At the dedication ceremonies of Trinity Church, Boston, on 9 February 1877, Henry Hobson Richardson described the style of the new building that would launch his national reputation. “The style of the Church,” he stated, “may be characterized as a free rendering of the French Romanesque, inclining particularly to the school that flourished in the eleventh century in Central France—the ancient Aquitaine” (Figure 1).

Richardson wrote very little. It seems the more noteworthy, then, that for a prestigious audience, which included the intellectual elite of Boston, he spent time explaining the Byzantine origins of the Romanesque architecture of Aquitaine. Scholars have long appreciated the significance of this statement for understanding Richardson’s concept of the composition of Trinity Church. However, they have been less interested in the sources of his ideas about the historical development of Auvergnat architecture. Instead, they have focused on identifying individual buildings that may have inspired particular elements of the church.

In fact, Richardson’s ideas can be traced to French nineteenth-century sources that, in turn, provide an expanded framework for understanding three of the most celebrated aspects of his architecture—his commitment to the round arch, his attention to the articulation of the wall, and his mastery of balanced composition. I approach the relationship of French theory to Richardson’s work through three topics. First I pursue the importance of French ideas about the Romanesque in the writings of Eugène-Emmanuel Viollet-le-Duc and Léonce Reynaud. This discussion in turn places Richardson’s architecture within the trajectory of what scholars have called the round-arched style. Then I analyze the visual forces of the walls in Richardson’s buildings in light of Viollet’s and Reynaud’s theories about the structural dynamics of arch and wall construction. Lastly I suggest that Richardson’s particular approach to asymmetrical composition may be traced to the methodology of dessin au trait taught at the Ecole des Beaux-Arts in Paris.

This article does not challenge the originality and importance of Richardson’s contributions to American architecture nor does it rewrite the established narratives of the trajectory of his development. Rather, it queries the privileging of Anglo-American influences on his work and the concomitant undervaluation of French ideas and methodologies. In particular, it shifts emphasis from Ruskinian influences by reconsidering the discourses that Richardson would have encountered during his years of study in Paris.

Scholars of Richardson’s work have used the theories of John Ruskin to explain Richardson’s use of polychromatic stonework, the power of his rough stone surfaces, and the bold clarity of his silhouettes as well as his attraction to Venetian Byzantine capitals and moldings. Ruskin’s characterizations of medieval walls as analogous to geological strata, worn and transformed by time, and responsive to local conditions of
light and shade are cited as inspirations for Richardson's work. Ruskinian poetics also are seen as complements to the influence of Richardson's friend, Frederick Law Olmsted. Not only did Olmsted design many of the landscapes that enhance Richardson's buildings, but his transcendental understanding of nature and his love of the pastoral picturesque are viewed as reinforcing Richardson's taste for the expressive qualities of natural materials, particularly stone, and for asymmetrical compositions of harmonious and generous volumes.

Yet, Ruskin and the picturesque were major influences on many Anglo-American architects whose work differs significantly from Richardson's in style and composition. In a telling distinction between Richardson's buildings and those of his contemporaries, James O'Gorman typifies Victorian Gothic not only as asymmetrical and polychromatic but with “accumulated, diverse, and nervous detail.” In contrast, he describes Trinity Church as “coherent, balanced, and serene.”

A wide range of precedents have been suggested for Richardson's architecture. Scholars have found parallels in his work with that of his British contemporary William Burges, Japanese buildings, Norman rural residences, the American vernacular, the granite tradition of New England, and the contemporary German-influenced rundbogenstil, as well as French medieval architecture. They have stressed his extraordinary ability to adapt a heterogeneity of sources to his own distinctive style. Indeed, Richardson has been credited with “invent[ing] a personal solution to the problem of eclectic styles run wild, giving birth in the process to a new, individual and widely imitated vocabulary.” Significantly, the methodologies he learned in Paris supported a synthetic approach to sources.

Henry Hobson Richardson was not self-taught in architecture, nor did he follow the customary Anglo-American practice of apprenticeship to an established architect. Instead, unlike most of his contemporaries in the United States, Richardson went to Paris to study at the Ecole des Beaux-Arts. It is recognized that his work cannot be understood without considering what he learned during the six years—from 1859 to 1865—he spent studying architectural design at the Ecole in Paris. Nevertheless, the scope of the Ecole's influence on Richardson's work has been underestimated.

O'Gorman insists that “any well-rounded assessment of Richardson's achievement must include an understanding of the profound impact of his experience in Paris as well as the way he absorbed that experience into his own programmatic mission.” The skills that he attributes to Richardson's Ecole education are all in keeping with what has become the normative understanding of the Beaux-Arts method of design: in Paris, Richardson gained the ability to make a “clear analysis of the building program into served and servant spaces followed by the equally clear synthesis of these parts into a balanced hierarchical axial arrangement in both plan and elevation [that] was the essence of Ecole design.” Also significant was the ability “to generate quickly a central idea,” or parti, and to represent that idea “in a simple graphic shape comprehensible at a glance.” In O'Gorman's view, his education gave Richardson the tools he needed “to discipline the picturesque,” which “was his aim and his achievement.”

Yet, however significant scholars consider the Beaux-Arts influence to have been for Richardson's architectural achievement, they also view it as circumscribed. In particular, what Richardson learned in Paris is thought not to have shaped his stylistic preferences. O'Gorman insists, “we can judge from his mature works, in which he eschewed classical details, that knowledge of the esquisse process and the
rational analysis of building programming far outweighed the trappings of classical style in the aspiring architect’s homeward baggage.\footnote{11}

Furthermore, how Richardson managed to adapt the teachings of the Ecole for his own work, which is so stylistically and compositionally unlike the symmetrical classical buildings associated with the school, has remained unclear. However, a consideration of French nineteenth-century theories about style, the forces in play in masonry construction, and balanced composition suggests that Richardson owed more to his understanding of the robustness of French ideas and methods than has been generally recognized. His ability to adapt a wide range of sources to his own ends may be attributed to the attitudes about style and composition that he acquired in France.

Richardson and Viollet-le-Duc

The Ecole did not insist on the classical vocabulary to the exclusion of all others. In fact, scholars have observed that the design of Trinity Church owes something to Ecole projects.\footnote{12} O’Gorman described the 1864 winning Prix de Rome design for a hospice in the Alps by Richardson’s friend Julien Guadet as “Romanesque . . . with an interior almost Byzantine in . . . its decorative scheme.”\footnote{13} The work of Barry Bergdoll, Neil Levine, and David Van Zanten on nineteenth-century French architecture suggests that Guadet’s design was not an aberration but a manifestation of ideas about a round-arched tradition, which, over the course of thirty years, had gradually reshaped thinking about the appropriate style for French architecture.\footnote{14}

In search of a tradition of arcuated construction, this nineteenth-century research and theory had constructed a trajectory of architectural development that led from Roman through medieval to Early Renaissance architecture. Bergdoll and Van Zanten have associated these theories with the idiosyncratic classicism of Louis Duc, Félix Duban, and Henri Labrouste and also with the work of Léon Vaudoyer. His Marseille Cathedral (1852–93), designed in a Romanesque-Byzantine style, was the most important church built in France in the second half of the nineteenth century (Figure 2). Bergdoll claims that “Vaudoyer’s cathedral was the center of the debate at mid-century over historical models and the quest for modern architecture” and that the debate “quickly spread from the administration of public architecture to the professional and public press.”\footnote{15} Although Viollet-le-Duc drew different lessons from his study of the past than did the people associated with the Néo-Grec circle (so named because of their architecture’s associations with the Byzantine style), his writings too were part of this debate.\footnote{16} In short, at the time Richardson was studying in Paris, the Romanesque-Byzantine style was a focus of discussion.

These nineteenth-century debates about the development of French medieval architecture focused on defining the distinctiveness of particular regional schools and explaining the reasons for the local characteristics. As Bergdoll explains, this research advanced under the auspices of the Service des Édifices Diocésains, created in 1853 when Hippolyte Fortoul, a key theorist in the Néo-Grec group, was minister of Public Education and Worship.\footnote{17} Bergdoll’s discussion of the work of this group suggests how central the issues about medieval architecture had become by the 1850s.

Bergdoll explains that, in 1853, Reynaud, Vaudoyer, and Viollet-le-Duc were each assigned areas of France and required to report on the status of medieval buildings there. The assignments were distributed on the basis of each architect’s particular expertise. Viollet, with his knowledge of Gothic architecture, was responsible for “most of the great Gothic cathedrals of the Île-de-France, Lower Normandy, the Auvergne, and Alsace-Lorraine.” Reynaud, who had participated in the debates about the domed cathedrals and churches of Aquitaine and the southwest, was given these areas, which included the cathedrals of Périgueux and Angoulême. Significantly Reynaud had argued in the first volume of his Traité d’Architecture (1850–58) “that far from being oddities that violated a norm represented by the great Gothic cathedrals of the north [as Viollet claimed], they were the buildings that linked French medieval tradition to its roots in Lombardic Italy and ultimately to the Byzantine east.” Vaudoyer was given a district that included parts of southern France, Algeria, and Corsica that he valued “as faithful upholders of Romanesque and Lombardic types.”\footnote{18}

It was in Paris that Richardson began the collection of architectural books that would form his professional library.\footnote{19} Although it has been argued that Richardson was not an admirer of Viollet-le-Duc, inventories of Richardson’s library reveal that he owned a significant number of books by Viollet, including the Dictionnaire raisonné, the ten volumes of which were published between 1854 and 1868.\footnote{20} A brief review of the Dictionnaire suggests how much it had to offer Richardson if read for its historical insights and technical information and not for its overarching polemic. In particular, Viollet’s famous essay “Architecture the Art of Construction” in volume one yields clear parallels with Richardson’s ideas about the lineage of French domed medieval churches. Viollet writes: “In the center of geographic France there was the great province of Aquitaine. . . . Now it was in this vast province, and only in
Richardson had been quite specific that the lineage of Auvergnat churches could be traced not only to Venice but as far back in time and space as Constantinople. Viollet had made this very point in his entry “Coupole” in volume four of the Dictionnaire. There he asserts that the church of Notre-Dame du Port à Clermont was one of the most interesting monuments in France because it combined a Roman basilican plan with domes like those of Hagia Sophia. He says of the building in Constantinople that, for the artists of the eleventh century, it was “a type, an incomparable work, the supreme effort of human intelligence.” He states that Notre-Dame du Port is “absolutely like” the grand church of Hagia Sophia in the approach to buttressing the major dome and the piercing of the lateral walls under the dome with arcades. Viollet then goes on to contrast the lineage of the church in Clermont, which he says was inspired directly by Hagia Sophia, with that of St. Front at Perigueux, which he claims derived from the intermediate example of St. Mark’s in Venice, a point that draws attention to the contemporary controversy over the sources of the tradition of domed churches in France.

In his speech, as we have seen, Richardson stressed the distinctiveness of the Auvergnat type of church tower, which not only seemed to have been inspired by domes but, in Richardson’s words, also “became, as it were, the church.” Significantly, Viollet’s 124-page entry “Clocher,” in volume three of the Dictionnaire, provides a remarkable map that traces the lines of influence of various church-tower types in eleventh-century France (Figure 3). “H” on the map is Clermont, “seat of the Auvergnat school.” Thus, for Viollet, the Romanesque of Auvergne is notable both for its domes and its towers.

If these writings of Viollet-le-Duc resonate with Richardson’s speech at the dedication of Trinity Church, more generally the Dictionnaire offered Richardson an immense amount of concrete knowledge about the details of Romanesque building. For Viollet, the Romanesque was only an evolutionary stepping stone to his beloved Gothic, but that transitional role made it all the more important that he delineate the Romanesque antecedent precisely. All Richardson would have had to do is stop reading midway through Viollet’s developmental trajectory to gain an A-to-Z understanding of the form, structural rationale, and historical influences shaping the characteristics of Romanesque buildings. Thus, despite the fact that Richardson had joined the students who walked out in protest when Viollet lectured at the Ecole, and despite the fact that Richardson did not favor the Gothic style that Viollet so ardently championed, still Richardson had more than one reason to be interested in his writings.
Even a quick sortie into the alphabetically ordered entries in the *Dictionnaire* yields interesting associations with Richardson’s work. Three entries that complete the As in volume two make the point:

“Assise” is defined as a single course of masonry. Viollet stresses that medieval masons based the appropriate height of a given *assise* on the height of the material as found in the quarry. One need not look further to understand Richardson’s interest in parallels between geological formations and masonry construction, parallels that have previously been credited to his interest in Ruskin and his associations with Olmsted.

“Astragale” draws attention to a particular detail of Richardson’s columns, the ring that encircles the shaft near the base of the capital. Viollet discusses this molding as a marker of the evolution from Romanesque to Gothic, making his points with shaded section drawings that illustrate with exactitude the differences in the form and placement of this molding in various periods (Figures 4, 5). He claims that the *astragale* until the twelfth century, and even later in...
Figure 4 "Astragale," entry in Viollet-le-Duc, Dictionnaire raisonné, volume 2 (1867), 10–11

Figure 5 "Astragale," entry continued in Viollet-le-Duc, Dictionnaire raisonné, 2:12–13
some places including Auvergne, was an element of the shaft, not the column. Thus a detail of Richardson’s build-
ings, which might easily be overlooked, can be seen as a salient marker of the Romanesque style when viewed through Viollet’s analysis.

“Auvent,” a wooden hood used over doors, store fronts, or ground-floor rooms to shelter persons entering and leaving, is accompanied by a vignette that is particu-
larly suggestive for Richardson’s work (Figure 6). Viollet’s drawing vividly contrasts the lightweight carved wooden construction with the heavy masonry walls. It thereby evokes that combination of monumentality and attention to elements of comfort and convenience that characterizes Richardson’s work.

The French Debate about the Round-Arched Style

If Richardson learned from Viollet-le-Duc a precise history and vocabulary of medieval building, Reynaud’s Traité d’archi-
tecture offered him a strong antidote to Viollet’s privileging of the Gothic.28 Richardson not only owned the two-volume Traité, he may even have had a tenuous association with Rey-
aud.29 According to Van Zanten, Traité was an expansion of ideas that Reynaud had developed in association with the Saint-Simonian circle in the 1830s (with which Fortoul and Vaudoyer were also connected) and that he had shaped into the course he taught at the Ecole Polytechnique beginning in 1837. Reynaud’s Traité d’architecture became “the principal architectural treatise of mid-century France.”30

In his speech at the dedication of Trinity Church, Richardson explicitly distinguished the French Romanesque from both the classical and the Gothic styles. The Romanesque was notable, he said, for “differing from the classical manner in that, while it studied elegance, it was also constructional, and from the succeeding Gothic, in that, although constructional, it could sacrifice something of mechanical dexterity for the sake of grandeur and repose.”31 The terms of his comparison with the Gothic echo the position of Reynaud.

In Traité, Reynaud considers the relative merits of the Romanesque in relation to the Gothic style: “This art is the Romanesque. It is calm, serious, monumental, has a very pronounced religious character and lends itself equally to a great richness or an extreme simplicity. It is not dogmatic, does not have formulaic rule or sacrosanct proportions. It adapts to all exigencies, accommodates all materials and can vary the forms of its columns and all its ornament, accord-
ing to circumstances.”32 Although he admits that the Romanesque can be criticized for heaviness in forms and timidity in conceptions, he argues that “it rested on too broad a foundation, it showed too much independence, while relating to the architecture that preceded it, for any-
one to doubt the development of which it was susceptible. Its imperfections lay at the hands of those who built it and not its principles.”33

Reynaud then explains the unfortunate shift to “le style ogive,” the Gothic style, which occurred “at the moment that Romanesque architecture had just raised its most important constructions and where . . . it appeared to be called to make rapid progress.”34 In a lengthy passage, he traces the changes in vaulting that had led to this shift. He underscores that “the establishment of vaults had been the great preoccupation of architects since the beginning of the 11th century.”35 However, the obsession with the pointed arch caused problems. “All vaults whatever their span, all arches whether big or small are laid out with pointed ribs.”36

Reynaud’s critique of Gothic architecture is wide rang-
ing and virulent. He insists that Gothic architecture viol-
ated the very fundamentals of architecture. “If the decadence of Gothic art was rapid and more complete than any in the saddest epochs of art, it is because the point of departure was erroneous.”37 More precisely,

Gothic architecture violated the fundamental conditions of art, . . . wishing to deny the laws of materials . . . for an excess of spirituality; it is more studied, more precise in its intentions than previous architectures; but it has disdained the real, it has lost touch with this solid support, this salutary guide. After admitting only rational forms when it was supported by the
spirit that governed Romanesque architecture, it researched with fervor and accepted all those that seemed by nature to meet its ideals. Those that were favorable to stability, suitable to the nature of materials, appropriate to the durability of buildings, these qualities meant little to it; its conception of the beautiful was outside them, even in opposition to them.38

Although Reynaud favors, as Van Zanten says, a style inspired by the early Renaissance, nonetheless there is no question that his treatise presents the Romanesque as a style whose potential remained unfulfilled. Furthermore, Van Zanten notes that Reynaud proposed “a continuous round arched tradition extending unbroken from Rome to the Renaissance.”19 Reynaud’s associate Vaudoyer had characterized this tradition as the emancipation of the arch. “We attach the greatest importance to this event, the emancipation of the arch: because it is by this . . . that one may explain naturally the formation of Byzantine art, of Arab art, of Roman[esque] art and of Gothic art.”40 Vaudoyer’s cathedral design made clear these associations. “Evocations of the domes of Byzantium, the marble-clad cathedrals of Tuscany, the portals and minarets of the mosques of Cairo, and the radiating chapels of French pilgrimage churches on the road to Santiago de Compostela abound.”41

Thus the round-arched tradition, as Van Zanten makes clear, was an eclectic one. In fact, it seems remarkably similar in its stylistic mixture to Richardson’s work, which has been described as “an alternate eclectic mode combining elements of three general styles . . . the Syrian Early Christian, the Byzantine, and the French and Spanish Romanesque.”42 Knowledge of French theories on the round-arched style seems implicit in Richardson’s synthesis, just as it complements an interest in Ruskin.

There are other clues to Richardson’s interest in Reynaud’s ideas, among them Richardson’s interest in the Lombard style. Van Zanten states that part of Reynaud’s efforts to construct a continuous round-arched tradition involved his advocacy of the existence of buildings dating from the early Lombard period. Van Zanten says that “Leonce Reynaud . . . reintroduced the Lombard style [in his Traité]. . . . In 1860 Ferdinand Dartien . . . a student of Reynaud . . . led a mission to study the architecture of northern Italy. He published the results . . . as his compendious Etude sur l’architecture lombarde [et sur les origines de l’architecture romano-byzantine] (1865–82). He backs Reynaud, step by step.”43 Richardson owned Dartien’s book. Given its arcane argument, his ownership of it is suggestive of his attention to the nuances of the round-arched debate.

Richardson may have acquired an interest in Reynaud’s Traité on his own, but it is also possible that his decision to study in the atelier of Louis-Jules André contributed to his awareness of its importance. André had opened his atelier in 1856 at the request of former students of Labrouste.44 Indeed, Richardson’s friend Julien Guadet had first studied with Labrouste and then moved to the Atelier André.45 Strengthening the possibility of a more than incidental link between the atelier, the Néo-Grec circle with which Reynaud was associated, and Richardson is the fact that André helped Richardson get a position in the office of Henri Labrouste’s brother, Théodore. Although Théodore Labrouste was not central to the Néo-Grec group, he had historical and personal connections to it.46 Whatever the web of connections may have been, the very fact that Richardson preferred to speak French rather than English after he returned to the United States in 1865 indicates that he was not prepared to turn his back on his formative experience in France.47

The Forces of the Wall

Richardson’s desire and ability to adapt French theory and methodology to his own ends became evident only after he acquired some experience in his American practice. His very first commissions do not predict his personal adaptation of the round-arched style that would come to characterize his work.48 However, it might be noted that even his early houses—which are wooden variants of the Second Empire style—articulate the structural frame, and Néo-Grec detail can be found on his early brick buildings, suggesting French influence on his work from the start. Furthermore, only five years after his return from Paris, Richardson did in fact use round arches at his Brattle Street Church at a time when the Gothic was the preferred medieval-inspired style. Certainly his work of the 1870s onward manifests concerns that resonate with French theory.49

Violette-le-Duc argues in his Dictionnaire essay on construction that the Gothic architects discovered “a new system based on the principle of elasticity, . . . [which was] destined to replace the principle of absolute stability on which the Romans had relied.”50 Violette asserts that this discovery resulted from the desire for masonry vaults in the absence of the knowledge and societal conditions necessary for emulating Roman vault construction. He also says that “Romanesque arches [because of their innovations in masonry construction] presented a certain amount of elasticity.”51 He states further that “Gothic architecture . . . stemmed from nothing else but a very rigorous analogical application of the system of construction inaugurated by the Romanesque architects.”52 Violette’s narrative contrasts the monolithic construction of the Romans with the elasticity of
Richardson's choice of materials is to return to the moment of the inception of the French Renaissance work. As Van Zanten puts it, for Reynaud, the task of the modern architect is to return to the point of the inception of the Renaissance. He continues: “Everyone has been able to observe the happy effects that combinations of stones of various dimensions or colors produce. Chains of cut stone which link at intervals the horizontal courses into a single composition, and between them masonry of small building stones or bricks” suffice in many circumstances. Reynaud's emphasis on the differentiation in size and color of materials to achieve an intrinsic architectural decoration has implications for Richardson's architecture. Admittedly, Reynaud’s analysis of masonry walls suggests that proper diversity in size and placement of materials will reveal a vertical concentration of forces rather than the horizontal distribution characteristic of Richardson’s work. But Reynaud particularly favors the early Italian and French Renaissance work. As Van Zanten puts it, for Reynaud, Fortoul, and Vaudoyer, “the task of the modern architect is to return to the moment of the inception of the Renaissance.” One might say that Richardson chose an earlier starting point, one that allowed him to exploit horizontal rather than vertical forces.

Scholars have stressed that Richardson’s masonry architecture is a mural architecture. They note how he exploited the stone coursing, whether of contrasting or monochromatic materials, to draw attention to the continuity and weight of the wall. Richardson had, as Marian Griswold Van Rensselaer put it, “[a] love for broad, plain fields of wall.” Yet, scholars also note the attention that Richardson gave to the scale of headers, jams, and sills; the form of arches; the depth of reveals; and the rhythm of columns and mullions. Indeed, to read the scholarship on Richardson is to collect a lexicon of his alternatives. Masonry walls may be of quarry-faced or dressed stone, or boulders, laid up in random or in layered ashlar. Openings may be flat headed or defined by segmental, round, elliptical, or Syrian horseshoe arches. They may be framed by piers, single or clustered columns, or chamfered jams with or without stops. Voussoirs may be single or in concentric rows, polychromatic or monochromatic. In fact, it could be said that Richardson's architecture is not only emphatically focused on mural construction but also concerned with establishing and resolving the tension between solid and void inherent in such construction. Richardson’s preoccupation with the vibrant unity of the wall offers a creative use of French theory. A close reading of the details of just a few Richardson buildings reveals the means he used to establish complex interrelations between wall and aperture. The Oliver Ames Free Library (1877–79) in North Easton, Massachusetts, which was commissioned the same year that Trinity Church was dedicated, provides an excellent case in point. The scale of the run of windows in the stack wing suggests a well-lit interior as befits a room where librarians must work and locate books (Figure 7). Richardson underscores the extent of the windows by combining the sill with an abutting belt course in the same Longmeadow stone and drawing both well beyond the set of windows to the corner of the building. This transformation of sill into stringcourse establishes it, and by association the windows, as an element of the wall. Thus Richardson elides the distinction between aperture and enclosure.

In another reading, the sill/stringcourse appears as a molding to the actual sills, which are not linear at all but rather are built up of a series of shallow rectangular U shapes (Figure 8). Richardson often used this type of element for window sills. In this case, however, they serve not only to define the individual window but also act as plinths for the single and clustered columns that give rhythm to the window/wall. Although each sill element neatly defines its window, it does not similarly provide a unitary support for a column. Rather the column plinths are built up of multiple sill units. The sill thus belongs not only to the window/wall but also to the window/colonnade. Finally, the plinth/sill actually joins the wall at the end of the run of the windows, where it extends to become one of the quoins marking the vertical terminus of the run of windows. In short, Richardson confounds any single reading of these basic architectural elements, and instead displays a preoccupation with creating a large unity from incomplete and/or overlapping systems.

Richardson makes this unity even more complex by changing the relationship of elements from one part of the building to the other. In the arcade of the gable he uses the same sill type as in the stack wing, though now the sandstone is rough faced (Figure 9). Again, the sill defines a window, but now each sill unit also serves as a complete plinth.
Figure 7  H. H. Richardson, Oliver Ames Free Library, North Easton, Mass., 1877–79. Photographed ca. mid-1880s

Figure 8  Oliver Ames Free Library, detail of windows of the book wing
for a column. So here it is the columns, not the plinths, that are coupled—a condition that Richardson underscores by linking each pair of columns by a single block of Byzantine-style capitals and a single abacus accentuated with a heavy impost block.

Actually, not all the columns are paired. Those that close the end of the arcade are single columns, tied to the wall through the extension of the impost block as a belt course and the abacus as a shelf to support the gable wall. Here, as in the stack wing, elements act in multiple rather than single contexts, blurring oppositions while drawing attention to local conditions of placement. His approach draws attention to the forces of the wall as Viollet and Reynaud advocate but does so in a way that sets his work apart from the more skeletal dynamics of both the Néo-Grec and the Gothic of Viollet-le-Duc.

Adding to the eloquence of Richardson’s masonry is the attention he devotes to distinctions of location. The entrance porch of the Woburn Public Library (1876–79) in Woburn, Massachusetts, gives very clear evidence of this preoccupation (Figure 10). On the side elevation, Richardson highlights differences in position by varying the configuration of the clustered columns and their plinths, which are L shaped at the interior corner, rectangular for the two intermediate column groups, and then thickened to a square at the exterior corner (Figure 11). Seen from the front, it is clear that the greater girth of the last results from its having to receive the broad segmental arch of the entrance.
Polychromatic voussoirs accentuate the relation between arch and polychromatic columns. Yet, the arch is supported only on one side by columns. On the other it rests on a heavy corbel embedded in the red sandstone wall of the stair tower. Spanning between wall and column, the arch establishes both their equivalence and difference.

A similar differentiation may be found in his treatment of the tower of the Oliver Ames Free Library (Figure 12). As the tower merges with the entrance volume it stops and is supported by a corbel. Thus, Richardson emphasizes how deeply the tower is embedded in the block of the entrance. However, at the reentrant angle with the stack wing the tower thickens as it meets the ground, to draw attention to its overall mass. Richardson’s architecture scrupulously references syntactical conditions—both diachronic and synchronic—to rationalize his variety of form and materials.

This syntactical emphasis is in keeping with Richardson’s distinctive management of the forces of the wall. Unlike classical architecture, forces in Richardson’s architecture are not to be understood as transferred downward but rather as dispersed throughout the surface of the wall. Richardson has a multitude of techniques for drawing attention to the presence of forces and their distribution. The overscaled voussoirs, the stilted (or segmental) arches, and the relieving arches over window headers all are in keeping with his desire to dramatize the forces generated when apertures are opened in a wall.

Looking again at the entrance wing of the Ames Library it is clear that the bands of dark sandstone establish a connection from the peak of the gable to the center of the Syrian arch. This connection in turn calls attention to Richardson’s placement of solid over void, a porte-à-faux at odds with classicism. But the intermediary band of stilted arches acting in concert both with the flanking flat-headed windows and the extended impost band creates a different reading. This horizontal band draws attention away from the central axis and, like a bridge, transfers the downward forces outward so they can be carried on the heavy, nearly

Figure 11 Woburn Public Library, side view of entrance porch

Figure 12 Oliver Ames Free Library, view toward tower
unbroken walls that also contain the spread of the great entrance arch.

Richardson’s shaping of the voussoirs of this arcade dramatizes this transfer. Those of the center-most stilted arch are cut so as to appear to bring the weight downward to the coupled columns poised over the great void of the entrance. In contrast, the enframing molding and voussoirs of the outermost arches seem to cascade outward—an effect of their asymmetrical configuration—to come to rest partially on a column, partially on a section of wall. The arcade at once maintains the axis of symmetry, dramatizes the tension between solid and void, and draws attention to the forces at play in the wall. Such asymmetry in the treatment of voussoirs and moldings appears over and over again in Richardson’s work.

Perhaps Richardson’s most telling details are those where he concentrates forces only to disperse them again, as he does in the entrance arcade of Harvard University’s Austin Hall (1881–84; Figure 13). There he draws the wall down to a rosetted triangle, then balances the blunted spandrel over an intercolumniation (Figure 14). The subtle porte-à-faux suggests that the weight of the wall falls to either side of the central arch, a suggestion he encourages through the subtle bulge in the capitals and impost at the point of the spandrels. Yet, by fusing the Byzantine capitals he also creates a rippling energy along the arches that implies that the weight of the wall does not fall through the spandrels but is dispersed along the entrance arcade. This expansion of forces does not extend the length of the façade, however. It is contained by the bulge.
of the stair tower wall on one side and, most slyly, by the puta-
tive barrier of a pilaster resting on an impost block, firmly tied
to the wall with a piece of incised stone (Figure 15). In short,
the same treatment of elements that establishes his overlap-
ning systems and draws attention to differences in placement
and condition serves the larger purpose of dramatizing the
forces of the wall.

Details such as these occur so regularly in Richardson's
masonry buildings that they may be taken as signatures of
his style. In more monochromatic work, such as Sever Hall
at Harvard University (1878–80), one can see how the stone
stops between the flat-headed arches of the windows in the
convex bay bleed across the rolled brick window-surrounds
accentuating the tension of the surface (Figure 16). How-
ever, in the flanking windows the stops taper much more
sharply to act as compressed capitals above the rolled mold-
ings. At the early Brattle Street Church, one might study
the way the large trapezoidal impost blocks of the porch
arcade interrupt the rolled molding at the inner edge of the
voussoirs, dramatizing the transfer of the weight of the wall
to the slender Byzantine columns. At the late Allegheny
County Buildings (1883–88), one might consider how the
relying arches and lintels extend the scale of the deep win-
dows, while the heavy U-shaped sills compress them, thus
subtly establishing an effect of expansion and contraction
across the granite walls.62

If this general preoccupation with the forces of the wall
can be traced to French theory, it is also possible to make
connections between Richardson’s work and more particu-
lar points made by Viollet and Reynaud. In his essay on con-
struction in the Dictionnaire, Viollet points out that the
relation between arch and column changed in the shift from
Roman to medieval architecture. Rather than the column
carrying a complete entablature as in Roman times, “when
Romanesque builders placed an arch on a column, . . .
whether it was an isolated column or an engaged column,
the capital served as a corbeling destined to receive the
impost of the arch; that is to say the capital was a projec-

Figure 15  Austin Hall, detail of west side of entrance arcade

Figure 16  H. H. Richardson, Sever Hall, Harvard University, Cam-
bridge, Mass., 1878–80, detail of east entrance

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tion serving as a transition between the cylindrical shaft of the column and the square foundation for the impost." By supporting an arch with a corbel on one side and a set of columns on the other, as at Woburn Public Library, Richardson acknowledges the homologous condition of these two types of support as Viollet found them in medieval construction.

The fact that Richardson rarely used a simple semicircular arch may also be traced to Viollet. The entry "Arc" in volume one of the *Dictionnaire* defines with lucid diagrams various types of "arcs plein cintré." Viollet points out that these arches formed by a half circle may sometimes be "stilted" or "horseshoe shaped" or "designed with the center below the springing." He maintains that these types were used almost exclusively until the end of the eleventh century, that is until the start of the Gothic period (Figure 17). Richardson preferred these variations to the Roman type of semicircular arch.

Viollet also draws attention to the distinction between a variety of arches based on their construction, and variety “according to their location and constructive purpose.”

The terms he uses to define this latter category include *archivoltes* and *arcs de décharge* (relieving arches). “Arcades” and “Arcature” (small blind arcades that are more decorat-

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*Figure 17* “Arc,” entry in Viollet-le-Duc, in *Dictionnaire raisonné*, volume 1 (1867), 45

*Figure 18* “Arc: archivoltes de portails,” entry in Viollet-le-Duc, *Dictionnaire raisonné*, 1:50–51
tive than functional) are given separate entries. He defines *archivoltes* as “arches which are carried on the piers of naves or cloisters, the engaged piers of portals, porches, doors or windows and which support the weight of walls.” This definition conveys both a range of supports and a variety of apertures where archivolts are appropriate. In the drawings that Viollet provides to explain these variations he draws attention to the relation of arch to wall, even when the arch rests on piers or columns (Figure 18). This emphasis serves his purpose in contrasting the mural quality of Romanesque architecture with the skeletal quality of his preferred Gothic. Richardson’s emphasis on the arch as an element of the wall is in keeping with Viollet’s conception of the Romanesque. The mural quality of the Romanesque is even more evident in his drawings of *arcs de décharge* (Figure 19). This entry provides another connection between Viollet’s analysis and Richardson’s approach to wall and aperture.

Reynaud’s ideas about vaulting also are suggestive for Richardson’s work. Reynaud had suggested that the excesses of Gothic construction could be traced to the medieval obsession with vaulting. Richardson rarely used masonry vaults in his buildings, not even at Trinity Church. Moreover, his justification for plastering the piers at Trinity is telling: “The commonplace criticism that ‘plaster conceals construction’ can hardly be considered to apply here, for the piers and arches being simply portions of the wall, it would be difficult to show any reason for plastering the other walls which would not equally apply to the piers.” Richardson’s emphasis is on the homologous relation between wall and pier rather than the opposition of frame and fill.

Given the lack of vaulting, the heaviness of Richardson’s masonry facades—with their glazing obscured by the shadowed reveals—is the more notable, and it makes the contrast with the wood and plaster volumes within, modeled by natural light, more significant. Although it is true that Richardson uses the windows of his facades to suggest the scale and lighting of the rooms, a Richardson interior is almost always a surprise. Who would predict from the exterior of the Woburn Public Library that the book wing is lined with a billowing butternut-wood barrel vault and an undulating ribbon of balconies (Figure 20)?

Although Richardson changes ceiling configurations to differentiate one functional area from another, these areas conform only generally with the volumes of the exterior. For example, the stairs to the stacks of the Woburn book wing expand into the reading room, and the volume of the stair tower of the facade masks the extent of the picture...
Richardson’s architecture picks up that thread to discover possibilities for his time, he was not unlike the French theorists of the round-arched style who were trying to find a starting point from which to develop a contemporary architecture. Indeed, by dispersing the forces of the wall rather than concentrating them he has created a surface continuity on the exterior that is in keeping with the open volumes of his interiors—open volumes that in Richardson’s case were achieved not with the new metal elements, favored by Henri Labrouste, but with lightweight liners of wood.72

**Richardson’s Picturesque Architecture and Dessin au Trait**

If Richardson’s approach to style and his attitude toward the articulation of the wall are traceable to French sources, in contrast, his taste for asymmetrical composition appears at first to be rooted in Anglo-American traditions. Whereas the Ecole des Beaux-Arts is generally associated with teaching the art of symmetrical design, the British are known for developing the theory and practice of the picturesque. Richardson’s buildings are often asymmetrical, yet they are also notable for the resonance of their geometrical volumes, a resonance that is significantly most compelling when the buildings are viewed frontally rather than on the oblique.

A consideration of Richardson’s work in light of the Ecole des Beaux-Arts methodology of *dessin au trait* illuminates Richardson’s distinctive approach to asymmetry.

Ruskin and Olmsted are the most frequently discussed sources for Richardson’s interest in asymmetry, whether in overall composition or in local asymmetries.73 In general, Olmsted is credited with inspiring him to learn from nature. In O’Gorman’s words, “the associations present in his mature buildings reflect a consistent general outlook. Their abstract natural forms and geological regionalism fit well into the century of the Hudson River School, Transcendentalism and Ruskin. . . . [But] there is in fact only one possible source for the theory that sustained Richardson’s intuition.”74 O’Gorman names Olmsted. Yet, Olmsted was a designer of landscapes, and accepting that Richardson’s work manifests his ideas, the question of Richardson’s method for translating those ideas into architecture remains open. Thus, it is Ruskin whose influence is most frequently cited as a more concrete source for Richardson’s work. Ruskin is credited not only with influencing Richardson’s love of surface color and varied ornament, and the “simple and continuous” outlines of his buildings, but with his particular approach to composition.75

In an analysis of Richardson’s Oakes Ames Memorial Hall (1879–81) in North Easton, Massachusetts, Thomas...
Hubka argues for the importance of “Ruskinian principles, or ‘principles of the picturesque’” in Richardson’s work (Figure 21). He finds that “Richardson employed standard patterns of nonformal or ‘picturesque’ design that constituted a type of personal design strategy. These underlying principles of picturesque design, or principles of the sublime (as John Ruskin might have labeled them), can be recognized [in those buildings] characterized by functional expression and asymmetrical massing.” Hubka emphasizes the importance of “Ruskinian balance,” which he relates to a “logical Gothically balanced expression of internal function,” and also Ruskin’s advocacy of “unified compositional hierarchy” and his insistence that “to compose is to arrange unequal things, and the first thing is to determine the principal thing.”

As an alternative to the emphasis on the Anglo-American roots of Richardson’s so-called picturesque composition, it is useful to look to his training in Paris. Indeed, O’Gorman has implied this. He says that Richardson “quickly began to apply the governing principles of composition learned at the Ecole... To discipline the picturesque was his aim and his achievement.”

Richardson’s architecture has certain distinctive and often-noted characteristics. There is the clarity of the volumes sometimes emphasized by the geometric simplicity of the roof shapes with their emphatic ridge lines. There is the simple and continuous outline of the building established by the strong edges of the facades. There is his use of contrasting horizontal courses of stone, whether of varying materials or stone shape, to underscore the unity of the composition. These bands may change form, or thin and thicken to draw attention to a change of planes or function, but they remain continuous.

At Oakes Ames Memorial Hall, for example, which was the focus of Hubka’s study, the decorative belt course broadens to take in a window sill in the wing, and smooths its dentils when it moves from the main block to the tower. The capitals of the arcade transform into bands as they extend around the tower and the side wing. These transformations allow for asymmetries while establishing continuities. The consistency with which Richardson uses strong horizontal bands to establish the link between the more vertical elements of his buildings—most notably the towers and gables—and the more dominant horizontal volumes creates an effect of cohesion that distinguishes his work from that of his imitators.
O’Gorman has stated that “despite Richardson’s definition of architecture as ‘plastic work’ he relied almost entirely upon two-dimensional presentation. In fact, many of the presentation drawings from his office show the building itself in elevation and only the scene in perspective.”79 This is a telling point. If the Anglo-American picturesque is well served by representations that show the building as a three-dimensional object—as it looked—for reasons related to a particular concept of composition, the Ecole des Beaux-Arts favored elevation drawings that showed the building as it was. Indeed, Richardson’s preoccupation with continuities of surface, his privileging of frontality, and his concern with an affective balance of elements all resonate with ideas about form taught at the Ecole.

In Robin Evans’s book The Projective Cast, the discussion of the work of Gaspard Monge is particularly helpful in understanding these ideas. Evans recounts that in the late eighteenth century Monge had developed a “new branch of geometry called descriptive geometry.” It was “a mathematician’s generalization of architectural drawing . . . . For Monge, all geometry was about three dimensions, though practiced in two. His descriptive geometry defined configurations in space by their orthographic projections on two fixed ‘reference planes’ perpendicular to one another.”80 The two planes may be seen as analogous to the orthogonal relations between plan and elevation, elevation and section, and section and plan.

Evans is interested in the complex forms that Monge’s method allowed architects and engineers to produce, but it should be clear that this method worked for simpler geometric shapes as well. As Richard A. Moore explained in his article “Academic Dessin in France after the Reorganization of 1863,” Monge’s method was “used in a paradigmatic way by most official French schools such as the Ecole des Beaux-Arts.”81 Descriptive geometry was one of the four qualifying concours set for students trying to gain admittance to the Ecole des Beaux-Arts.82 Richardson’s record shows that he passed it on his first try in October 1859. (Students were required to pass three of the four competitions set; however, Richardson only succeeded in two that time). In July 1863 Richardson received a mention in the “competition in construction, stone,” which required drawings for “foundations, walls, vaults and stairs.”83 The concours required that the student understand the relation between stereotomy (the art of stone cutting), descriptive geometry, and masonry architecture as taught at the Ecole.84

Moore’s article is extraordinarily suggestive for Richardson’s architecture because Moore explains in detail the Ecole approach to drawing, which is nothing less than a method for teaching a particular concept of form and composition. Given the importance of his argument for my purposes and the clarity of his definitions, I shall quote from his article in some detail. Moore says that “in contrast to the Italian concept of disegno, which stressed equally contour and internal details, French dessin emphasized contour, called dessin au trait. By means of dessin theory, the artist was taught to see planimetrically in terms of the single wholeness of the contour extérieur. . . . This quality of dessin was known as la correction.”85 So the overriding concern was wholeness of contour.

Furthermore, Moore explains that “in employing la correction, the artist was supposed to avoid perspective effects. . . . The purpose of dessin géométral was to see objectively in undistorted sections and elevations based on a grid of horizontals and verticals” (Figure 22).86 Thus to conceive a building so it would be most effective when seen foreshortened (as was the case with the Anglo-American picturesque) was not desirable. Richardson’s preference for elevation drawings rather than perspectives is in keeping with this method.

Figure 22 Demonstration of developpement as illustrated in G. Umbdenstock, Cours d’architecture, volume 1 (1930), 307, figure 388
Moore makes an even more interesting point. “Descriptive geometry taught the artist to see objects in elevation and particularly in plan within a projective system of three planes meeting in a single point at right angles. . . . The plan was considered an orthographic projection which reduced structure to pure form concentrated at a point locus. The use of a geometrical point . . . meant that objects were treated as volumetric shapes with enclosing surfaces generated by points, lines, and two-dimensional sectional profiles.” Moore credits André (Richardson’s teacher) with codifying the notion of the point of the plan in the late nineteenth century with “the concept of the mise au point du plan.” The emphasis of his teaching lay in conceiving forms in two dimensions that would yield clear volumes in three dimensions. Significantly, O’Gorman says that “apparently, Richardson had no difficulty grasping the three-dimensional consequences of geometric projections.”

Moore explains further that “traditionally this abstracting process was called développement.” He illustrates the concept of développement with drawings from a mid-twentieth-century text. But he quotes from a text published in the first quarter of the nineteenth century: “Développement is the operation by which one discloses, in all their true grandeur and proportion, all the surfaces composing a solid.” These simple geometric volumes then were understood to have certain rhetorical qualities.

It would be difficult to find a clearer exposition of the qualities of Richardson’s architecture than Moore’s exegesis of dessin au trait. The method accounts for the wholeness of contour; the conceptual grid that minimized the desire for perspective views; the emphasis on simple geometric volumes; and the grandeur, eloquence, and proportion of his surfaces. In addition, dessin au trait relied on one other key concept, which was the point d’appui. In Moore’s words, “the point locus was both a geometrical and structural concept, which defined the center of gravity as the station or point d’appui.” Then he quotes from a twentieth-century codification of this method of drawing: “One orders an architectural composition with respect to a point and a center of balance.”

Although this concept was used most often in architecture for generating symmetrical compositions, dessin au trait was in fact a methodology that originally had been developed for figure drawing. “Since the 17th century, dessin was inculcated in students primarily by requiring highly regularized drawings of the nude model. The model was carefully posed to demonstrate the laws of balance, called la statique or la pondération. . . . This archaic presentation of a statical law in physical science was given . . . artistic meaning with the simple studio technique of using the plumb line, or aplomb, to display the center of gravity.”

This emphasis on drawing the nude meant that, for the most part, students were drawing asymmetrical figures (Figure 23). The aplomb, as Moore explains, “limited the natural variety of human movement to an ideal range. . . . The plumb line, when held up to the figure, stays within the contour from head to supporting foot, thus avoiding the fallacy of the porte-à-faux, where solid is over void, instead of solid over solid.” In short, asymmetry and dessin au trait were assumed to be perfectly compatible. In fact, they taught the students the subtleties of balanced form.

In her recounting of Richardson’s years of study in Paris, Van Rensselaer quoted extensively from an account by one of Richardson’s friends, Adolphe Gerhardt, a fellow student with whom he lived for a time. The letter is well known, but what is significant here is his report on Richardson’s studies:

In addition to his architectural studies properly so called . . . our friend also sought instruction from a painter of talent, Monsieur Leperre, to whose studio he went two or three times a week. There, in the presence both of nature and the antique, he completed an artistic education which he felt would be incomplete unless nourished by knowledge and intelligent appreciation of form and linear harmony as shown in their noblest and most elevated aspects. Our dear Richardson understood the importance of this principle from the outset.

Gerhardt’s mention of “form and linear harmony” is not a banality but rather an allusion to dessin. During the controversy over the reform of Ecole pedagogy of 1863, Ludovic Vitet had written a defense of the method of Ecole teaching. Dessin instilled, he stressed, “a respect for line.” Richardson owned Emile Boutry’s book, Philosophie de l’architecture en Grèce, which was published in 1870, five years after Richardson had left the Ecole. Moore says of it, “in perhaps no other late 19th-century source is the role of dessin géométral by the method of la correction more completely dominant.”

A figure drawing has survived from Richardson’s studies in Paris. It is of a standing nude drawn from a cast of the Ildefonso group (Figure 24). In the actual sculpture the figure’s left arm is flung around the shoulder of another male nude in a frontal stance. But Richardson has eliminated this supporting figure. Instead, his nude appears at once in tense balance, held in place by the volume of space defined by the void between the head and foot, the curve of the arm, and the barely suggested opposing shoulder. It might be said that Richardson’s drawing emphasizes the generating void that is the volume rather than the solid that encloses it; or better, that Richardson’s drawing engages the relation between solid and void as creators of volume.
It seems then that the concept of *la pondération* may help to explain the singular quality of asymmetry in Richardson's buildings. This Beaux-Arts technique facilitated the ability to understand in two-dimensional drawings what is, in fact, a three-dimensional phenomenon—in short, volumetric balance. It is just that sense of volumetric balance that characterizes Richardson's version of picturesque composition.\(^98\)

Taken together, the various facets of *dessin au trait* help to explain the most distinctive aspects of Richardson's compositions—his preoccupation with unified contour, frontality, and an aesthetic of balanced volumes. *Dessin au trait*, and contemporary French ideas about style and masonry construction, offered a powerful architectural frame for conceptualizing history and design. It may be that “being an American, and one from French-speaking New Orleans practicing in Anglophile New England,” Richardson was in a unique position to appreciate, even more than the French, the robustness of the Ecole method of design and of French theory, and thus their possibilities for harmonizing a wide range of ideas and precedents appropriate to American society.\(^99\)

**Conclusion**

The quality and inventiveness of Richardson’s architecture cannot be explained by studying his sources, whether buildings or theories, be they British, American, or French. But the intellectual ideas of French theorists and the techniques for conceiving volumes taught at the Ecole offer insights into Richardson’s work that have not yet been sufficiently credited. Indeed, the defining characteristics of his architecture—his interest in the round-arched style, his attitude
toward the forces of the wall, and his taste for clearly defined geometric volumes in balanced compositions—may best be understood when viewed through the lens of interests that Richardson developed while at the Ecole. The education he acquired during his studies in Paris provided him with not only analytical skills but, more importantly, with fundamental concepts that defined his architecture. The talk he gave at Trinity Church early in his career suggests how very much he appreciated the importance of this education.

Notes

I would like to thank all my friends and colleagues who have shared my interest in Richardson’s architecture over the years: Christopher Bardt, Derek Bradford, Sarah Butler, Richard Chafee, Gabriel Feld, Alice T. Friedman, Natalie Kampen, Baruch Kirschbaum, William Morgan, Susan Ward, and Judith Wolin. I would also like to thank Mary Daniels at the Loeb Library, Harvard University; Ann Clifford, Robert Roche, and Paul Rocheleau for their assistance with the photographs; and the students in my Richardson seminar, especially Christian Mueller; the anonymous reader and Hilary Ballon for their valued comments; the Division of Liberal Arts, Rhode Island School of Design, for providing funding support; and Krista Sykes for her scrupulous editing. Specific contributions to this work are noted below. I dedicate this article to my beloved friend and colleague Beeke Sell Tower, with whom I discussed this project many times.

1. H. H. Richardson, Description of the Church Edifice in Consecration Services of Trinity Church, Boston, February 9, 1877 (Boston, 1877), 68. The quotations in this paragraph and subsequently are from p. 68.

2. See, for example, Margaret Henderson Floyd, Henry Hobson Richardson: A Genius for Architecture (New York, 1997), 47. Discussing the competition drawings, she says, “Richardson’s central tower is composed of two separate units with different sources, a lantern in the form of a hemispherical dome above the crossing, surmounted by a slender spire.” She then discusses possible precedents.


6. For Richardson’s studies at the Ecole, see Richard Chafee, “Richardson’s Record at the Ecole des Beaux-Arts,” JSAH 36, no. 3 (1977), 175–88.


8. Ibid., 11.

9. Ibid., 11–12.


12. Ibid., 25.


17. Bergdoll, Léon Vaudoyer, 185, 201.

18. The specific language is a quote from an article by Vaudoyer and Lenoir, trans. in Bergdoll, Léon Vaudoyer, 200–1, 308 n. 30.


20. James F. O’Gorman, “Documentation: An 1886 Inventory of H. H. Richardson’s Library, and Other Gleanings from Probate,” JSAH 41, no. 2, (1982), 150–55. The dates that Richardson acquired specific books are not known. References below to books owned by Richardson are based on O’Gorman’s “Documentation.” For the view that Richardson was not an admirer of Viollet, see O’Gorman, H. H. Richardson, 15.


22. Ibid., 62.

23. Ibid.


27. For example see O’Gorman, H. H. Richardson, 91–111.


29. Richardson apparently worked for Jacques Hittorf. O’Gorman, Living Architecture, 73. At the time Richardson would have been employed in Hittorf’s office the Gare du Nord was under construction. Reynaud was the engineer associated with that work and Hittorf was the architect. David Van Zanten, “Architecture,” in The Second Empire Art in France under Napoleon III (Philadelphia 1978), 53. On 4 June 2007, Richard Chafee pointed out to me in conversation that the Hittorf connection is first mentioned in Marianna Griswold Van Rensselaer, Henry Hobson Richardson and his Works (1888; New York, 1969), 15. No other documentation has been found, however.


31. H. H Richardson, Description of the Church Edifice, 68 (see n. 1).

32. “Cet art est le Roman. Il est calme, grave, monumental, a un caractère religieux très-prononcé, et se prête éqalement à une grande richesse et à une extrême simplicité. Il n’a point de parti pris, de règle formulée, de proportions consacrées; il s’adapte à toutes les exigences, s’accommode de tous les matériaux, et peut faire varier, suivant les circonstances, les formes de ses colonnes et de tous ses ornementes” Léonc Reymaud, Traité d’architecture.
49. in these early houses, and the use of "Neo-Grec" detail; see pp. 10, 15. 

50. Bergdoll, *Violette-le-Duc*, 123 (see n. 21).

51. Ibid., 124.

52. Ibid., 133.


54. “toute décoration architectonique réside essentiellement dans la mise en évidence d’un bon système de construction. On a choisi des matériaux des qualités convenables; on les a distribués judicieusement; on les a employés dans les proportions voulues; ils ont travaillés avec soin. . . . On y parvient en accusant les diverses parties de l’œuvre par des saillies plus ou moins prononcées ou par des différences de couleurs. On réunit ainsi la verité à la variété dans l’unité ces deux conditions essentielles du beau.” Ibid., 189–90.


56. Van Zanten, *Designing Paris*, 60. Floyd stresses that Richardson chose the style of the sixteenth-century French Renaissance for his work on the Albany state capitol. Floyd, *Henry Hobson Richardson*, 86 (see n. 2).

57. Van Renselaer, *Henry Hobson Richardson*, 121 (see n. 29).

58. Floyd, *Henry Hobson Richardson*. Paul Rocheleau’s photographs in Floyd’s book are the best alternative to the buildings themselves for the purposes of my analysis in this section. The analysis in this section I owe to colleagues in the Department of Architecture at the Rhode Island School of Design, particularly Christopher Barush, Gabriel Feld, and Judith Wolin.

59. I owe this formulation to Judith Wolin.

60. I owe the concept of the forces of the wall to Christopher Barush.

61. Gabriel Feld and I visited this building together; the analysis that follows is based on our discussion. In our conversations he has underscored Richardson’s attention to syntactical conditions.

62. It is generally accepted that the contractor Orlando W. Norcross, who executed many of Richardson’s buildings, should be credited with the quality of their masonry. However, O’Gorman makes clear in his study of Richardson’s office that Richardson was in charge. In fact, he says that “Richardson’s mind leapt directly from ideogram to stone and mortar; he seems to have considered the laborious preparation of detailed drawings as a necessary evil to satisfy legal niceties.” Richardson’s reluctance to give Norcross drawings in advance of the stage of work for which they were needed would seem to testify to Richardson’s control over the process of building itself. As O’Gorman asserts, “Richardson had such a total vision in mind, but wanted to test it stone by stone.” James F. O’Gorman, “The Making of A ‘Richardson Building,’ 1874–1886,” in H. H. Richardson and His Office (Cambridge, Mass., 1974), 26, 27.


65. “suivant leur destination.” Ibid., 46.

66. Ibid., 87–106.


68. Floyd says that like Gaudi, “Richardson was inspired by the structural theories of Violette-le-Duc.” *Henry Hobson Richardson*, 148. She makes this point in passing when discussing his furniture design.

69. Richardson, *Description of the Church*, 63 (see n. 1).

70. For a discussion of possible social implications for this lack of complete congruence, see Elizabeth Grossman, review of Kenneth A. Breisch, *Henry Hobson Richardson and the Small Public Library in American*, in *JSAH* 60, no.
presumably had some control over the images. Of the ten photographs of Richardson’s buildings that can be seen in photographs taken during Richardson’s lifetime, when he was often photographed on a very shallow oblique or head on. Significantly, this is not the case with many of Richardson’s buildings, making it difficult to photograph two sides of them at once. But it is nonetheless interesting that his architecture is more demanding that the outline of a building be simple and continuous.” Ibid., 24

76. Hubka, “The Picturesque in the Design Method of H. H. Richardson,” 21

77. Ibid., 7.

78. O’Gorman, H. H. Richardson, 47 (see n. 10).

79. O’Gorman, Richardson and His Office, 26. Admittedly the very breadth of many of Richardson’s buildings makes it difficult to photograph two sides of them at once. But it is nonetheless interesting that his architecture is often photographed on a very shallow oblique or head on. Significantly, this can be seen in photographs taken during Richardson’s lifetime, when he presumably had some control over the images. Of the ten photographs of exteriors reprinted in The Architecture of Henry Hobson Richardson in North Easton Massachusetts, which are taken from an 1886 monograph on Richardson’s architecture there, only two shots are toward an exterior corner, and both of these are of side and rear facades and not side and front. The Architecture of Henry Hobson Richardson in North Easton Massachusetts, The Oakes Ames Memorial Hall Association and the Easton Historical Society (1969). Mary N. Woods says that Richardson preferred to illustrate his work with photographs. Woods, “The Photograph as Tastemaker: The American Architect and H. H. Richardson,” History of Photography 14, no. 2 (Apr.–June 1990), 155. I am grateful to Mary Daniels, Loeb Library, Harvard University, for bringing this article to my attention.


82. Chafée, “Richardson’s Record,” 186 (see n. 6).

83. Ibid., 188.

84. Ibid., 178.


86. Ibid.

87. Ibid.

88. Ibid., 164.

89. O’Gorman, Richardson and His Office, 26.


91. Ibid., 147 fig. 2.

92. Moore, “Academic Dessin,” 147; Grossman’s emphasis.

93. Ibid., 147.

94. Ibid., 171, 148 fig. 3.

95. Van Rensselaer, Henry Hobson Richardson, 8–9 (see n. 29).


97. Ibid., 156.

98. For a related discussion of the balance of Richardson’s asymmetrical composition, see Gabriel C. Feld, “‘The Lonely Turret’: On Symmetry and Broken Symmetry in H. H. Richardson’s Austin Hall,” unpublished paper for Robin Evans’s course Geometry and the Practice of Architecture, 1987. I am grateful for the opportunity to have read this paper.


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Figure 1. Courtesy of Stonehurst, the Robert Treat Paine Estate, and the City of Waltham, Mass.

Figure 2. Barry Bergdoll, Léon Vaudoyer Historicism in the Age of Industry (Cambridge, Mass., 1994), 253 fig. 211

Figure 3. Eugéne-Emmanuel Viollet-le-Duc, Dictionnaire raisonné de L’architecture, vol. 3 (Paris, 1868), 364


Figures 22, 23 Richard A. Moore, “Academic Dessin Theory in France after the Reorganization of 1863,” JSAH 36, no. 3 (1977), 147 fig. 2, 148 fig. 3

Figure 24. Shepley Bulfinch Richardson and Abbott