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# “Build More and Draw Less”

## The AIA and Leopold Eidlitz’s Grand Central School of Architecture

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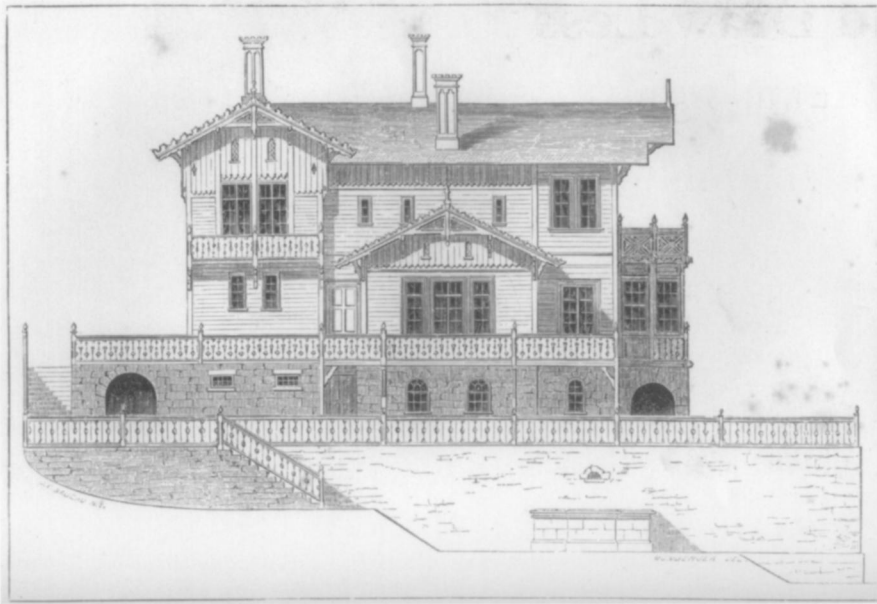
In its first decade, the American Institute of Architects (AIA) accomplished few of its purported goals. Founded in 1857 to advance the professional, economic, and social status of architects, the organization spent much of its first ten years not in action but in the throes of intense debate over the proper direction the profession should take. Issues ranging from the practical—materials, ethical client relationships, building codes, and competition rules—to the abstract—aesthetics, style, and history—engaged the broad range of men who appeared at the AIA’s monthly meetings.<sup>1</sup> The recurring debate over the form and content of architectural education shows deep rifts in the profession about more than just the details of curriculum.<sup>2</sup>

In 1867, Leopold Eidlitz (1823–1908), a German-speaking Bohemian Jew who arrived in the United States in 1843, proposed that the AIA create and administer a national architecture school, which came to be known in discussions as the Grand Central School of Architecture. A key aspect of Eidlitz’s program was that it encouraged students to “build more and draw less,” focusing on the practical side of architecture, including materials and construction, before moving on to aesthetics.<sup>3</sup> The AIA rejected the idea in 1868 and again in 1869, and in 1870 closed all further discussion by voting to endorse William Ware’s recently established architectural program at the Massachusetts Institute of Technology as the proper university-based and regionally driven model for American architectural education.<sup>4</sup> The Grand Central School pro-

posal and the discussion it provoked are an important and overlooked chapter in the development of architectural education in America. Eidlitz’s and Ware’s programs were the only two options considered by the AIA, and the differences between their pedagogical aims are indicative of deeply divergent attitudes toward education among nineteenth-century architects.

Surprisingly little has been written about the formation of the AIA, and what has been undertaken emphasizes the group’s early cohesion and unified vision.<sup>5</sup> But in fact there was a great deal of conflict during its first decade. Architects argued passionately among themselves about the nature of their responsibilities and aspirations. Detlef Lienau, an architect who was German by birth but French by taste, remarked at the second annual AIA convention, “The diversity of associations, and the consequent diversity of education of the different members of this body, have not only become apparent by the variety of the styles represented in the works produced by the different artists, but also in the expression of different opinions and ideas in the discussion of matters pertaining to Art at our regular meetings . . . our discussions have often been excited, because earnest and sincere.”<sup>6</sup> Though Lienau remained optimistic that their common interests would surmount their differences, the meetings of the 1850s and 1860s created little unity.

These decades have often been disparagingly characterized by an internecine “battle of styles,” a point of view promoted by the reminiscences of those on the “winning”



**Figure 1** Leopold Eidlitz, “Rural Home” design, published in John Bullock’s *The American Cottage Builder: A Series of Designs, Plans, and Specifications from \$200 to \$20,000; For Homes for the People* (New York, 1854)

**Figure 2** Richard Morris Hunt, Mrs. Colford Jones House, Newport, Rhode Island, 1866–69



Beaux-Arts team. George B. Post, for example, a student in Richard Morris Hunt’s atelier in 1858, later wrote of his time there:

Examples of good work were so rare that our ideals of perfection were incoherent and doubtful, and were swayed now in one direction and now in another by the literary warfare then prevailing between Gothic and Classic camps. Mediaevalism [sic] was sustaining itself by the religious ardor of Pugin and the brilliant rhetoric and poetic imagery of Ruskin. Sentiment was keenly aroused, but discipline was silent. But through the atmosphere, thick with prejudice and controversy, there was an intellectual movement in the midst of it exceedingly attractive to young men of education and artistic instincts.<sup>7</sup>

The “intellectual movement” that Post refers to is the importation of French architectural thinking as embodied by the monumental grandeur of the École des Beaux-Arts.

Eidlitz was a major figure in the “literary warfare” in America, and he fought the creeping importation of Beaux-Arts ideals at every turn from the 1860s to the 1890s. On the surface, many of Eidlitz’s designs appear not dissimilar from those of his peers Hunt, Ware, and Post. For many years, a Newport, Rhode Island, house designed by Hunt was misattributed to Eidlitz; the exuberant color and pattern of Eidlitz’s Church of the Holy Trinity is not so far from the High Victorian Gothic of Ware and Henry van Brunt’s Memorial Hall (Figures 1–4).<sup>8</sup> The crucial difference among these architects was not necessarily style but, as



**Figure 3** Leopold Eidlitz, Church of the Holy Trinity, New York, corner of Madison Avenue and 42nd Street, 1873–74. Demolished

**Figure 4** William Ware and Henry van Brunt, Memorial Hall, Harvard University, Cambridge, Mass., 1870–78





**Figure 5** Leopold Eidlitz, ca. 1883, at about age sixty

Post observed, the theoretical or “literary” underpinning of each practitioner’s designs and professional self-image. Eidlitz, who has been largely misunderstood in the scholarly record, had a different vision of who and what architects should be, one that has deep ramifications for the development both of American architectural education and the profession as a whole (Figure 5).

### The Grand Central School of Architecture

When the AIA held its first meetings in 1857, the improvement of American architectural education was one of its many concerns. In the U.S. in the 1850s and ’60s, there were two generally accepted means of becoming an architect: working in a practicing architect’s office or studying at one of the mechanics’ institutes that had existed in most major American cities since the 1820s.<sup>9</sup> Both methods suffered in the eyes of the AIA because of their lack of universal standards. A young man might learn all he needed to know to practice independently in one architect’s office, but absorb

nothing in another. Mechanics’ institutes had similar problems: they offered unsystematic technically oriented curricula with insufficient emphasis on the artistic qualities of architecture. Charles Babcock, for example, an employee and son-in-law of Richard Upjohn and later a professor of architecture at Cornell University, at an October 1857 AIA meeting bemoaned the fact that a student working in an architect’s office rarely had time to gain anything beyond the practical skills of drawing and construction.<sup>10</sup> Upjohn’s office, where Babcock had learned his profession in the 1840s, was among the first American offices to turn out competent professionals, including Upjohn’s son, Richard Michell Upjohn, and Eidlitz himself.<sup>11</sup>

Despite the members’ concerns, the AIA’s minutes and publications show little more than lamentation of the state of affairs. Hunt was the first to take positive action by establishing, also in 1857, an atelier in his New York office that addressed some of these concerns (Figure 6). The young men working there learned the practical aspects of architecture by working on his commissions, but they also addressed the intellectual and artistic side of the profession by engaging in discussions and by studying Hunt’s substantial collection of casts, photographs, and books. The first generation of “graduates” from Hunt’s atelier, which included Post, van Brunt, and Ware, quickly joined the newly formed AIA and became several of the profession’s most influential members. The success of the atelier was immediate and substantial, but when considered from another point of view, the simultaneous formation of both the AIA and Hunt’s atelier directly challenged the potential efficacy of the AIA by creating a competing private forum for the discussion of architectural ideas.<sup>12</sup> Even within the select New York group that was the AIA, there were smaller cliques and allegiances based both on shared experience and ideology.

In 1860, deciding that the AIA as a group needed to become active on the issue of education, Eidlitz proposed and created a committee on education whose goal was to study the feasibility of establishing a college and library supported by the AIA for the purpose of training young architects.<sup>13</sup> However, the AIA, despite its strong start, met only sporadically during the Civil War, and it was not until March 1867 that the committee on education revived, again headed by Eidlitz.<sup>14</sup>

Eidlitz had long been outspoken about the need for improved models of education for American architects. In the late 1850s, he wrote a sheaf of essays in which education was a recurring theme. Eidlitz could be formal and intellectual: “On Aesthetics in Architecture” drew on German idealist philosophy and aesthetics to outline a “science of the beautiful,” in which he proposed a systemization of basic



**Figure 6** Richard Morris Hunt studio, ca. 1859, inside the Hunt-designed Tenth Street Studio Building, New York. Demolished. Members of Hunt's atelier had access to his wide-ranging collection of casts, prints, photographs, and books.

architectural principles like symmetry and massing. Through study of the physical properties of buildings and materials and their effects on human perception, rather than through repetitive memorization of the classical orders and their proportions, architects could create and teach a new, modern architecture.<sup>15</sup> But Eidlitz could also be scathingly satirical. He wrote a series of humorous articles known as the "Discourses Between Two T-Squares," in which he attacked what he perceived as the self-interested ignorance of clients, building committees, builders, and architects. His broadly conceived portraits of Philologus Brown, a stair-builder-turned-architect, and Tom Pinch, a long-suffering and honest practitioner, were intended to expose the inadequacies of American architectural practice.<sup>16</sup>

Throughout his writings, Eidlitz identified several crucial problems for contemporary architects that could be solved by improving education: an overdependence on books and artificial notions of style; a lack of understanding of construction and a resulting inability to appreciate the particular skills of laborers and builders; and an inability to communicate with clients about architectural design. Study of the classical orders, the cornerstone of almost all architectural education in the nineteenth century, was, Eidlitz

believed, a particular waste of time.<sup>17</sup> By focusing on structure and materials instead of pattern books and copyism, architects would learn about the essentials of building. In these papers, Eidlitz was alternately patronizing and hopeful in his discussion of widespread architectural ignorance, without suggesting any particular programmatic remedy. The committee on education became his outlet for creating a solution to these problems.

Once the committee on education re-formed in 1867, Eidlitz wasted no time in preparing an ambitious and idealistic plan for the promotion of architectural education. In October, he proposed the creation of a "Polytechnic School" controlled and administered by the AIA; it was later named the Grand Central School of Architecture, in keeping with the scale and pretense of the project.<sup>18</sup> Consistent with his own training in Prague and Vienna, Eidlitz closely modeled the institution on the polytechnic schools of Germany and central Europe, with a wide-ranging curriculum centered on a core of technical training. Reaction to the first presentation was mixed, and led to the publication of the plan in the AIA's *Proceedings*, which permitted members to read and evaluate the ideas at their leisure.<sup>19</sup> The plan also appeared publicly, in the *New York Times*.<sup>20</sup>

Though there was general discussion of the need for improved architectural education in the few journals of the day, specific discussion of the Grand Central School proposal beyond the New York membership of the AIA seems to have been nonexistent. Samuel Sloan's new Philadelphia-based publication, the *Architectural Review and American Builders' Journal*, published from 1868 to 1870, did call for a "National Academy of American Architecture" to combat the influence of foreign architectural tastes, but without suggesting its location or its curriculum, or even acknowledging that the AIA was considering creating its own national scheme.<sup>21</sup>

Eidlitz was certainly the author of the plan. During the tenure of the committee there were at various times five other members: R. G. Hatfield, Emlen T. Littell, and Samuel A. Warner of New York, Thomas Ustick Walter of Philadelphia, and William R. Ware of Boston. The first three were unlikely to be major contributors. Littell resigned from the education committee the day before its first presentation to the AIA and was unsupportive of its goals during Eidlitz's tenure.<sup>22</sup> Hatfield, a successful if minor architect, was a diligent member of the AIA who never seemed quite to command its attention.<sup>23</sup> Warner was Eidlitz's brother-in-law and the son of architect Cyrus Lazelle Warner, who, like Hatfield, was competent and enthusiastic without stirring up controversy.

Walter was originally elected to the committee in March 1867, but he does not appear to have participated in its deliberations; he was not on the committee in 1868, 1869, or 1870, and his name was not included on the final Grand Central School report. Of all the members, however, he was the most experienced in educational matters, as he had lectured at Philadelphia's mechanical school, the Franklin Institute, in 1840 and 1841, and his election to the committee's ranks surely indicated a respect for his ideas and experience. Walter's ideas about education seem outwardly similar to Eidlitz's: both believed that architecture had the ability to improve individuals and transform society. Walter's own education at the Franklin Institute and subsequent apprenticeship emphasized the mechanical side of architecture. But his close adherence to strict notions of historical style and his belief in the supremacy of the classical language of architecture contradict one of the essential missions of the Grand Central School, namely its emphasis on structure, and not style, as the guiding force behind architectural education. The Franklin Institute was, furthermore, a mechanics' institute, not a polytechnic school, and it never offered an architectural curriculum beyond drafting. Walter's lectures at the Franklin Institute and his emphasis on training future architects through apprenticeship in his

office show his concern for education and for elevating public taste but not for systematically creating an institutional architecture curriculum. Walter's later lectures to the AIA and his work in the 1870s for the AIA's committee on education show no interest in direct involvement of the AIA in either national or polytechnic schools, but rather an embrace of the position espoused by Ware, namely the loose association with regional programs that the AIA eventually endorsed.<sup>24</sup>

Ware was, even as early as 1867, well on his way to becoming the most important figure in American architectural education, having published the previous year the *Outline of a Course of Architectural Instruction* for his program at MIT.<sup>25</sup> Ware's *Outline* is quite dissimilar from Eidlitz's proposal in both tone and content. He was traveling in Europe studying the architecture schools of England and France during 1867 and was, therefore, absent during the writing of Eidlitz's report as well as its presentation in October of that year. In fact, Eidlitz likely intended his Grand Central School as a direct challenge to Ware's new MIT program. At an AIA meeting in February 1867, Eidlitz publicly dismissed Ware's efforts: "Mr. Eidlitz spoke at some length of the necessity of a Polytechnic School and accurately described such an Institution as Mr. Gambrell informed him already existed in Boston, even with a thorough architectural department under the skillful direction of our accomplished fellow member, Professor Ware—but Mr. Eidlitz failed to admit that the school referred to met his requirements."<sup>26</sup>

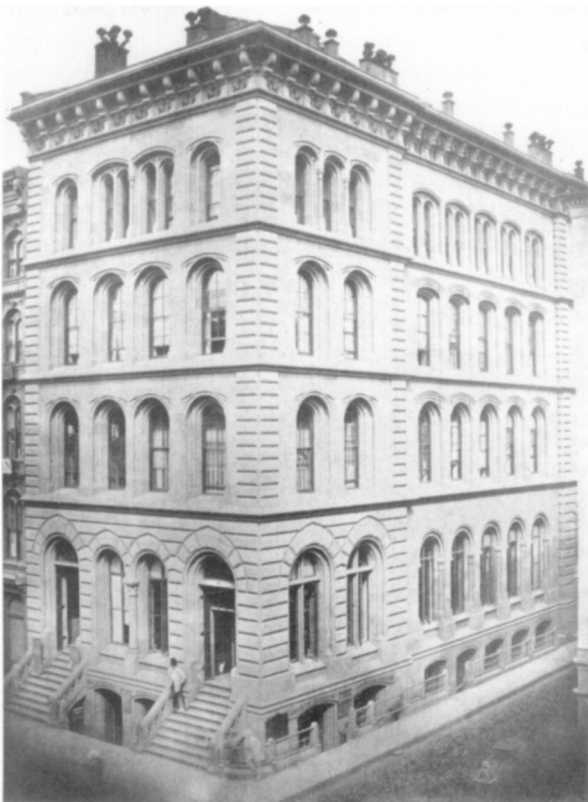
While some of the rhetoric of Ware's and Eidlitz's educational aspirations was similar, as in their architectural designs the theoretical frameworks that informed their creations were fundamentally different. Eidlitz's plan was brief and focused not on the general educational philosophy that Ware addressed in his *Outline* but on the practicalities of the proposed school: its administration, curriculum, and funding. He envisioned the institution being located either on the outskirts of New York City, in northern Manhattan, or in Westchester on the banks of the Hudson River. Advocating the establishment of a bucolic college town as a setting for learning reflected Eidlitz's own impulse to escape the workaday rush of the city: in 1851, he made his home in the nascent suburb of Bloomingdale, building a cottage at what is today 86th Street and Riverside Drive. While the city was an ideal place for his work—Eidlitz had his office at 128 Broadway in the heart of the area where most New York architects were located professionally—he followed in the intellectual footsteps of Emerson, Goethe, and Jefferson in deeming the cradle of nature a more nurturing setting for the kinds of creative and intuitive thinking that the school would encourage in its advanced students (Figures 7, 8).<sup>27</sup>





**Figure 7** Leopold Eidlitz, Eidlitz Residence, New York, 1851. At present-day Riverside Drive and 86th Street. Demolished

**Figure 8** Leopold Eidlitz, American Exchange Bank, 126–28 Broadway, New York, 1857. Demolished. For the majority of the years between 1863 and 1890, Eidlitz’s office was in this building.



Eidlitz hoped that the Grand Central School would be national, even international, in scope, drawing its students from across the United States as well as Canada, Cuba, and Mexico to train side-by-side with underprivileged New Yorkers on scholarship. The school was to be the flagship institution of the AIA, promoting its professional, ethical, and technical standards, and would train not only architects but also engineers, draftsman, and business people—everyone involved in the design and construction process. To create a “perfect independence . . . of all political or social controlling influences,” the AIA would control the financing and administration.<sup>28</sup> The school’s oversight by the AIA, and not by any governmental agency or university, would also ensure that its curriculum always reflected the most current thinking in design and professional ethics. A “board of control” consisting of members elected by the AIA would choose the faculty, library books, and all the school’s equipment. Eidlitz also proposed that when a professional organization of engineers equivalent to the AIA formed, its officers would become de facto members of this board. The board, forbidden from receiving payment for its role in running the school, was the institution’s professional conscience, preventing it from becoming a pulpit for promoting



the methods of its paid teaching staff. The success of the plan depended on the AIA raising \$500,000 to purchase real estate, build the campus and “academical town,” and provide seed money for an endowment to cover salaries, upkeep, and the all-important scholarships. Eidlitz, a shrewd investor, recommended raising the money in stages and using the opening of the school as a catalyst for further investment.

Eidlitz was specific about the Grand Central School’s educational philosophy. He proposed a curriculum based closely on a German polytechnic model, emphasizing the necessity of a harmonious balance between technical expertise and aesthetic creativity. The program of study consisted of three stages that moved from the most concrete subjects to the most subjective. In other words, students learned practicalities before moving on to design and history. The initial two-year “preparatory” program—intended for graduates of public high schools and equivalent to a Realschule training—included mathematics, geometry, geography, chemistry, drawing, and either French or German. Graduates went on to the next stage of training, equivalent to the program of a Technische Hochschule, which lasted another three years and included more drawing, higher mathematics, natural philosophy, mechanics and civil engineering, construction (architectural, naval, or mechanical), chemistry, astronomy, and both French and German. Only by studying these practical and scientific fields and then passing a specially designed examination would students be allowed to enter the final stage of education, the “academical,” which lasted one or two years and encompassed aesthetics, art history, architecture, and “practical solution of problems.”<sup>29</sup> A final option was “commercial instruction,” a separate course in currency and manufacturing. A student could end his education after any of these stages and find gainful employment in an architectural practice as a draftsman or bookkeeper, for example, but in Eidlitz’s view the most promising architects would complete the entire program in order to experience the full spectrum of intellectual challenge. This structure, even as it created an egalitarian environment that emphasized the complexity of the building profession and the contributions of its many kinds of workers, maintained the architect as the most educated and sophisticated member.

There is a key word missing from Eidlitz’s architectural curriculum: design. As can be gleaned from reading his other later works on education, Eidlitz was opposed to the way that design was increasingly taught according to the French Beaux-Arts–derived *éskisse* method, in which students, from the earliest stages of their education, began to compose buildings through sketches that were submitted to

their teachers for critique. “What is practiced everywhere,” he wrote in 1881, “is the early and constant composition of structures by means of sketches which are prepared by the pupils and corrected by the master. This process is pursued without system, without due preparation, and with very bad results.”<sup>30</sup> Drawing, for Eidlitz, meant drawing existing buildings in toto and coming to understand the organic relationship of parts by the physical process of sketching. Education gave potential architects specific knowledge and tools: original design came with emergence into professional practice and not before.

## Sources

Eidlitz based his design for the school on his own educational experiences as a youth in Prague and Vienna. There, as a student at the new schools of technology and architecture in the 1830s, Eidlitz was sensitized to the potential for educational institutions to promote societal change. In the Habsburg empire, the emergence of polytechnic schools in the first decades of the nineteenth century was an essential component in modernizing the states in central Europe. These schools were separate from the well-established universities and responded to the new industrial spirit of the age by training engineers, architects, and businessmen—not primarily military engineers, as did France’s *École Polytechnique* (established in 1794).<sup>31</sup> In the words of Franz Joseph von Gerstner, founder of the Realschule in Prague, the school’s goal was to “raise the commerce of the Fatherland through scientific instruction.”<sup>32</sup> To that end, a system of schools emerged in the German states and central Europe, with Realschulen complementing the existing secondary schools, or *Gymnasien*. The Realschulen were essentially high schools with a technical orientation; after graduation a young man either entered the work force directly or continued further study at one of the new Technische Hochschulen, technical universities created, like the Realschulen, to complement the existing educational system by providing advanced study in the mechanical sciences, engineering, architecture, and business.<sup>33</sup>

Eidlitz benefited directly from this vast experiment in practical education. Born in 1823 in Prague’s Jewish ghetto, the oldest son of a small shopkeeper, Eidlitz grew up in a city that had been generally tolerant of Jews since the reforms of Leopold II in the late eighteenth century (Figure 9). During the same period, the Jewish Reform movement shifted the emphasis away from synagogue schooling and toward secular education for young men. It was in this climate of expanding educational possibilities that Eidlitz enrolled at the Realschule, graduating in 1838.<sup>34</sup>

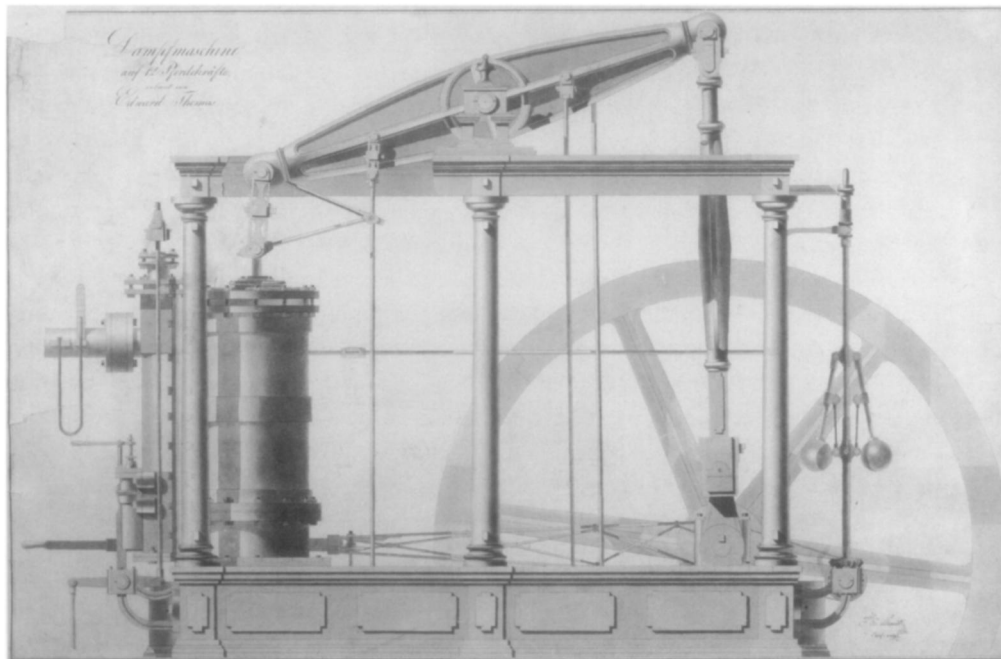


**Figure 9** Old Town Square, Prague. This print was in Eidlitz's personal collection of prints and photographs.

Remarkably, financial assistance was available to students who needed it, which probably made it possible for Eidlitz to attend.

The Realschule's two-year program had first been designed in 1820 by the eminent von Gerstner, though its implementation was delayed. A professor of mathematics at the Universität Prag, von Gerstner had previously established the separate Technisches Institut zu Prag in 1806, crafting a specialized and practical program influenced by France's *École Polytechnique* with an emphasis on building sciences and polytechnics; lectures ranged from topics in the natural sciences and geology to mathematics, drawing, and foreign languages. At the Realschule, Eidlitz learned about the latest advances in building materials and how to make technical drawings for machinery and for building (Figure 10). His exposure to architecture would have been as a building science: one that emphasized structure over style, technical considerations over aesthetic ones.<sup>35</sup> Eidlitz's plan for the initial two-year program at the Grand Central School echoes this scheme.

After completing the program in Prague, Eidlitz moved to Vienna in 1838 and enrolled in the Technische Hochschule, which had opened in 1815. In later years in America, Eidlitz told his friends and colleagues that he had studied at the



**Figure 10** Technical drawing of Edward Thomas's design for a twelve-horsepower steam engine, executed in 1835 by Otto Bischoff, a student at the Technisches Institut zu Prag. Eidlitz studied at the Realschule in 1838 and would likely have executed similar studies.



**Figure 11** Karlsplatz, Vienna, showing the Technische Hochschule (designed by J. S. von Leytenbach, 1816) at right and the Karlskirche (Johann B. Fischer von Erlach, 1715) at left

Technische Hochschule in order to become a land steward—essentially an estate manager who would have been responsible for the upkeep and management of a large farm’s buildings.<sup>36</sup> He was careful not to suggest that his training was primarily architectural. But Eidlitz did not in fact enroll in the famed engineering and architecture programs of the Technische Hochschule; instead, he enrolled in its Kommerzielle Abteilung, or business school, a path also consistent with a land steward’s career (Figure 11).<sup>37</sup> Created to produce store and bank managers, the business school’s courses included topics such as bookkeeping, currency management, and how to write business letters. This program was clearly Eidlitz’s inspiration for the AIA scheme’s “commercial instruction.” While at the outset the business school was considered an important means of creating a new workforce for the industrial era, business education was never taken as seriously as the engineering and architectural programs by the Vienna Technische Hochschule’s administration and in 1865 it was eliminated from the institution’s mission.<sup>38</sup>

But in the late 1830s, the major influence at the Technische Hochschule in Vienna was Johann Joseph Prechtl, the school’s founder. Although established with goals similar to those of the Prague technical institute, namely the promotion of a highly skilled workforce for the modern Austrian state, the Vienna version differed in its more open-ended and aesthetically oriented program. Prechtl also specifically rejected the *École Polytechnique* as a model for his school in favor of a more flexible program for “artistically eager” students.<sup>39</sup> In Vienna, technical instruction remained thorough, with major areas of study focused on chemistry, mathematics, and mechanics. But the structure of the curriculum put little focus on the granting

of diplomas, allowing the students to study according to their own program. And, perhaps most important for Eidlitz, the school offered lectures in art and architectural history and ornamentation. This was unusual for a technical institute; in fact, it created tension with the well-established Akademie der bildenden Künste, which regarded itself as the only proper venue for such aesthetically oriented lectures.<sup>40</sup>

Though enrolled for only one term at the business school, Eidlitz almost certainly took advantage of the flexibility of the Technische Hochschule by attending the engineering, architecture, and history lectures although not officially a student there, absorbing its ethos if not its formal lessons. Even after decades in America, Eidlitz continued to identify strongly with the Viennese architectural profession, subscribing to the *Allgemeine Bauzeitung*, published in Vienna, and praising the work of Friedrich Schmidt, designer of Vienna’s new Rathaus (1872–83).<sup>41</sup> In his Grand Central School, Eidlitz addressed the conflict about the proper place for aesthetics in architectural education and landed on the side of the aesthetically nuanced program of Vienna’s Technische Hochschule: “A thorough education in architecture must comprise both a Polytechnic School and an Academy of Art.”<sup>42</sup> Though he placed aesthetics and history at the end of a student’s course of study, he did so to emphasize their importance: amateurs had nothing to gain by studying the most difficult subjects first.

The Grand Central School was in some ways significantly different from the models provided by the Realschule in Prague and the Technische Hochschule in Vienna, the most important of which was its firm denial of state or governmental control, or as Eidlitz put it, “perfect independ-

ence . . . of all political or social controlling influences."<sup>43</sup> As a Jew in the heavily regulated Habsburg lands, Eidlitz knew firsthand the consequences of state interference in private matters. He had to register with the police to leave Prague and to enter Vienna; and he had to receive permission to enroll in the Technische Hochschule. High-level professions were not officially open to him: in Vienna or Prague, Eidlitz could have worked in the building trades but never as an architect. Beyond these deeply personal matters, Eidlitz also recognized that government-sponsored schools ultimately sought to perpetuate and consolidate the power of the state itself rather than to promote the harmony of the building arts and the general population. This is a crucial difference: one of the ultimate goals of the Grand Central School was the creation of an architectural landscape in America that was uplifting and edifying for the general public. As generations of well-trained architects practiced their trade in the young country, the quality of built architecture would improve, causing a concomitant rise in the taste of "the people."<sup>44</sup>

The modern architect needed to be engaged with artistic, scientific, and social issues. Eidlitz's belief in architecture as a transformative force is filled with the fervor of the social reform movements of the mid-nineteenth century, and his views on architecture and education were intertwined with his involvement in the political life of New York. To further these ends and his career, he allied himself with the anti-slavery reform Democrats of the city. In the 1890s, looking back over his career, he wrote: "Throughout the civilized world class privileges have been greatly abridged during the last century. While European aristocracies are shorn of their most offensive prerogatives, in this country nothing remains to deny equal rights to all. The abolition of slavery and the establishment of manhood suffrage have given to the most humble a voice in the government. Whether this will ultimately result in the greatest good to the greatest number, which is our present hope, is a question that cannot now be answered."<sup>45</sup> Eidlitz sensed he was living through tumultuous changes and could only hope that the course society followed was the best. To promote these social goals, he was deeply involved in the politics of New York City. The controversial Fernando Wood, who was Democratic mayor of New York from 1855 to 1858 and again from 1860 to 1862, was, despite his many political failings, an "urban progressive" and a patron of Eidlitz.<sup>46</sup> William A. Booth, a self-made businessman, philanthropist, and active reformer who was a member of the Commission of Seventy, a group that investigated the corruption of the Boss Tweed administration, was also a repeat client.<sup>47</sup> Eidlitz himself was on the campaign committee for Andrew H. Green, Democratic nominee for mayor in New York in 1876. Green had been a commissioner of

Central Park and president of the board of education; he was also a key figure in restoring a semblance of financial order to New York as the city's comptroller in the wake of the Boss Tweed scandals.<sup>48</sup>

Eidlitz's views were complex and, like his contemporary and client P. T. Barnum, he could be scathing in his criticism of the ignorance of the masses even as he pressed quite genuinely for means of alleviating it.<sup>49</sup> He had no tolerance for laziness or dishonesty and later in life wrote a small book, titled *Big Wages and How to Earn Them* (1887), that was outwardly an anti-union rejoinder but also evoked Emerson's essay "Self-Reliance" (1841) in its call for American workers to honor their work and themselves by championing their individuality.<sup>50</sup> Both on a personal level—as an immigrant who found freedom and financial success in America—and on a professional level, Eidlitz could not and did not separate architecture from its social and communal setting. It is the underlying message of broader social reform that most dramatically separates Eidlitz's scheme for architectural education from that of Ware.

### Competing Ideals: Ware and Eidlitz

Eidlitz's plan was idealistic and ambitious and was met with skepticism by his fellows at the AIA. When the group finally took an official vote on the idea in October 1868, one year after its initial presentation, they summarily rejected it.<sup>51</sup> Shortly thereafter, in December 1868, Eidlitz dramatically quit the organization, leaving his plan for a polytechnic school without a sponsor.<sup>52</sup> When, at the next annual convention in December 1869, the plan again received attention, the committee on education declared it "impracticable" and preferred that the AIA be a passive presence vis-à-vis education, stating that, furthermore, the "objects . . . of this Committee are necessarily undefined."<sup>53</sup> By December 1870, the establishment of an AIA-sponsored school was deemed "absolutely impossible" and further discussion ceased; the AIA voted instead to support fully Ware's MIT program as a model for the future development of American architectural education.<sup>54</sup> In 1871, cementing the endorsement, the group's annual convention was held at MIT.

From the AIA's earliest days, Eidlitz had fomented debate and dissent on topics as wide-ranging as clients, style, and technology. He exhibited scathing sarcasm in his published articles and his personal exchanges that skewered every member of the building trades, from clients, building committees, and engineers to architects. He and van Brunt, then a protégé of Hunt and recently graduated from Harvard University, engaged in a rancorous debate in 1858

about the merits of cast iron as a building material, with van Brunt arguing for more aggressive adoption of the material in façade decoration and Eidlitz arguing against its use in what he considered mere ornamental frippery.<sup>55</sup> Disagreements between Eidlitz and Hunt were common—toward the end of 1866, for example, Eidlitz began a hostile line of questioning with: “As the zest of the early meetings had been in a good measure heightened by the spirited discussion between himself and the Chairman of the evening [Hunt], he proposed to revive the animation of those days.”<sup>56</sup> Eidlitz was contentious and stubborn, and nearly every idea he presented through the 1850s and ’60s was met with impatience and argument, so it is perhaps no surprise that his plan for a Grand Central School was also rejected.<sup>57</sup>

The AIA had substantive and specific reasons for turning down the plan beyond its impracticality. First, the new committee on education stated, the idea of a national school seemed inappropriate for America, with its strong regional identities; second, a single campus would be difficult for students from all over the country to access; third, there simply weren’t enough mature architectural professionals to teach at such a school. Instead, the committee argued that the AIA had no real role in creating schools, which would arise naturally out of the needs of regions and cities; as these regional schools gradually came to life, AIA members could support their causes by giving lectures on “historical and general topics” and giving students tours of their own buildings under construction.<sup>58</sup> By 1871, this goal was even more clearly stated: the AIA’s interest was in “fostering the schools that may be established in the vicinity of the different Chapters” and “collecting and disseminating information in regard to Architectural education.”<sup>59</sup> This is, of course, how American architectural education eventually developed, along regional lines with transitory contributions from practicing architects to students’ education.

Across America, as both Jeffrey Cohen and Mary Woods have shown, many of the mechanics’ and polytechnic institutes that had supported architectural training gradually died out by the end of the nineteenth century with the emergence of university-based regional architecture programs supported by land-grant monies.<sup>60</sup> The federal government’s land grant program, which funneled financing to universities that emphasized mechanical and agricultural studies, made it difficult for privately funded institutions to compete for students and faculty. Many of these institutions depended on low tuition to attract students but found it difficult to raise enough revenue to carry out their missions. Furthermore, the establishment of geographically dispersed architecture programs at MIT in 1868, Cornell in 1871, and the University of Illinois in 1873 made it increasingly clear

that a centralized school did not necessarily suit the needs and desires of American architects.

But the AIA’s quick adoption of this *laissez-faire* policy also buried tensions within the profession about the relative merits of different models of architectural education. When presented with a populist polytechnic model, the profession’s clear preference for a Beaux-Arts–inflected, university-based curriculum had broad implications about the relationship between art and science, aesthetics and practicality, in design, and about which Americans rightly would have access to architectural education. A comparison of the rejected Grand Central School plan to Ware’s realized architecture program at MIT shows that they envisioned the future of the architectural profession in different ways.

On the surface, Ware’s and Eidlitz’s programs shared the intention of elevating the practice of architecture and the status of architects in America. Eidlitz sought to establish a school that promoted skills both technical and aesthetic; Ware in 1866 described his MIT program by saying: “The course will . . . be practical as well as theoretical; and will embrace the scientific study of construction and materials . . . as well as that of composition and design, and of the history of art.”<sup>61</sup> This was in keeping with the goals set forth by MIT’s first president, William Barton Rogers, who modeled the institute’s “useful arts” curriculum in part on the *École des Arts et Manufactures* in Paris.<sup>62</sup> Ware, like Eidlitz, was interested in enhancing the practice of architecture by creating a fully educated workforce of office workers and architects; both saw the public confusion between trained architects and those who merely assumed the title to be a major problem in the United States.

The direction that Ware’s program followed after it began in 1868 did not quite embody the harmonious balance of science and art he described. In 1869, Ware spoke to the AIA membership about his new architecture program at MIT, declaring that art, not science, was the proper domain of architectural education.<sup>63</sup> As summarized by Frederick A. Peterson, architect of the Brooklyn Collegiate and Polytechnic Institute (1854) and the original building for the Cooper Union for the Advancement of Science and Art in New York (1859), Ware’s position was that “scientific education is of no avail and no necessity for the student of Architecture; and that art and artistic views are exclusively necessary to the Architect.”<sup>64</sup> While Ware expected his MIT students to absorb science, geology, and engineering, courses in these areas were not integrated into the architectural curriculum but were offered as part of MIT’s general program of study. The architectural curriculum itself was focused almost exclusively on design.<sup>65</sup> It was not until after

Ware's departure for Columbia University in 1881 that courses in heating and ventilation and in iron construction—arguably more closely related to architectural science—were introduced.<sup>66</sup>

According to Eidlitz's idealized vision of the Grand Central School, architects and engineers were equal partners in administration and teaching; in addition, they all had to be practicing professionals. The members of the AIA's committee on education were to be its presidents and deans; AIA members-at-large were to be among the instructors; and the engineering field would, Eidlitz hoped, be represented by its own professional organization. Eidlitz firmly believed in the interconnections of architects, engineers, and builders and the need for their mutual understanding: "A careful scrutiny of the history of architecture shows that its real progress has been ever dependent upon advancement in science, religion, political liberty, the mechanic arts and the acquisition of wealth."<sup>67</sup> Beyond his own education and experience, Eidlitz had knowledge of construction through his brother Marc, one of the most successful builders in New York in the late nineteenth century. Marc Eidlitz and Sons was the contractor for a number of Eidlitz's buildings, as well as those by Hunt, Post, and later McKim, Mead, and White and other major architectural firms.<sup>68</sup> While promoting this rapprochement, Eidlitz still held—along with colleagues like Ware and as he manifested in his curriculum—that architects were the grand masters of architectural schemes, coordinating the efforts of all involved. The key difference is that Eidlitz's model of education promoted this ability to work together by forming all building professionals in the same crucible.

At MIT, the university context limited the influence of practicing professionals on teaching. Ware, whose practice gradually diminished in scale as he continued teaching at MIT, gave lectures on architecture that, at least according to the dissatisfied Louis Sullivan, gave priority to "diameters, modules, minutes, entablatures, columns, pediments and so forth and so forth, with the associated minute measurements and copious vocabulary, all of which items he supposed at the time were intended to be received in unquestioning faith, as eternal verities."<sup>69</sup> The choice of Eugène Létang as Ware's assistant and then as chief professor of design provides a further point of contrast. Létang, a prize-winning graduate of the École des Beaux-Arts, came to the U.S. from France in 1871 and taught at MIT until his death in 1892. He never established a thriving practice in America. The "faithful professor" was an expert in teaching architectural drawing but had little understanding of the conditions of hands-on work in America.<sup>70</sup> For Eidlitz, this situation was appalling: it was contemporary practical

knowledge that would create a good teacher and thus, good students. It was, indeed, the duty of American architects to teach the next generation so that society at large could benefit from the improvement of the architecture that they saw in their cities every day. Eidlitz's Grand Central School would have lacked the stability and continuity of the MIT program, as his plan seemed to indicate, perhaps unrealistically, that busy professionals would rotate in and out of teaching positions so as not to interfere with the progress of their careers.

The two programs also differed in their means of graduating students. Where Eidlitz's consisted of three different levels of education, with admission to each contingent on completion of the preceding, the full MIT program, by dint of its situation within a university, took the customary four years; working draftsmen could enroll in customized shortened programs as special students. The traditional students, who were relatively few in number, could choose to concentrate in one of three possible four-year courses of architectural study, including design, professional practice, and engineering.<sup>71</sup> There were relatively few graduates of the full program, and many of the early graduates did not enter the architectural profession.

Eidlitz's program required thorough grounding in the practical, objective fields before one could venture into the abstract and subjective areas of design and, later, art and history; Ware's, by contrast, encouraged students to delve into them right away. Students at MIT, and then at Columbia, studied design and history as intertwined subjects from the beginning of their education. They learned about history by tracing and drawing from models of historical architecture, a method Eidlitz also embraced, but the cornerstone of Ware's program was the Beaux-Arts-based *éskisse* method. Ware had declared the primacy of art and design in architectural education, stating his belief that students learned best when "thrown headlong into the practice of design."<sup>72</sup> In the program's earliest years, MIT students were designing buildings from their first days, depending on the forms and elements of their historical sketches for inspiration. Ware cautioned against outright plagiarism of historic designs, but encouraged imitation: in his *Outline*, he referred to the "forbidden work of copying and the legitimate and indispensable work of imitation."<sup>73</sup> Sullivan may have balked at this "cemetery of orders and of styles," but other early MIT students such as Arthur Rotch, who like Sullivan went on to study at the Beaux-Arts in Paris, thrived under Ware's and Létang's tutelage and became sophisticated and accomplished practitioners in their own right.<sup>74</sup>

This is exactly the kind of historical education that Eidlitz summarily dismissed. For Eidlitz, the formal ele-

ments of style were unimportant; it was instead a combination of intellectual, cultural, and social circumstances that gave rise to great artistic achievements. He disdained the current practice of teaching “style” as a conglomeration of visual characteristics to be imitated: “Architects study styles instead of architecture, and when, in their wandering, they meet with a style which requires much application to become properly initiated in it, they skip it, and adopt another which gives them more license, and then pronounce that style congenial with their feelings, when it is, in reality, only congenial with their laziness.”<sup>75</sup> Instead, architects should absorb the “history of architecture as a whole”—not by dividing it into discrete stylistic chunks—and in the process gain the ability to discern its great individual monuments. These buildings, because they solved the problems of use and beauty in ways that still resonated with contemporary viewers, would form the basis of an architect’s visual memory instead a catalogue of styles. By placing the study of the “whole” of history after a student’s practical education, Eidlitz believed he would be better able to appreciate the achievements of the past and use those monuments as paradigms for design rather than templates.

### Rejection by the Profession

While scholars have noted that Ware’s program was a mix of English, French, and German prototypes—as it was understood within the AIA’s membership in the late 1860s—the program was essentially an Americanized version of French Beaux-Arts ideals. In the discussions about education that ensued after Eidlitz’s departure from the AIA, most members found it impossible to consider any model for education except the Beaux-Arts or possibly the English apprenticeship model. And despite the presence in France of a robust polytechnic system, it is clear that in considering the French model of architectural education, American architects thought solely of the *École des Beaux-Arts* and its associated ateliers. Existing American polytechnic models for complete architecture education, including a young but rigorous program at the Polytechnic College of the State of Pennsylvania (established 1853) and the comprehensive plan awaiting implementation at Rensselaer Polytechnic Institute (established in 1824, curriculum revised 1850), did not come up in the AIA’s discussions. Both of these programs were heavily influenced by German and to a lesser extent French polytechnic curricula.<sup>76</sup>

But in open discussions among AIA members, only the English and French educational models were even mentioned as possibilities for American architectural education. Hunt declared that the English apprenticeship was “the only sys-

tem that exists in opposition to the French.” The French system, in which “the moment a young man commences to learn his profession, he commences to compose,” was infinitely superior.<sup>77</sup> Russell Sturgis—ironically, a former draftsman for Eidlitz who at his recommendation studied at both the Technische Hochschule and the Akademie der bildenden Künste in Munich—opined that “a few of us would dissent from a too hearty endorsement of the Paris system, while, at the same time, we may not have a better one to offer.”<sup>78</sup> In this intellectual climate, the German polytechnic model that Eidlitz depended on was unwelcome.

What emerges in these and later discussions is not an outright anti-German sentiment among the New York members of the AIA (the organization was still very much centered in that city), but one that found the practical and engineering-oriented programs of German-speaking nations, which had initially been based on the French polytechnic model, beneath the aesthetic aspirations of the new generation of American architects. Alfred J. Bloor, a former assistant to Calvert Vaux and longtime secretary to the AIA and its New York chapter, summed up the German system in 1869: “As another rule, in Germany the architectural student studies at the same desk with the engineering student—in France he studies in the same room with the sculptor and painter.”<sup>79</sup> While New Yorkers in the mid- to late-nineteenth century generally viewed Germans as practical and hard-working, they also considered them down-to-earth, or, in less flattering terms, boorish. Karl Heinzen, a German intellectual and cultural critic, complained that German New York lacked any cultural sophistication: “Beer, Dance, Business—that is the world of the German ‘Volkes’ in New York. It is like living in Buffalo!”<sup>80</sup> Germans in New York, from the working class to the emerging elite, tended to maintain a separate social existence from the “Americans” of the city even as they provided crucial services such as grocery shops, tailoring, banking, and shoemaking.<sup>81</sup>

France, by contrast, supplied relatively few immigrants to New York but was the source for high-fashion items, with imports in cosmetics, clothing, and furniture from Parisian designers and clothiers in great demand in New York beginning in the 1850s. After a journey to America in 1861–62, the British novelist Anthony Trollope observed sardonically: “The taste of America is becoming French in its conversation, French in its comforts and French in its discomforts, French in its eating, and French in its dress, French in its manners, and will become French in its art.”<sup>82</sup> Mirroring these cultural trends, architects in New York in the 1860s increasingly found German architecture functional but prosaic, while they admired the majesty and



sophistication of the latest Parisian creations. Again, an exchange between Sturgis and Hunt stresses this distinction between technical and aesthetic accomplishment: Sturgis assessed current Parisian architecture as “cold and lifeless” and was met with a sharp rejoinder from Hunt: “For any man to walk through the City of Paris to day [*sic*], or to go all over France and then to say that, in their Architecture, they are not far ahead of any other country—demands an explanation.” Laughter from the AIA audience members ensued, attesting to both Hunt’s eminence and the popularity of his Francophile opinions.<sup>83</sup> In a profession that sought increasingly to elevate its status through identification with the fine arts—Charles Babcock put it succinctly by saying, “It [*is*] easy to find buildings well and scientifically constructed, but artistic designs are not produced every day”—the perceived mundane practicality of the German polytechnic model had no place.<sup>84</sup> Indeed, when asked to characterize Eidlitz’s achievements, Ware later wrote that he was nothing more than a “conspicuous German,” and that “I do not think his writings were thought to add materially to his reputation.”<sup>85</sup>

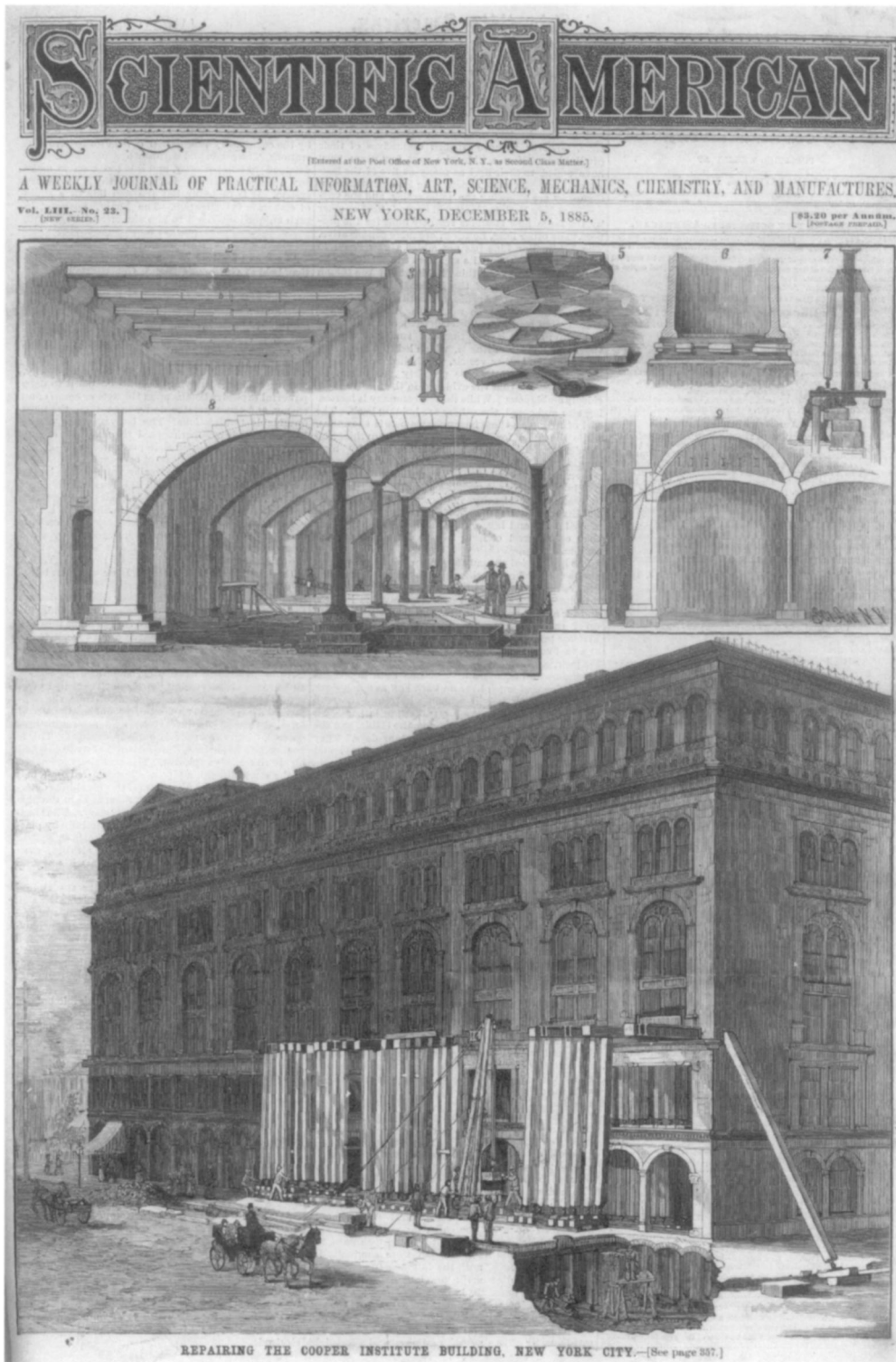
This rejection of practical education in favor of artistic education tied in with the profession’s desire to set itself apart from the lesser building trades.<sup>86</sup> The emphasis on practical and tuition-free education at mechanics’ institutes in general, and at the Free Academy in New York (opened 1847; became City College in 1866) and the Cooper Union (opened 1859) in particular, sprang from a program of social reform aimed at improving the employment prospects of the social and economic under- and middle-class of the city. Neither could furnish a complete architectural education, but both offered some training in technical and drawing instruction that qualified graduates either for employment in an architect’s or engineer’s office or, in exceptional cases, for further college study. Each of these institutes was a tool of the philanthropic social reform movement of the mid- to late nineteenth century, in which the wealthiest Americans sponsored programs designed to elevate the financial and intellectual status of the working classes. The Free Academy, established largely at the impetus of the populist Democrat Townsend Harris, opened to provide education to mechanics and artisans; in Harris’s estimation, neither Columbia nor New York University provided the kind of opportunity that the vast majority of New Yorkers needed. Through the Free Academy, Harris hoped to create “a class of mechanics and artists, well skilled in their several pursuits, and eminently qualified to infuse into their fellow-workmen a spirit that would add dignity to labor.”<sup>87</sup> Eidlitz believed in the work of the Free Academy. Rather than embracing the apprenticeship model from which he

himself had benefited in Upjohn’s office, in his advertisements for architectural assistants in his office in the 1850s he requested applicants who had already passed the examinations at the Free Academy.<sup>88</sup>

The Cooper Union had a similar focus on bringing free education to the working classes. It was established by Peter Cooper and Abram Hewitt, who were, like Harris, populist Democrats who saw a need for a new kind of institution. The Cooper Union initially offered day classes in design to women seeking a respectable trade as engravers or drawing teachers as well as a variety of night classes to working men and women seeking to improve their positions. In 1867, the Cooper Union was still quite new and did not have a fully developed architecture training program. Instead, courses were aimed at working mechanics and architectural draftsmen; Calvert Vaux’s former assistant Edward C. Miller taught night classes in architectural drawing.<sup>89</sup> Peter Cooper, in 1868, rejected a proposed affiliation between the Cooper Union and Columbia College, suspicious of the latter’s more elite intellectual climate.<sup>90</sup>

Eidlitz may have seen Cooper’s philanthropic support of the Cooper Union as evidence that the AIA could succeed in soliciting endowment funds for its own polytechnic school. The AIA had long sought to gain Peter Cooper’s funding for its own endeavors, but without success.<sup>91</sup> Eidlitz, however, was a political and business associate of Cooper and his son Edward, who were both, like Eidlitz, active anti-Tweed reform Democrats. Cooper was an investor in Eidlitz and John Serrell’s unrealized 1871 mass-transit scheme for New York.<sup>92</sup> In 1885, Eidlitz was the architect of the reconstruction and expansion of the Cooper Union, in which deteriorating foundations were repaired and the studio spaces atop the building were expanded (Figure 12).<sup>93</sup> Beyond these formal contacts, Eidlitz greatly admired Cooper and his family. In his last published book, *Big Wages and How to Earn Them*, he dedicated a passage to discussing the good example they set by being successful in business and by generously using their earned wealth to promote the interests of the less fortunate.<sup>94</sup>

Though they had many successful students and graduates, the Free Academy and the Cooper Union cemented in the minds of New York’s AIA members the association of practical and polytechnic education with the lower levels of the building trades and not with the ascendancy of the architectural profession. As Hewitt said of his own program, it was “an institution for . . . the working classes, hence it has not [*sic*] reputation and deserves none as a school of science.”<sup>95</sup> The associations of practical education with the working classes and of university education with the higher professions was widespread. In his *Architectural Review*,



**Figure 12** Leopold Eidlitz, reconstruction of the Cooper Union Building, Astor Place, New York, as shown on the front page of *Scientific American* (Dec. 1885). Frederic A. Peterson designed the original building (1853–59), which has been substantially altered.

Samuel Sloan praised mechanics' and polytechnic institutes for providing valuable "practical" education, but also saw their clearest value as a pathway to gainful employment for the lower classes.<sup>96</sup> Charles G. Leland, a journalist and educational reformer, embraced the polytechnic as the means of "scientifically educating . . . master-workmen" and saw the university as a "feudal institution" for the leisure classes.<sup>97</sup> One of the key elements of Eidlitz's Grand Central School was this populist component—educating the working classes alongside future architects—within its larger polytechnic curriculum. This was a common goal of other mid-century institutions outside New York, particularly in Philadelphia, which had a large and diverse assortment of drawing academies and technical institutes to meet the needs of a broad constituency.<sup>98</sup> While this social and economic cause may have been generally worthwhile, in the eyes of the AIA it negated the value of the institution as a place for nurturing the best and brightest future architects.

The integration of Ware's Beaux-Arts-based program within a college setting, rather than as a separate AIA-sponsored polytechnic institute, avoided the associations with the lower class that tainted the Grand Central School in the eyes of many AIA members. Ware, as a Harvard graduate and the son of a Harvard professor, was a product of the American university system. He clearly saw its potential to accommodate new programs of study without its organizers having to start completely from scratch—a prospect made more difficult in the post-Civil War years. Ware was also dedicated to the notion of the architect as a cultured, educated man, writing that "the most important qualities in an architect are good sense and good taste, and it is a general, not a technical education, that one must look to, to furnish them."<sup>99</sup> The system for this general education was already in place at MIT.

Eidlitz, by contrast, believed that a new start, a brand-new school that allowed architects to control a curriculum independent of long-standing traditions, was the way to cast off the past and embrace the future. Eidlitz's school was to be imbued with the modernizing ideals of the technical schools he had attended in Prague and Vienna—albeit without state sponsorship. The independence, narrow focus, and flexibility of the school would contribute to its success and its ability to respond quickly to developments in contemporary technology and aesthetics. This is a vastly different setting for training future architects than a university, one in which the architect, even as he worked toward his place at the top of the building professions, was nonetheless made aware as well of the supporting trades that would make his designs a reality. The Grand Central School's open-door policy and its different levels of instruction made it a place for both those seeking low-level employment and those interested in advanced training.

It is this larger goal—to improve and uplift society—that is most obviously absent from the Beaux-Arts-influenced architectural education system as implemented within American universities in the late nineteenth century. By locating the education of architects within the university system, the relatively elite status of the profession in the coming decades was ensured. Eidlitz, himself of modest origins, was able to improve his lot in life by attending the Realschule in Prague without paying tuition. Pervading all his writing about art and architecture is the firm and often strident belief that education is the key to the betterment of all men and women. Addressing his fellow AIA members in 1858 at their first annual dinner, he declared:

It is our privilege, I say, to devote ourselves to the pursuit of architecture . . . . Are we to improve it, and how are we to do so? By improving ourselves and by diffusing the love and knowledge of architecture among our fellow citizens. We will find them ready to hear us, eager to adopt our advice, willing to assist us, and generous to repay us for our devotion . . . . Let us show by our individual efforts and by our efforts as a body, that we merit the confidence of our fellow men; that our interests are above all others intimately connected with their interests in a moral as well as in a pecuniary point of view . . . . Let us but show our willingness and ability to respond to the demands of an intelligent nation.<sup>100</sup>

Eidlitz's vision of architecture was as an inherently populist profession. In this respect, the Free Academy and the Cooper Union were far more similar to his vision of the proper setting for a modern school of architecture than universities like MIT or Columbia. Though working draftsmen who could afford the tuition did attend MIT, Ware's eventual admission of architecture office helpers and draftsmen to his architecture program at Columbia in 1891 proved more controversial, with some fearing it would dilute the quality of the program and the university.<sup>101</sup> By contrast, these were the very people whom Eidlitz hoped from the beginning to serve. Eidlitz envisioned the architect as an educated anyman; Ware imagined the architect as an educated gentleman.

The most stinging indictment of Eidlitz's plans is, of course, the fact that they never came to fruition, whereas Ware's did. In large part, Eidlitz's plan was doomed to fail because of his overly idealistic and uncompromising nature. And to suggest that the AIA create and sponsor a new school of architecture in the 1860s, when it could not even find a permanent office or manage to create a library for use by its members, was obviously wishful thinking.

By 1897, the next time that Eidlitz found himself in the

midst of a professional debate about architectural education, there were many schools of architecture within the arms of larger colleges or universities, the majority of which had a Beaux-Arts-based approach to design, including MIT and Columbia, the University of Pennsylvania, and Harvard. And yet, nearly thirty years after his break with the AIA, the seventy-four-year-old Eidlitz still found the energy to continue his battle, stating with typical bombastic certainty that “the system of the *École des Beaux-Arts*, which is imitated in many schools outside of France, is utterly subversive of possible logical architecture.”<sup>102</sup> By the late 1890s, that system had largely taken hold in America, and architects no longer had to travel to Paris to acquire expertise in large-scale planning, draftsmanship, and the language of classicism.

Despite the domination of the Beaux-Arts in East Coast universities, however, by the late 1890s new voices joined Eidlitz’s in protest. Architecture programs did have different pedagogical underpinnings. Nathan Ricker began to craft a German-inspired program at the public University of Illinois (established in 1870) when he became its leader in 1873, responding to local conditions in Chicago that allowed interest in a more polytechnic and theoretical education to flourish.<sup>103</sup> Herbert Langford Warren’s architecture program at Harvard (established in 1896), although embracing some aspects of the *éskisse* method, sought to counter the academicism of Beaux-Arts programs by adding to the curriculum a practical sense of construction and American social conditions.<sup>104</sup> The AIA’s desire to let local demand influence curricular content in the long run contributed to its movement away from the MIT model it had originally endorsed.

Comparison of Eidlitz and Ware also shows that the trends the proponents of the modern movement would later criticize in American architectural education were sources of conflict from its beginnings in the 1860s. Debates over the relative merits of science and art, access to architectural education, and the role of practicing architects in education are far from resolved today and seem to perpetuate the conflicting positions established by Ware and Eidlitz.<sup>105</sup> Ware himself would eventually fall victim to the changing outlook of his professional peers; by 1900, the Beaux-Arts had an even stronger hold on the profession and education than he had envisioned in the 1860s.<sup>106</sup> In the 1920s and 1930s, the advent of modernism in architecture caused a swing back in the opposite direction, with the German Bauhaus model eventually gaining a temporary ascendancy. “Practical” education and the delay or even elimination of the study of history became the norm in the wake of reforms at schools like Harvard’s Graduate School of Design,<sup>107</sup> led

by Joseph Hudnut and Walter Gropius, who dismissed the previous forty years: “During the course of the last two or three generations, architecture degenerated into a florid aestheticism, as weak as it was sentimental, in which the art of building became synonymous with meticulous concealment of the verities of structure under a welter of heterogeneous ornament. Bemused with academic conventions, architects lost touch with the rapid progress of technical developments and let the planning of our towns escape them.”<sup>108</sup> The sweeping criticisms of previous generations by Gropius and other modernists ignore and belittle the very real disagreements and concerns that gripped their forerunners. Eidlitz, fifty years before the crystallization of modernism, warned his colleagues that “the dilettantism of modern architecture must be rooted out before the art can revive and exercise a wholesome influence upon society.”<sup>109</sup> In this context, his exhortation to “build more and draw less” is not simply prophetic but a major cornerstone of American architectural identity.<sup>110</sup>

## Notes

I would like to thank Nancy Stieber and Hilary Ballon, as well as Mari Nakahara of the American Architectural Foundation, for their help in preparing this article. A fellowship from the Samuel H. Kress Foundation made possible my research into Eidlitz’s origins in Prague and Vienna, where Dr. Juliane Mikoletzky of the Technische Universität-Wien provided valuable assistance.

1. For a history of the formation of the AIA, see Mary Woods’s pioneering treatment of the architecture profession in the nineteenth century, *From Craft to Profession: The Practice of Architecture in Nineteenth Century America* (Berkeley, 1999), 27–42, and Henry H. Saylor, *The AIA’s First Hundred Years* (Washington, D.C., 1957).
2. The history of architectural education in America in the nineteenth century is discussed in detail in Woods, *From Craft to Profession*, ch. 3. See also Andrew Saint, *The Image of the Architect* (New Haven, 1983), and Arthur C. Weatherhead, *The History of Collegiate Education in Architecture in the United States* (Los Angeles, 1941).
3. Leopold Eidlitz, *The Nature and Function of Art, More Especially of Architecture* (London and New York, 1881), xv.
4. The Grand Central School proposal is discussed briefly in Woods, *From Craft to Profession*, 67–68. New research on Eidlitz makes it possible to refine and expand that discussion in the context of Eidlitz’s educational experience and theories.
5. Saylor, author of the only history of the AIA, called it a “homogeneous group.” Phoebe Stanton’s account of the AIA’s early years emphasizes the members’ general agreement about theoretical issues. Woods’s account focuses largely on the later nineteenth century, when the organization became more proactive; she writes: “Sheer survival was the AIA’s greatest accomplishment in its first twenty years.” Woods, *From Craft to Profession*, 38. Saylor, *The AIA’s First Hundred Years*, 7. Phoebe Stanton, *The Gothic Revival & American Church Architecture* (Baltimore, 1968), 324–25. These accounts also devote much attention to the leadership provided by Richard Upjohn

(the group's first president, from 1857 to 1876) and Richard Morris Hunt (the group's first secretary and its president from 1888 to 1891), two of the most distinguished practitioners of the nineteenth century. The conflicts within the group and the substantial contributions made by practitioners who are today less-known remain largely unexplored. For an account of the AIA's early years emphasizing Lienau's contributions, see *Nineteenth-Century Architects: Building a Profession*, an exhibition catalogue published by the Lockwood-Mathews Mansion Museum (Norwalk, Conn., 1990).

6. Detlef Lienau, toast presented at the Second Annual Convention of the AIA (1859), *Crayon* 6 (Mar. 1859), 100.

7. George B. Post as recorded in Catherine Howland Hunt, "The Richard Morris Hunt Papers," ed. Alan Burnham, 55, Drawings and Archives, Avery Architectural and Fine Arts Library, Columbia University.

8. The Willoughby Chalet in Newport was attributed to Eidlitz by Henry-Russell Hitchcock in 1939. William Jordy reassigned the attribution to Hunt based on drawings and the correspondence of Hunt and the original owner, who was not Willoughby, but Mrs. Colford Jones. See Henry-Russell Hitchcock, *Rhode Island Architecture* (Providence, 1939); Antoinette Downing and Vincent Scully, *The Architectural Heritage of Newport Rhode Island, 1640-1915*, 2nd rev. ed. (New York, 1967); and William Jordy and Christopher Monkhouse, *Buildings on Paper: Rhode Island Architectural Drawings 1825-1945* (Providence, 1982).

9. See Woods, *From Craft to Profession*, 53-66. An overview of mechanics' institutes in the U.S. can be found in Bruce Sinclair, *Philadelphia's Philosopher Mechanics: A History of the Franklin Institute, 1824-1865* (Baltimore, 1974), and Carl Bode, *The American Lyceum* (New York, 1956). An in-depth analysis of the options available to aspiring architects in nineteenth-century Philadelphia is provided in Jeffrey A. Cohen, "Building a Discipline: Early Institutional Settings for Architectural Education in Philadelphia, 1804-1890," *JSAH* 53 (June 1994), 139-83.

10. Charles Babcock, "The Ways and Means of Accomplishing the Elevation of the Architect's Profession," *Crayon* 4 (Dec. 1857), 372. Babcock gave this speech at an AIA meeting in October 1857.

11. Eidlitz and later his close friend Montgomery Schuyler stated that Eidlitz worked for Upjohn in the early 1840s: "Trinity . . . was already well underway, and the drawings for it all done, but the young Bohemian found some work in the office of the Anglican architect." Montgomery Schuyler, "A Great American Architect," pt. 1, *Architectural Record* 24 (Sept. 1908), 166. The Upjohn Papers contain no specific reference to Eidlitz working in the Upjohn office in the early 1840s. Everard M. Upjohn's biography refers to Eidlitz as a "friend" of Upjohn who may have suggested the latter's itinerary in Germany; Judith Hull's account of Upjohn's office agrees that Eidlitz worked there during the years that Trinity Church was constructed but notes that Upjohn's account books record draftsmen and salaries starting only in 1846, presumably after the period when Eidlitz would have been on staff. Everard M. Upjohn, *Richard Upjohn, Architect and Churchman* (New York, 1939), 104; Judith Hull, "The 'School of Upjohn': Richard Upjohn's Office," *JSAH* 52 (1993), 285. Eidlitz and Upjohn subsequently maintained a friendly and respectful correspondence. For example, Upjohn, showing his confidence in Eidlitz as an engineer, asked for his professional opinion about the "strength of stone against crushing weight;" later he showed his confidence in Eidlitz the aesthetician, extending him an invitation to give the annual address to the AIA in his stead in 1868, which Eidlitz declined. Eidlitz to Upjohn, 20 Feb. 1855, and Eidlitz to Upjohn, 10 Sept. 1868, The Richard Upjohn and Richard Michell Upjohn Papers, Rare Books and Manuscripts Division, New York Public Library. For further analysis of the relationship between Upjohn and Eidlitz, see Kathryn E. Holliday, "Leopold Eidlitz and the Architecture of Nineteenth Century America" (Ph.D. diss., University of Texas at Austin, 2003), ch. 1.

12. For a detailed account of the Hunt atelier, see Paul R. Baker, *Richard*

*Morris Hunt* (Cambridge, Mass., 1980), 100-7.

13. Minutes for AIA meeting held 17 Jan. 1860, The American Institute of Architects Archives, Washington, D.C. (hereafter AIA Archives). "L. Eidlitz suggested the propriety of appointing a committee of 3 who should have power to associate with themselves 5 gentlemen not members of the Institute with the object of establishing a Library and a College for the education of Architects." The committee consisted of Frederick Diaper, Eidlitz, James Renwick, Jr., J. W. Ritch, and Richard Upjohn.

14. In late 1861, the AIA acknowledged the "present stress in business matters" and decided to hold its meetings in Eidlitz's office at 128 Broadway; after the February 1862 meeting, there was a two-year hiatus, with meetings resuming in March 1864 at Hunt's office. Minutes of the AIA for 6 Nov. 1861, 18 Feb. 1862, and 5 Mar. 1864, AIA Archives.

Emlen T. Littell proposed renewing the Committee on Architects at the 19 February 1867 meeting; at the 19 March 1867 meeting, the committee was formed, consisting of Eidlitz, chair, with R. G. Hatfield, Emlen T. Littell, Thomas U. Walter, and William Ware. Littell resigned his membership on the committee 22 October 1867. Minutes of the AIA, AIA Archives.

15. Leopold Eidlitz, "On Aesthetics in Architecture," pts. 1, 2, *Crayon* 8 (Apr./May 1861), 89-91, 111-13, 89 quoted.

16. The articles were published in *Crayon* under the series title "The T-Squares" but are also referred to in the AIA minutes by the fuller title "Discourses Between Two T-Squares." Minutes of the AIA for 5 Jan. 1858, AIA Archives. The articles appeared unsigned in a series of eight installments between February and December 1858: *Crayon* 5 (1858): 48-50, 77-79, 107-8, 165-67, 196-99, 262-64, 287-89, 345-51. The point of these satirical texts was to highlight the absurdities of the system of architectural production as it existed in the U.S., in which the lines between client, architect, and builder were blurred to an extent Eidlitz found both laughable and intolerable. In the first of the series, for example, Eidlitz joked acerbically about the distinction between "practical" and "theoretical" architects while showing clearly that he believed an architect should be both. Leopold Eidlitz, "The T-Squares, no. 1, Philologus Brown," *Crayon* 5 (Feb. 1858), 49.

17. See, for example, "On Style," *Crayon* 5 (May 1858), 142: "When a student, he [the architect] is taught, in the first place, the five orders, according to Vitruvi [*sic*] or Stuart. His first acquaintance with architecture is an erroneous one; he is led to believe that architecture is a matter of science of strict laws of proportion determined by the rule of three. Many complete their education with the composite order, and it is not to be wondered at if they build Custom-houses in the form of Grecian temples . . . Thus architects study styles instead of architecture."

In a more humorous vein, Eidlitz, in his T-Squares series, ridicules those who believe themselves to be architects simply because they have studied and can draw (at least some) of the orders: "Thinks I to myself, supposing I set up [as an] architect! . . . Instead of selling the books I pawned my chest of tools, and took Nicholson down to the kitchen fire. Before night I had mastered the Tuscan and Doric, and although the ionic gave me some considerable trouble on account of the hifoluten (meaning volutes), which I could not manage to draw according to rule, I resolved that I would not mind that;—I could easily persuade customers when it came to the pinch, that the Ionic was rather expensive, and would not, after all, look quite so well as the Doric—until I could get some fellow who could do the hifoluten with his compasses. So I hired an office, hung out a shingle, and have been practicing in the trade ever since." Eidlitz, "The T Squares, no. 1, Philologus Brown," 48. The selling of an architect's tools instead of his books is particularly noteworthy in this passage.

18. Emlen T. Littell, "Annual Report of the Committee on Education," *Proceedings of the Third Annual Convention of the American Institute of Architects [1869]* (New York, 1870), 15.

19. After it was proposed to pursue the formation of the school, George B.

Post suggested postponing any vote on the matter until the report was published. Minutes of the AIA for 23 Oct. 1867, AIA Archives. Eidlitz's report was published in December of the same year. Leopold Eidlitz, "Report of the Committee on Education," *Proceedings of the [First] Annual Convention of the American Institute of Architects [1867]* (New York, 1867), 13–16. After Eidlitz's departure from the AIA, Hatfield seemed still to support the notion of an AIA-sponsored school. See his remarks in "The Architects' Council," *New York Times*, 18 Nov. 1869, 1.

20. "A Polytechnic School; Proposed Action of the American Institute of Architects," *New York Times*, 30 Oct. 1867, 8. The plan was published in the "Local Intelligence" section of the paper. There were no responding letters to the editor or follow-up articles.

21. "An American Style," *Sloan's Architectural Review and American Builders' Journal* 1 (Nov. 1868), 336. The article discussed the need for American architects to cast off the influence of immigrant architects and Europe by developing their own style. One means of achieving this end was improved education: "Let amateurs and admirers, men of means and taste, be solicited to join in the patriotic undertaking; and we cannot fail of seeing a NATIONAL ACADEMY OF AMERICAN ARCHITECTURE arise in our midst; and once arisen, grow and flourish in its native strength." The author did not mention that the creation of such a school was currently under consideration by the AIA. Later in the essay, he criticized the AIA, as it currently existed, as being irrelevant: "There are a few architects among us, who have shown an inclination to enter on such an enterprise [forming a professional society]; but, unfortunately, they 'hide their light under a bushel'; and a very limited portion of the community, in deed, is aware, that there is in New York city an INSTITUTE OF AMERICAN ARCHITECTS. This is not what we want. We want such an institution, as will make its existence known by its works—a light on the hill, that all can see and recognize—a National School of Architectonic Taste, from which ideas worthy of our name shall emanate."

Other journals dedicated to architecture began publication at this time: the New York-based *American Builder and Journal of Art* (which appeared from 1868 to 1873) and the short-lived Philadelphia-based *American Architect and Builders' Monthly* (1870 to 1871). The former presented a wide range of articles focused on practical advice and new inventions, with a heavy emphasis on a selection of pictures, plans, and diagrams directed at builders, and did not carry notice of the AIA's plan for a polytechnic school. The latter had a much closer relationship to the AIA and its membership and published features on its members' designs as well as columns detailing the AIA's activities. The *Monthly* carried general articles on education but nothing specific to the failed Grand Central School, which had been abandoned by the time the journal appeared; see "Architectural Education," *American Architect and Builders' Monthly* 1 (May 1870), 33. *Manufacturer and Builder*, aimed largely at builders and engineers, was issued beginning in 1869. A book review from that year included notice of the publication of the AIA's proceedings from its second annual convention, but no other discussion of the AIA and its activities. "Literary," *Manufacturer and Builder* 1 (July 1869), 214. For a history of American architecture periodicals in the nineteenth century, see Mary Woods, "The First American Architectural Journals: The Profession's Voice," *JSAH* 48 (June 1989), 117–38.

22. R. G. Hatfield read the proposal for a polytechnic school to the AIA at the meeting on 23 October 1867; Littell had resigned his position on the committee at a meeting held the previous day. Minutes of the AIA, AIA Archives. It appears Littell rejected Eidlitz's notions about education, as he rejoined the committee in 1869 after Eidlitz's departure from the AIA in late 1868. Littell had been a member of the Franklin Institute in Philadelphia in 1858. Cohen, "Building a Discipline," 150 (see n. 9).

23. Hatfield was the author of *The American House Carpenter* (New York,

1844), worked for the Architectural Iron Works in New York, and was the architect of several High Victorian Gothic buildings in New York as well as the Sun Building in Baltimore. See Robert A. M. Stern, Thomas Mellins, and David Fishman, *New York 1880: Architecture and Urbanism in the Gilded Age* (New York, 1999), 248 ff.

24. During the years the Grand Central School was discussed, 1867 to 1869, Walter was temporarily in retirement in Philadelphia (he resumed work in 1873) and he does not appear to have contributed to this particular report. Walter was not present or mentioned at any of the AIA meetings dedicated to the discussion of the Committee on Education's proposal of 1867–69. The Walter Papers at the Philadelphia Athenaeum contain no correspondence between Eidlitz and Walter on the subject; I am grateful to Bruce Lavery for this information.

Walter appears to have renewed his early involvement with the AIA in 1870, the year the group held the annual convention in Philadelphia, at which he gave the annual address. He rejoined the committee on education, chaired by Ware, in 1871. The "Report of the Committee on Education" of 1871 outlined the committee's new orientation toward informal communication with recognized schools at Cornell, MIT, Worcester, and Philadelphia Polytechnic, as well as sponsored lectures at the AIA's offices in New York.

See also Jhennifer Amundson, "Thomas Ustick Walter's Lectures on Architecture," (Ph.D. diss., University of Delaware, 2001), 405: "Once committed to the idea of returning to architectural practice, Walter resumed all his professionally related activities." On the Franklin Institute, see Cohen, "Building a Discipline," and Sinclair, *Philadelphia's Philosopher Mechanic* (see n. 9). Amundson's dissertation treats both Walter's educational outlook and his assessment of the recognized historical styles. Walter "encouraged his students to pursue the kind of education he had followed," which meant a broad but unsystematic pursuit of drawing, science, and art. Amundson, "Walter's Lectures on Architecture," 338. "That specific historic forms and compositional strategies have greater value than others Walter explains . . . through his study of historic cultures and their architecture. Be they the 'enobling' forms of Greek architecture or the 'degenerate' mode of the Chinese, Walter believed architecture could decisively change, for better or for worse, a person's character, and collectively, affect society at large" (37).

25. William R. Ware, *An Outline of a Course of Architectural Instruction* (Boston, 1866).

26. Minutes of the AIA for 19 Feb. 1867, AIA Archives.

27. Eidlitz's office addresses are published in Dennis Steadman Francis, *Architects in Practice, New York City, 1840–1900* (New York, 1980).

28. Eidlitz, "Report of the Committee on Education," 13.

29. *Ibid.*, 15.

30. Eidlitz, *Nature and Function of Art*, 471 (see n. 3). Additional critique of this system is scattered throughout Eidlitz's essays and books: See esp. *Nature and Function of Art*, 48–51, and "The Architect of Fashion," *Architectural Record* 3, no. 4 (1894), 347–53.

31. "Unlike the École Polytechnique, the technical universities were not focused on the training of military officers, but were essentially civilian institutions." Christopher Long, "East Central Europe: National Identity and International Perspective," *JSAH* 61 (Dec. 2002), 519.

32. Quoted in C. Jelinek, *Das ständisch-polytechnische Institut zu Prag. Programm zur fünfzigjährigen Erinnerungs-Feier an die Eröffnung des Institutes* (Prague, 1856), cited in Ulrich Pfammatter, *The Making of the Modern Architect and Engineer: The Origins and Development of a Scientific and Industrially Oriented Education* (Boston, 2000), 214.

33. On the emergence of polytechnic education, see Christopher Long, "East Central Europe: National Identity and International Perspective";

Gary B. Cohen, *Education and Middle-Class Society in Imperial Austria, 1848–1918* (West Lafayette, Ind., 1996); and Pfammatter, *Making of the Modern Architect*.

34. The date of Eidlitz's graduation from the Realschule in Prague appears in the records of the Technische Hochschule in Vienna: Prüfungs-Katalog der Komerziellen Abteilung polytechnischen Instituts vom Studienjahre 1839, Archiv TU-Wien. The Prague City Archives appear to have no record of attendance at the Realschule during this period.

35. Pfammatter, *Making of the Modern Architect*, 210–16; Cohen, *Education and Middle-Class Society*, 12.

36. Montgomery Schuyler's reminiscence of Eidlitz, published posthumously, is the source of many biographical details. "But he did not resort to Vienna to study architecture. He was destined or had destined himself to the calling of a land-steward, within whose jurisdiction might come the erection of sundry humble and utilitarian classes of buildings called for in the administration of an estate. It was while engaged in learning how to do these that his imagination took fire at the possibility opened before him of doing worthier and larger things." Schuyler, "Great American Architect," pt. 1, 164 (see n. 11).

37. Historians, confronted with an absence of biographical details about Eidlitz, have previously assumed that he received primarily an engineering education at the Technische Hochschule, Vienna. See, for example, William Jordy and Ralph Coe, introduction to Montgomery Schuyler, *American Architecture and Other Writings* (Cambridge, Mass., 1961), 21; Kathleen Curran, *The Romanesque Revival: Religion, Politics, and Transnational Exchange* (University Park, Penn., 2003), 266–68; and the recent doctoral thesis by Kenneth Jacobs, "Leopold Eidlitz: Becoming an American Architect" (Ph.D. diss., University of Pennsylvania, 2005), 59. Eidlitz's school records are preserved in the Prüfungs-Katalog der Komerziellen Abteilung polytechnischen Instituts vom Studienjahre 1839, Archiv TU-Wien.

38. Dr. Juliane Mikoletzky, archivist at the TU-Wien, personal communication, 28 May 2002.

39. Pfammatter, *Making of the Modern Architect*, 216.

40. For Prechtl's ideals in founding the school, see Pfammatter, *Making of the Modern Architect*, 216–18. J. Neuwirth, *Die K. K. Technische Hochschule in Wien 1815–1915* (Vienna, 1915), covers the early history of the school in depth.

41. Eidlitz donated his copies of the *Allgemeine Bauzeitung* to the AIA's library in 1858. The AIA library now, unfortunately, has no record of these volumes (the library was moved and dispersed several times in the nineteenth century). Minutes of the AIA for 2 Mar. 1858, AIA Archives. Eidlitz praised Schmidt, as well as other German and English architects, in "The Architect of Fashion," 350 (see n. 30).

42. Eidlitz, "Report of the Committee on Education," 13 (see n. 19).

43. *Ibid.*

44. "With the best natural abilities on the part of the people, taste, in matters of art, is mainly the result of education. That the only means of popular education in architecture, now afforded, is in a study of the works actually executed, and placed before the public as examples." *Ibid.* The need of the masses to see better buildings constructed so that they themselves would be better educated was a common theme for Eidlitz. See, for example, "On Aesthetics in Architecture," an article ostensibly dedicated to defining the concept of architectural beauty, in which he wrote: "I have stated heretofore that a love for beauty is the natural gift of man . . . . The soundest and acutest natural taste must fail in the absence of proper education . . . . Natural taste is insufficient for another reason which is *that* in order to appreciate the beautiful in architectural monuments . . . it is necessary to possess sufficient education to be conversant with the idea itself represented by it." Eidlitz, "On Aesthetics in Architecture," 90–91 (see n.

15). And, later, "Until the philosophy and technique of the arts are taught in a scientific manner, both mechanic and fine art must drag on an empirical existence, pregnant with all the harm to society which has brought it into disrepute as a source of knowledge." Eidlitz, *Nature and Function of Art*, 196 (see n. 3).

45. Leopold Eidlitz, *Big Wages and How to Earn Them* (New York, 1887), 4.

46. Mayor Wood, though he was a pro-Southern Democrat and his term was marred by corruption, also "championed the interest of the working class and immigrants and sought to avoid incipient class conflict by urging businessmen to develop a social conscience that placed human rights over property rights." Jerome Mushkat, *Fernando Wood: A Political Biography* (Kent, Oh., 1990), vii–viii, 245. Eidlitz executed several commissions for Wood: he worked on Wood's house (ca. 1860–65), a temporary structure for celebrating the visit of the Prince of Wales (11–13 Oct. 1860), the refurbishment of the New York City Hall after a fire in 1858, and probably the initial plan for the Viaduct Railway, dated 1859, during Wood's tenure as mayor.

47. Booth (1805–1895) was a director of the American Exchange Bank in New York whose building Eidlitz designed (1857–60) and a donor of funds for the Stratford Congregational Church (1857–59) in Stratford, Conn. He also apparently hired Eidlitz to design his home in Englewood, N. J. (ca. 1860) and probably also the orphans' home for the Children's Aid Society in New York (1872). William Ague Booth Biography File, Stratford Historical Society, Stratford, Conn., which includes three obituaries from unidentified newspapers. Additional information can be found in William A. Booth, *The Reminiscences of William A. Booth* (n.p., 1892). Booth never specifically mentioned Eidlitz in his *Reminiscences*; my reconstruction of their relationship is based on the timing of Booth's appointments at institutions for which Eidlitz designed buildings.

48. Eidlitz was a vice-president of Green's unsuccessful election committee. "The Mayoralty," *New York Times*, 8 Oct. 1876, 12. Green was also a lawyer in Samuel J. Tilden's firm in the 1840s; Tilden would later become governor of New York (1874–76) and was probably instrumental in the appointment of Eidlitz, along with H. H. Richardson and Frederick Law Olmsted, to redesign the New York State Capitol. Green and his difficult relationship with Olmsted are discussed in Laura Wood Roper, *FLO: A Biography of Frederick Law Olmsted* (Baltimore, 1973).

49. Eidlitz designed and built Iranistan in Bridgeport, Conn., for P. T. Barnum; the story of the commission is told in Schuyler, "Great American Architect," pt. 1, 169–70 (see n. 11); see also W. Barksdale Maynard, *Architecture in the United States, 1800–1850* (New Haven, 2002), 173–75. On Barnum and the reform impulse imbedded in his entertainments, see Janet Davis, *The Circus Age: Culture and Society Under the American Big Top* (Chapel Hill, 2002).

50. Eidlitz, *Big Wages*.

51. On 2 June 1868, Eidlitz proposed an article for the AIA's constitution that directly concerned the implementation of the Grand Central School: "Art. X. It shall be the duty of the Committee on Education to collect information in regard to Architectural Education and to advise with the Committee on Publications in regard to papers on this subject. They shall also organize the School of the Institute at as early a day as practicable and when organized they shall maintain and control it subject in the expenditure of money to the approval of the Board of Trustees who shall devote to this purpose only such sums as shall be intrusted to them especially for this purpose." The succeeding vote on the article failed and it was not implemented. Minutes for 2 June 1868, AIA Archives. Woods states that the AIA endorsed the school in 1867, but the group began its consideration in 1867 and finally rejected the proposal at this June 1868 meeting. Woods, *From Craft to Profession*, 67 (see n. 1).

52. The exact cause of Eidlitz's departure from the AIA is unclear. Perhaps



the poor reception of his report on education was the reason, but it was more likely the conflict over the administration of the newly implemented chapter system which was discussed at the same meeting (the Annual Convention of 1868). Eidlitz appears to have objected to the means by which the New York chapter of the AIA was formally established; he wished it to have higher dues and a library, at least, in order to justify its position as “head” of the new national system. His motion to delay the formation of the New York chapter (not those of other cities) was tabled by an unidentified member referred to only as “Mr \_\_\_\_\_” in the minutes (I saw no other instances of this pointedly omitted identification in the minutes for this period). Calvert Vaux and Frederick Clark Withers were the only two members who sided with Eidlitz in the vote and they also resigned at the same time. See minutes of the AIA for 8 Dec. 1868, AIA Archives. Though the cause of Eidlitz’s departure may never be known, its dramatic nature of Eidlitz’s departure is indisputable. When a member resigned, the AIA generally sent a representative to convince him to return, a service Eidlitz himself had performed in the past. In Eidlitz’s case, no effort was made: “The President [Upjohn] presented letters of Resignation from the Institute of Messrs. Calvert Vaux and Leopold Eidlitz and reported that another letter of similar import had been received from Mr. F. C. Withers, but had been lost in the confusion in his (The President’s) office resulting from the fire in Trinity Building. Mr. Wight moved that the resignations be accepted. Mr. Post in seconding the motion remarked that usually, in such a case, he should move a committee to confer with the gentlemen offering resignations, but that, much as it was to be regretted, such action would clearly be useless in this instance. The resignations were accepted; and the Treasurer was instructed to collect the dues of the three gentlemen only up to Oct 1st 1868.” Minutes of the AIA Board of Trustees, 11 Jan. 1869, AIA Archives.

53. Littell, “Annual Report of the Committee on Education,” 15 (see n. 18).

54. Littell, “Report of the Committee on Education,” *Proceedings of the Fourth Annual Convention of the American Institute of Architects [1870]* (New York, 1871), 218.

55. Van Brunt’s and Eidlitz’s papers both appeared in *The Crayon*: Henry van Brunt, “Cast Iron in Decorative Architecture” (1858), repr. in William A. Coles, ed., *Architecture and Society: Selected Essays of Henry Van Brunt* (Cambridge, Mass., 1969), 79; and Leopold Eidlitz, “Cast Iron and Architecture,” *Crayon* 6 (Jan. 1859), 21.

Scholars have previously interpreted this exchange over cast iron differently and cast Eidlitz as a Luddite in the face of van Brunt’s innovation. In his biography of Hunt, Baker summarizes Eidlitz’s opinion of cast iron as a material “without significant utility”; Baker, *Richard Morris Hunt*, 114–15 (see n. 12). Coles, in the introduction to his collection of van Brunt’s essays, completely ignores Eidlitz’s rebuttal and characterizes him as “doctrinaire” and a “disciple of Viollet-le-Duc and Ruskin,” Coles, *Architecture and Society*, 54. H. Allen Brooks, in his master’s thesis, “Leopold Eidlitz,” concluded that Eidlitz “shunned” cast-iron construction and “failed to comprehend that the engineer’s understanding of new materials would be an important contributing factor in the development of a new art.” H. Allen Brooks, “Leopold Eidlitz,” (M.A. thesis, Yale University, 1955), 20–21. All of these analyses overlook Eidlitz’s embrace of cast iron as a material that could make modern architecture possible; Eidlitz’s critique of van Brunt was based not on any antipathy or lack of understanding toward the material but instead on van Brunt’s desire to use cast iron in non-functional, non-structural elements. For a more extended analysis of the exchange between van Brunt and Eidlitz, see Holliday, “Leopold Eidlitz,” ch. 2.

56. Minutes of the AIA for 20 Nov. 1866, AIA Archives. At the same meeting, Eidlitz further proceeded to question Hunt about his professional ethics, as he had submitted drawings to a potential client without asking to be paid for them, ostensibly one of the practices the AIA was trying to eliminate:

“Eidlitz thought it was contrary to the recognised etiquette, and that no member of the Institute should enter upon a competition without remunerative [sic]. Mr Hunt said he had been wrong—although he was not aware that there was any rule in the institute in regard to competitions. Mr Post said, if it were understood that members should not compete without pay, it would deter the younger members from entering upon competitions, as only the older architects would be likely to be invited. Mr Eidlitz said that there was no rule, but a tacit understanding on the matter. He did not think, however, that architects outside of the regular paid competition should be debarred from volunteering designs. Mr Hunt was led to conclude from the discussion the he had not been so far wrong after all, and Mr Post seemed satisfied with the admission as the volunteered designs, the discussion was dropped.”

57. See for example, the meeting of 1 February 1867, in which Eidlitz presented a paper on competitions “which was a refreshing and encouraging episode in the usually monotonous and easily conducted consultations of the Institute. The most habitually taciturn now became earnestly eloquent and . . . eager were all to express their convictions at the same moment.” Eidlitz pushed for a vote on his proposal for setting rules for participation in competitions and the proposal failed. Minutes of the AIA for 1 Feb. 1867, AIA Archives.

58. Emlen T. Littell, Chair of the Committee on Education, *Proceedings of the AIA [1869]*, 143–44, 144 quoted (see n. 18).

59. William R. Ware and Thomas W. Walter, “Report of the Committee on Education,” *Proceedings of the Fifth Annual Convention of the American Institute of Architects [1871]* (New York, 1872), 14.

60. Cohen, “Building a Discipline,” 176–77 (see n. 9); Woods, *From Craft to Profession*, 58–60.

61. Ware, *Outline*, 6 (see n. 25).

62. For William Barton Rogers’s concept of the useful arts and the founding of MIT, see Alex J. Angulo, “William Barton Rogers and the Idea of MIT” (Ph.D. diss., Harvard University, 2003). On the École Centrale des Arts et Manufactures, see Pfammatter, *Making of the Modern Architect*, 103–207 (see n. 32), and Charles Day, *Education for the Industrial World: The Écoles d’Arts et Metiers and the Rise of French Industrial Engineering* (Cambridge, Mass., 1987), esp. 13–18.

63. In the AIA’s annual proceedings, the editor notes that Ware failed to submit the text of the paper for publication. See *Proceedings of the AIA [1869]*, 170. The theme of the paper can be deduced by the ensuing discussion, which was published in the proceedings, and by an article in the *New York Times*, which stated, “The attempt to introduce the scientific method into the study of art, as there is a natural tendency to do, it was the object of this paper to discountenance.” “The Architects’ Council,” *New York Times*, 18 Nov. 1869, 1.

64. Frederic A. Peterson, in *Proceedings of the AIA [1869]*, 172.

65. “In addition to instruction in mathematics and engineering required of all students, courses were offered in architectural design, ornament and details, architectural drawing, perspective, and specifications, and there were lectures on history and the orders.” Caroline Shillaber, *Massachusetts Institute of Technology School of Architecture and Planning, 1861–1961: A Chronicle* (Boston, 1963), 12.

66. *Ibid.*, 18.

67. This passage is from a toast that Eidlitz delivered to the AIA at its first annual dinner held on 22 February 1858 at Delmonico’s restaurant in New York. Eidlitz, “The Day We Celebrate,” *Crayon* 5 (Apr. 1858), 110.

68. Eidlitz’s brother, Marc Eidlitz, was a building contractor and an active member of the General Society of Mechanics and Tradesmen of New York City, which Eidlitz joined in 1870, just after quitting the AIA. The membership rolls of the General Society were published in *Manufacturer and Builder*. Though they worked together and shared many political acquaintances and concerns, Leopold and Marc also circulated in different circles,

with Marc adopting a German Catholic social network that eventually led to his presidency of the Germania Bank of New York. See Theodor Lemke, *Geschichte des Deutschthums von New York, von 1848 bis auf die Gegenwart* (New York, 1891), 86–90, and Marc Eidlitz & Son, *Marc Eidlitz & Son, 1854–1904* (New York, 1904).

69. Louis Sullivan, *Autobiography of an Idea* (New York, 1956), 186.

70. On Létang, see Shillaber, *MIT*, 12–15 and the obituary in *The Tech*, 12 (8 Dec. 1892), 1.

71. J. A. Chewning, “William Robert Ware at MIT and Columbia,” *Journal of Architectural Education* 33 (Nov. 1979), 26.

72. Ware, *Proceedings of the ALA [1869]*, 171.

73. Ware, *Outline*, 19 (see n. 25).

74. Sullivan, *Autobiography of an Idea*, 189. On Rotch, see Harry L. Katz and Richard Chafee, *A Continental Eye: The Art and Architecture of Arthur Rotch* (Boston, 1985).

75. Eidlitz, “On Style,” 142 (see n. 17). Eidlitz concluded “On Style” with an early call for the AIA to open an architecture school that would properly teach the history of the art.

76. Benjamin Franklin Greene, third director of the Rensselaer Polytechnic Institute (RPI), completely reformed its curriculum in 1849–50 so that it would become what he envisioned as a “true polytechnic” whose object was “the education of ARCHITECTS and CIVIL MINING, and TOPOGRAPHICAL ENGINEERS, upon an enlarged basis, and with a liberal development of Mental and Physical Culture.” Benjamin Franklin Greene, *The Rensselaer Polytechnic Institute: Its Reorganization in 1849–50, Its Condition at the Present Time, Its Plans and Hopes for the Future* (Troy, N.Y., 1855), 5. However, due to a lack of funds the board delayed implementation of the full architecture program and focused instead on civil engineering. Greene’s revised curriculum was based on his study of European polytechnical curricula and in no small part on the writing of Dr. Lyon Playfair, the first chemist at the School of Mines, London. Playfair published an extremely influential pamphlet in 1853, “Industrial Education on the Continent,” which concluded that German polytechnic schools provided the best model for England to emulate in its quest to modernize. Playfair’s pamphlet was well known in the United States and provided much of the raw material for Greene’s report. While Greene found much to admire in French polytechnic instruction, the comprehensive and systematic nature of the German system gave it practical advantages. For a history of RPI, see Palmer C. Ricketts, *History of Rensselaer Polytechnic Institute*, 3rd ed. (New York, 1934).

Jeffrey Cohen has shown both that the Polytechnic College in Philadelphia offered the first architecture program in America and that it was based on “mainly German” models. The college itself used the polytechnic school in Karlsruhe and the École Centrale des Arts et Manufactures in Paris as inspiration. Cohen, “Building a Discipline,” 171, 175 (see n. 9).

77. Richard Morris Hunt, quoted in *Proceedings of the ALA [1869]*, 171, 172. See additional comments by Ware, Hunt, Russell Sturgis, and Frederick Peterson on 170–72.

78. Russell Sturgis, quoted in *ibid.*, 172. On Sturgis’s time in Munich, see Karin May Elizabeth Alexis, “Russell Sturgis: Critic and Architect” (Ph.D. diss., University of Virginia, 1986), 12–13, and Marjorie Pearson, “The Writings of Russell Sturgis and Peter B. Wight: The Victorian Architect as Critic and Historian” (Ph.D. diss., City University of New York, 1999), 34–35.

79. A. J. Bloor, *Architectural and Other Art Societies of Europe* (New York, 1869), 99. For a fuller description of the German system, see 100–101.

80. Karl Heinzen, *Pionier*, 1 Aug. 1858, quoted in Stanley Nadel, *Little Germany: Ethnicity, Religion, and Class in New York City, 1845–80* (Urbana and Chicago, 1990), 104.

81. “The developing German-American elite remained distinct from the

native elite of New York, though it sometimes lost its children to the natives . . . . The strong ethnic group solidarity that had developed in the early years when the elite was part of the fabric of Kleindeutschland was maintained by numerous social institutions and tended to promote the continued existence of a distinct German-American elite in New York until it dissolved under the intense anti-German pressures of World War I.” Nadel, *Little Germany*, 86–87. And, Nadel notes, in the wake of the building of the opulent Liederkrantz Halle on East 58th Street, “needless to say, all thought of erasing social distinctions [between Germans and Americans] had been thoroughly abandoned” (115).

Many German-speaking architects, upon their arrival in the United States, chose either to find their clients within their own immigrant communities or to become partners with native English-speaking architects and remain behind-the-scenes as designers and technical advisers. Michael J. Lewis, “The Architectural Competition for the Philadelphia Academy of Music, 1854–1855,” *Nineteenth Century* 16, no. 2 (1997), 3–10. Kathleen Curran’s wide-ranging discussion of the German *Rundbogenstil* and its impact on Protestant church designs and schools in the United States provides coverage of some of the other ways that German architectural principles did impact American practice. Curran, *Romanesque Revival*, esp. chs. 6, 7 (see n. 37).

82. Anthony Trollope, *North America* (1862; New York, 1951), 204, quoted in Ellen W. Kramer, “The Domestic Architecture of Detlef Lienau, A Conservative Victorian” (Ph.D. diss., New York University, 1957), 88. In Kramer’s dissertation, see also the discussion of the emergence of French fashion and its impact on architectural taste in New York (esp. 87–96).

83. Hunt and Sturgis’s exchange can be found in *Proceedings of the ALA [1869]*, 172.

84. Babcock’s statement at an AIA meeting as recorded by Hunt and published in “Architecture,” *Crayon* 4 (Dec. 1857), 372.

85. “He was perhaps the most conspicuous of the German Architects practising in this city.” Ware to William Emerson, 19 May 1897. Recorded in the Royal Institute of British Architects (RIBA) Council minutes, 1896–97, 271–72, Archives of the Royal Institute of British Architects. The RIBA was considering giving an honorary membership to Eidlitz and wrote to Ware asking his opinion of Eidlitz’s career and writing. Eidlitz received the honor despite Ware’s cool assessment.

86. Again, Woods provides an excellent overview of the conflict between architects and builders. “Both Babcock and Ware believed that university training objectified the distinctions that early professionals had unsuccessfully drawn between architects and builders.” Woods, *From Craft to Profession*, 67 (see n. 1). See also Cohen’s discussion of the same theme in Philadelphia: “The ascendancy of Beaux-Arts architectural pedagogy nationally in the decades after the American centennial must have left the program at the Polytechnic College [in Philadelphia] in even deeper shadows . . . . Even if financial support had been forthcoming to the Polytechnic College, such expectations among potential students would likely have constricted the eventual role of its architectural school. Those with the means, fulfilling a more aristocratic image of architects as the social equals of their clients, attended university programs, and generally predominated among the first rank of American architects.” Cohen, “Building a Discipline,” 176 (see n. 9).

87. Townsend Harris to James Kent, 23 July 1847, James Kent Papers, Library of Congress, quoted in Thomas Bender, *New York Intellectual: A History of Intellectual Life in New York City from 1750 to the Beginning of Our Own Time* (New York, 1987), 105.

88. Among the classified ads Eidlitz published in the *New York Times*, one read: “Draughtsmen Wanted—Immediately, three expert draughtsmen. To thorough architects, a good salary and steady employment will be given, no others need apply. Also two boys, 16 or 17 years old to learn the profession,

one as draughtsman, the other as clerk. Best references required. Those who have passed examination at the Free Academy preferred. Apply at my office, at 2 P.M. Leopold Eidlitz, Architect, No. 298 Broadway." *New York Times*, 14 Feb. 1853, 5.

89. Edward C. Miller appears on the instructor's list for the 1891 session of the Cooper Union. Cooper Archives, Cooper Union Library. Miller worked for Vaux in the early 1870s; his name appears on invoices that Vaux submitted for work done in preparing estimates for the completion of the New York County Courthouse. Tweed Papers, Box 8, Museum of the City of New York.

90. On the history of these educational institutions, see Bender, *New York Intellect*, and Phyllis D. Krasnick, "Peter Cooper and the Cooper Union for the Advancement of Science and Art" (Ph.D. diss., New York University, 1985).

91. Upjohn had, in the early days of the AIA, unsuccessfully sought out Cooper to lend the fledgling group meeting space in the newly completed Cooper Institute Building. Minutes of the AIA meeting, 16 Feb. 1858, AIA Archives.

92. An article in the *New York Times* listed all the company's investors, which also included Boss Tweed himself, William M. Tweed, his henchman Peter B. Sweeny, Eidlitz's brother Marc, Manton Marble (editor of the *World*), and William A. Booth (another important repeat client of Eidlitz). "The Viaduct Railway," *New York Times*, 10 Mar. 1871, 5. Eidlitz and Serrell published a prospectus describing the financing and operation of the Viaduct Railway: *A Viaduct Railway for the City of New York; as Designed by John J. Serrell and Leopold Eidlitz* (New York, 1870).

93. The building's foundations had been altered in 1881 to make space for additional classrooms in the basement. "Building Intelligence," *Manufacturer and Builder* 13 (Oct. 1881), 224. These alterations, in addition to the stories added in a previous alteration, in 1880 may have been the source of the foundation problem Eidlitz was called in to deal with. For Eidlitz's contributions, see "Repairing the Cooper Institute," *Scientific American, Architects and Builders Edition* 1 (Dec. 1885), 39.

94. Eidlitz, *Big Wages*, 123–25 (see n. 45).

95. Edward Mack, *Peter Cooper: Citizen of New York* (New York, 1949), 266, quoted in Krasnick, "Peter Cooper," 129–30.

96. "Practical Art Education," *Architectural Review and American Builders' Monthly* 3 (July 1870), 1–3.

97. Charles G. Leland, "Polytechnic Institutes," *Continental Monthly* 2 (July 1862), 83, 84. Charles Godfrey Leland was a Philadelphia-born journalist who studied in Germany and actively supported the Union in the Civil War through his prolific publications. While best known for his "Hans Breitmann Ballads," humorous poems written in broken German and English, he was also active in supporting arts and crafts education in Philadelphia in the later nineteenth century.

98. For a summary, see Cohen, "Building a Discipline," 181–82 (see n. 9).

99. William Ware to Waldstein, 1904, Ware Papers, MIT Archives, Cambridge, Mass. Quoted in Chewning, "Ware at MIT and Columbia," 25 (see n. 71).

100. Eidlitz, "The Day We Celebrate," 111 (see n. 67).

101. Steven M. Bedford and Susan M. Strauss, "History II: 1881–1912," in Richard Oliver, ed., *The Making of an Architect, 1881–1981* (New York, 1981), 33. It should be noted that compared to other members of the pro-

fession, Ware was mild in his elitism; in his later years at Columbia, he resisted, unsuccessfully, the machinations of Charles Follen McKim to engineer an "elite cadre" of prize-winners to oversee Columbia's architecture program. See Richard Plunz, "Reflections on Ware, Hamlin, McKim, and the Politics of History on the Cusp of Historicism," in Gwendolyn Wright and Janet Parks, eds., *The History of History in American Schools of Architecture 1865–1975* (New York, 1990), 68.

102. Eidlitz, "The Educational Training of Architects," *Journal of the Royal Society of British Architects* 4 (1897), 216.

103. See Anthony Alofsin, "Tempering the École: Nathan Ricker at the University of Illinois, Langford Warren at Harvard," in Wright and Parks, *History of History*; and Roula Geraniotis, "The University of Illinois and German Architectural Education," *Journal of Architectural Education* 38 (summer 1985), 15–21.

104. See Anthony Alofsin, *The Struggle for Modernism* (New York, 2002), esp. ch. 2, and Alofsin, "Towards a History of Teaching Architectural History: Herbert Langford Warren," *Journal of Architectural Education* 33 (autumn 1983), 2–7.

105. See, for example, the report on architectural education sponsored by the Carnegie Foundation—Ernest L. Boyer and Lee D. Mitgang, *Building Community: A New Future for Architecture Education and Practice* (Princeton, 1996)—which makes two key recommendations: for architects to develop a greater social conscience as practitioners and for architectural education to become less exclusive and reach a broader audience in order to engage society at a more basic level in architectural production.

106. Bedford and Strauss, "History II," 34–37.

107. For an account of the arrival of modernism in an American architecture school, see Alofsin, *Struggle for Modernism*; for a firsthand account, see Albert-Bush Brown on the change from the Beaux-Arts to modernism at Georgia Tech: "The conflict between the Bauhaus and the Beaux-Arts was a conflict in objectives and methods of teaching of teaching." Albert Bush-Brown, *Beaux Arts to Bauhaus and Beyond* (New York, 1976), 29–36, 36 quoted.

108. Walter Gropius, *The New Architecture and the Bauhaus* (Cambridge, Mass., 1965), 81–82.

109. Eidlitz, *Nature and Function of Art*, 489 (see n. 3).

110. *Ibid.*, xv.

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