Secretary of State.

Aside from FOGA, which functions as the primary architecture practice, the partners claim in correspondences that they wish to not disclose distinctions and functions of several of the firm’s subsidiaries, including FOGA II and Gehry Materials. “Gehry Design, LLC” is intended to focus on Gehry’s “design projects,” which include furnishings, textiles, jewelry, industrial design objects, and “Gehry International, Inc.” is a designated entity for international work. This hesitation to disclose or describe the firm’s composition and functions coincides with an increasing privatization of architectural archives. While the Getty Research Institute has acquired Frank Gehry’s papers and is currently archiving the projects, files related to the practice, rather than projects, are not intended to be part of the collection. Similarly, AECOM, for example, banned public access to its archive in the mid-2000s, citing high-profile military contracts and potential legal risks that enveloped all of the firm’s documents. The firm’s legal counsel writes: “We are not able to share documents or information related to our firm’s practice or legacy project files, since their release may have legal consequences related to our clients.”<sup>23</sup> These restrictions do not mean that we can no longer study practice or the history of architecture firms, but that the archival and historiographical practices may no longer rely solely on institutional archives and traditional historiographical techniques. In order to obtain documents, drawings, and information related to AECOM, for example, I deployed a technique I describe as historical ethnography, which considers both oral histories, interviews, as well as archival documents as ethnographic documents that reveal layers of the past.<sup>24</sup> For a firm like AECOM, this required the submission of dozens of freedom of information act requests to obtain drawings and project files alongside oral histories and interviews, and for a firm such as Gehry Partners, it may similarly require a study of corporate filings by extracting records from individual state business records.

Even beyond Gehry’s firm, there others—some far less known in their international presence—that have resorted to subsidiaries

as means by which to economically bolster or support their firm: from small rendering off-shoots, to 3D printings subsidiaries, to real estate consulting. One small 7-person residential design firm in Los Angeles, which began in 2010, for example, prides itself in “good family values”—meaning that they wish to both provide their employees with adequate pay, labor protections, as well as focus on intellectually rigorous projects. The firm also initiated a small as-built drawing subsidiary in 2018. With a sense of impatience and frustration with sub-par as-built drawing consultancies, the firm formed a subsidiary to reclaim this practice in order to produce as-built drawings with greater precision, attention to detail, and rigor. When I asked why they resorted to a subsidiary, rather than absorbing this practice into the firm itself, the co-founder argued that the intent was:

“To make it [the subsidiary] available as a target—outside of residential construction. Do we want it to occupy 50% of our work load? No. 20%? No. So it’s really about finding the right balance and it’s really about—and cycles back to—needing an income revenue stream where there’s liquidity. The kinds of things that happen to small practices a lot is that they just choke so quickly, so it gives you an alternative, but that the alternative is not so far away from what you do.”<sup>25</sup>

This suggestion reinforces the origins of the term “subsidiary,” as a practice in reserve, as an assistant, or supplement, and therefore that subsidiaries act as both an economic cushion in the face of lulls in the economy, but also as a new means by which to define specialization that does not infringe upon the otherwise generalist scope of architecture practice.

### A POST-INDUSTRIAL “TWIST”

One explanation for subsidiaries is that architects choose to form subsidiary entities as a way to capitalize on a particular skill, market, or interest—especially as they may help to protect against economic downturns or recessions in the construction industry. They may also signify broader shifts in the nature of

capitalist production, however. For instance, DMJM first initiated subsidiary practices during the early 1970s, which coincided with the 1973 oil crisis and an abrupt end to economic growth of the 1960s. AECOM formed in 1990, during a brief recession, just as the lengthy expansion of the economy of the 1980s, including an increase in debt and consumer pessimism, ended. The more recent turns to subsidiary practices by smaller design firms in the 2000s similarly reflect shifts and instabilities in the economy. Frank Gehry's firm, for instance, initiated most of its subsidiary practices either in early 2000s, just as the dot-com bubble collapsed and ended a period of sustained growth throughout the 1990s, or between 2006 and 2007, just as the Great Recession struck, the housing market collapsed, and the US was catapulted into monumental financial crisis. As one architect, who formed a subsidiary practice in 2018, suggests: "maybe the generalist nature of practice is stretched too thin. What we're really good at is being generalists. But I do think you need to have a few specific tricks in you. And I don't like the kind of consumption model—waiting to receive something."<sup>26</sup> This suggestion—that one must have a specific "trick"—is a common descriptor among large businesses, including oil companies who needed to diversify during the 1970s and 1980s in order to avoid antitrust sanctions. The Chief Operating Office of one such company, Ashland Oil, which acquired DMJM in 1984 as part of its diversification strategy, claimed: "Back in the 1960s, our chief strategy was to push more oil through the refineries, make more gasoline, sell more gasoline...It doesn't work like that anymore. The world has changed. You've got to have a different *twist*."<sup>27</sup>

The 1970s marked a period of transformation in the nature and definition of work. Advancements in technologies and shifts away from manual labor severed ties between production and consumption, disrupted the historical size-based characterizations of firms (since they were based on manual, industrial labor), and enabled post-industrial forms of work. Within theories of post-industrialization, large scale business began to shift the sights of their supervision away from internal markets, materials, and labor toward the terrain outside of production (ie: the relationships with consumers). Subsidiaries in architecture can therefore be viewed as direct results of a new kind of architectural labor, made possible by post-industrialization, that attempts to understand the informational content of commodities—the immaterial work (research, marketing, etc.) needed to determine which "twists," "tricks," or "subsidiaries" might be lucrative in the first place: the wants, needs, and desires of consumers. According to Italian Sociologist and Philosopher Maurizio Lazzarato, "immaterial labor finds itself at the crossroads (or rather, it is the interface) of a new relationship between production and consumption...The role of immaterial labor is to promote continual innovation in the forms and conditions of communication (and thus in work and consumption)."<sup>28</sup>

While the desire to form subsidiary practices does not inherently suggest unethical or immoral practices, corporate greed, or commercial dominance, these practices certainly beg the question: at what point might corporate and commercial practice tilt from an otherwise rigorous, sensitive, and cultural practice

to one driven primarily by the historical logics of big business and profit, and what might the indicators be? One method may be to look at sources of corporate or capitalist advantage and how they are practiced in order to reach maximum economic output above all else. To return briefly to the subsidiaries of Gehry Partners, for example, there are four registered in the state of Delaware, incorporated in 2002, though they operate primarily in California. This is a tendency is common of profit-seeking big business: more than 66% of Fortune 500 companies, for instance, are incorporated in Delaware.<sup>29</sup> While incorporation in Delaware can add cost, complexity, and minor tax advantages that are hardly noticeable for small businesses, big businesses are often greatly advantaged due to Delaware's business-friendly tax laws. For example, businesses that are incorporated in Delaware but that do not conduct business in the state are not required to pay state corporate income tax. In addition, stock shares owned by people outside of Delaware are not subject to state taxation. For architecture firms, those typically defined as "design"-based are rarely incorporated in Delaware, though firms such as AECOM includes eighty-three Delaware enterprises, Gensler includes six, and Skidmore Owings and Merrill, which includes fifteen. Therefore, one may suggest that the distinction between "high design" and "corporate power" no longer upholds at the level of design rhetoric, firm size, nor is measurable by built output. Through deeper archival investigations, analyses of seemingly drab and bureaucratic filings and publications, one may be able to draw new parallels between firms related not to "high design" vs. "commercial," but instead as capitalist firms and those who resist or critique.

## CONCLUSION

Whether described as a firm of firms, a multinational conglomerate, or design-based corporation, it is important to remember that each represents only one particular version of architecture practice along a continuum of capitalist production, and thus to view a firm as a penultimate version of practice would be to deny the ways in which its architects will continue to adapt to new economic systems and means of production in the future. Business historian Alfred Chandler and Bruce Mazlish have adopted the "Leviathan" as the title of their 2005 anthology as a means to describe the large, unwavering, and seemingly divine characteristics of multinational corporations that emerged after 1970s. They borrow the name from Thomas Hobbes's seventeenth century book Leviathan, in which he used the mythical multi-headed sea monster as an analogy for the simultaneously physical and imaginary structures of a state or commonwealth.<sup>30</sup> No longer derived from godly origin nor constructed by the state, Chandler and Mazlish draw on a series of dictionary definitions to describe the multinational corporation, which includes the corporate conglomerate, as a "great sea monster (adversary of Yahweh); a large ocean-going ship; a vast bureaucracy; or something 'large or formidable'."<sup>31</sup> It is in the biblical story of the Leviathan's battle with the Hebrew God, Yahweh, that the analogy to architectural practice may be most useful. While the Leviathan is compared to a firm, growing and transcending geographical boundaries in accordance with capitalist accumulation, the Leviathan, as a sea monster, also represents the forces of chaos. The Hebrew God

Yahweh ultimately defeats the Leviathan (in Psalm 74:12-14) by crushing its many heads into several parts in order to feed the people inhabiting the wilderness. The fracturing of the Leviathan into parts settles the chaos of the sea in which it lives, and thus Yahweh's victory establishes a new sense of calm, order, and absolute power. Therefore, while firms within firms characterize the seemingly all-powerful form of late-capitalist architectural practice that are reinforced by, and reproduced through, the built environment, the looming possibility and capability of Yahweh—the invisible hand of capitalism or the visible hand of governmental regulation—to fragment, disassemble, or rupture the firm may at any moment establish a new sense of order, calm, and possibility for architectural practice.

## ENDNOTES

1. Aaron Cayer, "Shaping an Urban Practice: AECOM and the Rise of Multinational Architecture Conglomerates," *Journal of Architecture Education*, 73.2 (2019): 178-192.
2. While the "conglomerate" form of corporate practice is a particular type of company that grows primarily by acquiring and merging with other firms, though they were defined in the broadest of terms by the US Federal Trade Commission during the 1950s. These terms included three nearly all-encompassing categories, as either 1) market extensions, in which firms acquired similar companies but in different geographies; 2) product extensions, in which firms acquired others that were similar in work but did not directly compete; and 3) "pure" conglomerates, in which firms acquired others that were completely disparate in their function, service, product, or distribution. This definition appeared in amendments made to the 1890 Sherman Antitrust Act, which was the landmark statute that prohibited monopolies. The first amendment passed by the Clayton Antitrust Act of 1914 specifically prohibited price discrimination as well as mergers and acquisitions (under Section 7) if they were to lead to decreased competition. A second was the Celler-Kefauver Act in 1950, which is often referred to as the "Anti-Merger Act," which included provisions against acquisitions even by acquiring assets, and it prohibited vertical and conglomerate mergers if they were to result in reduced competition. In draft reports by the Federal Trade Commission in 1948, conglomerates were initially defined very specifically as "those in which there is little or no discernible relation between the business of the purchasing and the acquired firm," before concluding with much broader application in the final 1950 amendment. Federal Trade Commission on The Merger Movement: A Summary Report (Washington, DC: Federal Trade Commission, 1948), p. 59. See: "Celler-Kefauver Act," Public Law Ch. 1183-1184, December 29, 1950, pp. 1125-1128. Accessed November 12, 2017: <http://legisworks.org/congress/81/publaw-899.pdf>
3. For revenue data, see: AECOM, *Imagine It. Delivered. 2017 Annual Report* (Los Angeles, CA: AECOM, 2018) and Stuart Pfeifer and Chris Kirkham, "Merger of AECOM and URS to Create Giant LA Construction Firm," *Los Angeles Times*, July 13, 2014. For salary data, see: Security Exchange Commission, AECOM, "Form DEF 14A," 2018.
4. DMJM's subsidiaries as reported in Engineering News-Record in 1982 included: American Science & Engineering, Co.; Arctic Slope Technical Services, Inc.; Associated Design Planning & Art, Inc; DMJM International; DMJM/Thomson Ltd; Development and Technology Consultants, Inc., Philippines; Logicom, Corp; Real Estate Resources; Technical Management Services, Inc.; Technical Management Services Arabia, Ltd, Saudi Arabia; TMSI Contractors, Inc.; Wilhamp, Inc. See: "The Top 500 Design Firms," *Engineering News-Record* (May 1982), p. 95.
5. For the Hilton acquisition, see: "Daniel, Mann in Northwest Joins Hilton," *Los Angeles Times*, May 12, 1974, p. G7. For the acquisition of others, see: Pastier, "Architecture for Big Business Has Become Big Business," p. C7.
6. "Profile: Daniel, Mann, Johnson and Mendenhall: A Summation of Parts," p. 74.
7. "Data Processing Firm Acquired," *Los Angeles Times*, September 21, 1975.
8. Paul Konkel, "Getting in Step with CAEDS," *DMJM Review*, (1978), p. 3. CSU Dominguez Hills Special Collection, Dominguez Hills, CA.
9. DMJM's listed subsidiaries in 1980 included: American Science & Engineering, Co.; Arctic Slope Technical Services, Inc.; Associated Design Planning & Art, Inc; DMJM International; DMJM/Thomson Ltd; Development and Technology Consultants, Inc., Philippines; Logicom, Corp; Real Estate Resources; Technical Management Services, Inc.; TMSI Arabia, Ltd, Saudi Arabia; TMSI Contractors, Inc.; Wilhamp, Inc., "The Top 500 Design Firms," (May 1982), p. 95.
10. Among others, see: Henry-Russell Hitchcock, "The Architecture of Bureaucracy and the Architecture of Genius," *Architectural Review*, no. 101 (1947), pp. 3-6; and Claire Zimmerman, "The Labor of Albert Kahn," *Aggregate* 2 (December 2014).
11. "Albert Kahn Associates," accessed March 14, 2018, <http://www.albertkahn.com/what.php>. For excellent business histories that explain the shifts from twenty to twenty-first century firm structures, see: Thomas P. Hughes, "From Firm to Networked Systems," *The Business History Review* 7, no. 3 (2005), pp. 587-93; Walter W. Powell, "The Capitalist Firm in the 21st Century," in *The Twenty-First Century Firm*, ed. Paul DiMaggio (New York: Princeton University Press, 2001), pp. 33-68.
12. "Perkins+Will Firm Profile," accessed December 12, 2017, <https://perkinswill.com/firm-profile>. See also: Ronald Litke, "Perkins & Will: The First 50 Years," *Inland Architect*, October 1985, 11-15.
13. "Dar Group Factsheet," accessed January 12, 2018, <http://www.dargroup.com/documents/Dar%20Group%20Factsheet%2027%20October%202016.pdf>. Also see: Lawrence Bradford Perkins, *Oral history of Lawrence Bradford Perkins, F.A.I.A.*, interview by Betty J. Blum, 2000, Department of Architecture, the Art Institute of Chicago, p. 154-55; and Eva Franch i Gilabert et al., eds., *OfficeUS: Atlas* (Zürich: Lars Müller Publishers, 2015), p. 211. For more on the connection between conglomerates and brands, see: Naomi Klein, "Mergers and Synergy: The Creation of Commercial Utopias," in her *No Logo: No Space, No Choice, No Jobs* (New York: Picador, 2010), pp. 143-164. Between 1995 and 2009, Perkins & Will initiated an aggressive acquisition campaign that coincided with that of AECOM, acquiring the firms: Nix Mann & Associates, Nix Mann Shive, The Wheeler Group, DTS Shaw Associates, Marsters & Partners, Eva Maddox Branded Environments, CRA, B2HK, Busby & Associates, Ai, MBT, Fuller & Associates, CNI, Rozeboom Miller Architects, Guenther 5, The Environments Group, SMWM, and Shore Tilbe Irwin and Partners. See: "Perkins+Will Historical Timeline," Perkins+Will, 2014, <http://history.perkinswill.com>.
14. This shift coincides with a broader rise in corporate forms of organization in general. While the majority of architecture firms resisted incorporation during the first half of the twentieth century—as they did partnerships during the nineteenth century—to remain as sole proprietorships, this began to change during the 1960s. By 1977, the corporate structure of practice surpassed the partnership in number, though not all corporations were engaged in mergers and acquisitions, and by the 1980s, corporations surpassed even the number of sole proprietorships. Nearly sixty percent of architecture firms adopted corporate structures by 1982, which was a trend that was carried into the twenty-first century, with eighty percent of firms adopting such structures by 2012. In 1972, there were 1,203 incorporated architecture firms, 3,361 sole proprietorships, and 2,252 partnerships in the US. By 1977, there were 2,276 corporations, 4,409 sole proprietorships, and 1,908 partnerships. A decade later, in 1987, there were 10,571 corporations, 5,001 individual proprietorships, and 1,652 partnerships. Sources: US Department of Commerce, Bureau of the Census, *Census of Selected Services*, 1972, Subject Statistics, vol 1, table 4; and US Department of Commerce, Bureau of the Census, *Census of Service Industries*, 1987, Industry Series: Miscellaneous Subjects, table 7.
15. "Subsidiary," from Etymology Online. <https://www.etymonline.com/word/subsidiary>. Accessed October 1, 2019.
16. Paul Goldberger, "Emerging Young Architects: Diversity and New Directions," *The New York Times*, Sept. 16, 1982. <https://www.nytimes.com/1982/09/16/garden/emerging-young-architects-diversity-and-new-directions.html>. Accessed Oct 1, 2019.
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