



Proceedings of the Society of Architectural Historians, Australia and New Zealand 30, Open

Papers presented to the 30th Annual Conference of the Society of Architectural Historians, Australia and New Zealand held on the Gold Coast, Queensland, Australia, July 2-5, 2013.

<http://www.griffith.edu.au/conference/sahanz-2013/>

Peter Kohane, "Structure and its Representation as Ornament: An Introduction to James Fergusson's 1855 Drawing of Façades" in *Proceedings of the Society of Architectural Historians, Australia and New Zealand: 30, Open*, edited by Alexandra Brown and Andrew Leach (Gold Coast, Qld: SAHANZ, 2013), vol. 2, p 475-486.

ISBN-10: 0-9876055-0-X

ISBN-13: 978-0-9876055-0-4

Structure and its Representation as Ornament

An Introduction to James Fergusson's 1855 Drawing of Façades

Peter Kohane

University of New South Wales

James Fergusson's Illustrated Handbook of Architecture (1855) explores the relationship of structure to ornament in design. He set out the theory in a drawing of a building with a series of five façade treatments. These become progressively more ornate from left to right. Through such divisions, Fergusson demonstrated that architecture is an art founded on prosaic construction, yet requiring the addition of ornament. The sequence of façades in the sketch charts the progress from raw and unadorned structure to a fully finished architectural production. This was underpinned by a hierarchy of the respective domains of the builder, engineer and architect. An assignment of the "prose" and "poetry" of a building to different professions was necessary.

Fergusson's drawing will be analysed in terms of its distinct types of ornament. The first, which is defined as "ornamental construction," involved the creation of an aesthetically pleasing composition by adapting the structural form of a building itself. He then referred to "ornamented construction." Ramifying his classificatory system even further, he proposed that this comprised two stages. Fergusson distinguished between "constructive" and "decorative" ornament. His definition of "constructive ornament" was founded on an understanding of the real construction, its concealment and representation.

The varied kinds of ornament will be discussed in relation to Fergusson's drawing, as well as his account of ancient and medieval monuments. The contribution of his arguments to subsequent developments is addressed by considering Louis Sullivan's late nineteenth century tall buildings. As evident in his theory and the Guaranty Building (Buffalo, 1894-95), the actual structure is concealed yet acknowledged in an ornamental surface.



In a series of influential books, widely read and commented upon in Britain and its colonies, as well as America, James Fergusson (1808-86) outlined a theory and history of architecture suited to the beliefs and perceived needs of a modern, rational and progressive society. His ideas were valued by the general public, colonial administrators and designers. Fergusson's impact on the Victorian architectural world involved interpreting the past in a manner that was relevant to current practice. In the first of two significant strategies, he contrasted a traditional "true" style with a current "false" one. The contemporary example is flawed because based on copying forms originally conceived for an historical building. The second approach pertained to the formation of a modern "true" style, in which a logical relationship is established between structure and its embellishment. Scholarship on Fergusson, however, has emphasised his views on the dilemma of style. New insights into the theorist's work must shift attention to ornament. With this focus, Fergusson's ideas can be shown to co-exist with those of Ruskin. In the middle of the nineteenth century, these two authors accentuated a distinction between the arts of building and architecture, where the latter is characterised by the addition of ornament. Fergusson's theory demands close consideration, in terms of a well-conceived structural solution and its concealment behind layers of ornament.

This paper is concerned with a theme in nineteenth century architecture, where modernism and ornament are linked. In a brief introductory section, the accepted scholarly position on Fergusson is endorsed by noting his condemnation of current architecture. Emphasis is placed on nineteenth century citizens, who lack the ability to comprehend the meaning of revived styles. Attention then shifts to the central theme of the paper, which pertains to a building's adornments assuming an intrinsic beauty. In conclusion, a relationship is explored between the ideas of Fergusson and Louis Sullivan. The theory of the British author was relevant to the American designer, whose Wainwright Building (St Louis, 1890-91) and Guaranty Building (Buffalo, 1894-95) are founded on function and structure, yet assume their status as works of "fine art" through ornament.

In Fergusson's 1849 treatise *The True Principles of Architecture*, "copyism" in both literature and architecture is linked to the unfortunate acceptance of the eighteenth-century aesthetic doctrine of associationalism. As Fergusson characterized it,

1. James Fergusson, *An Historical Inquiry into the True Principles of Beauty in Art, Especially with Reference to Architecture* (London: Logman, 1849), 144.

“association is a form of phonetic utterance which throws a veil of beauty over some objects in the minds of particular persons, which to others appear only common-place or even ugly.”¹ Architects such as Robert Smirke and A.W.N. Pugin upheld this “lowest and most unreasoning source of beauty.” In each case, the architect’s chosen style was presented to, and admired by, a distinct social group. Narrow concerns, often of a highly specious nature, had challenged more rational and universal theories of beauty. Fergusson blamed associationalism for the modern plurality of styles, each assuming the elitist function of speaking about a unique past epoch.

In a social sense, this conflict between differing images and meanings was disruptive to Fergusson’s vision of a modern, unified “community.” A design copied from the past could only evoke associations in the mind of the beholder who belonged to the educated minority, as ordinary citizens lacked the kinds of knowledge necessary to comprehend a style’s significance. Fergusson felt that even if a community was not democratic, its buildings had to express a beauty accessible to everyone. Architects could create appropriate designs by imitating natural processes rather than history.² They fashion aesthetic surfaces that symbolized the building’s underlying structure. This was a gift of ornament to be enjoyed by all.

2. For Fergusson’s detailed account of the imitation of natural processes, see James Fergusson, *The Illustrated Handbook of Architecture: Being a Concise and Popular Account of the Different Styles of Architecture Prevailing in All Ages and Countries* (London: John Murray 1855), 1: 1-1iii.

Fergusson’s *True Principles* was dominated by the issue of a modern community, specifically its divided labours and social production. Architecture was shown to be defined by three kinds of labour, which involved the use of the muscles, the senses and the intellect. These are related to three essential aspects of a building—the structure, the aesthetic embellishment, and the paintings and sculpture. However, in 1849 Fergusson had not yet developed a systematic theory of structure and its representation as ornament. This was addressed in his next general and synthetic work, *The Illustrated Handbook of Architecture* (1855). In his monumental survey of world architecture, problems of labour were less prominent. Instead, Fergusson’s energies were focused upon the classification of historical styles. A lengthy introduction also revealed a concerted attempt to clarify the relationship of structure to ornament. This shift did not represent a denial of his earlier views; indeed, Fergusson’s definition of labour and architectural form never altered throughout his life. More probably, the new emphasis of the *Handbook* was due to a desire to expand his audience. Despite favourable reviews, *The True*



Principles had sold poorly, and Fergusson and John Murray, the publisher of the *Handbook*, may have attributed the lack of public interest to the prominence given to social issues, thought to be of limited relevance in an architectural book.

One sign of Fergusson's interest in cultivating a more purely architectural position for the *Handbook* was its inclusion in the introduction of a drawing of a building with a series of different façade treatments. These become progressively more ornate from left to right. Through these five façade divisions, marked A to E, Fergusson sought to demonstrate that architecture was an art founded on prosaic construction, yet requiring the addition of ornament.³

The five divisions of the illustration were displayed as distinct treatments of the same building, which he suggested could be “a cotton-factory, a warehouse, or any very common-place utilitarian building.”⁴ However this casual comment points to a problematic aspect of the composite structure, since not all of the depicted façades are appropriate to such a building type. Only the first three façades are suited to a utilitarian building; the increasingly grandiose ornament of the last two façades, D and E, seems to suggest much more prestigious and elevated buildings, such as banks or clubhouses. In this sense, the illustration contradicts Fergusson's own pronouncement that ornament should “be appropriate to the purposes of the building”⁵; and the issue of a decorous expression is thus confused. Fergusson probably felt this shortcoming was relatively unimportant, given that his primary theme was architectural form. Nevertheless, the disparity highlights Fergusson's understanding of ornament as purely aesthetic; that is, as simply intended to please the eye. In fact, Fergusson never came to terms with the issue of appropriate expression through architectural ornament; and continued to publish the illustration in successive volumes, despite the acute criticisms on the need to relate ornament to propriety.

The sequence of façades in Fergusson's drawing charts the progress from raw and unadorned structure to a fully finished architectural production. The first and simplest façade, division A, consists merely of a brick wall punctured by a series of windows on each floor. This denotes “the most prosaic form of building,” where the material and structure remain inert. In Fergusson's view, this constitutes “bad building, as no attempt is made to strengthen the parts requiring it, and no more thought is bestowed upon it than if it were a garden wall or a street

3. On the meaning of ornament, including its relationship to structure, the following studies are relevant: Joseph Rykwert, “Ornament is No Crime,” in his *The Necessity of Artifice* (New York: Rizzoli, 1982); and Neil Levine, “The Book and the Building: Hugo's Theory of Architecture and Labrouste's Bibliothèque Ste. Genevieve,” in *The Beaux Arts*, ed. Robin Middleton (London: Thames and Hudson, 1982), 138-73. In several cases, the interpretation of nineteenth-century works have been informed by issues and problems raised in Robert Venturi, *Complexity and Contradiction in Architecture* (New York: The Museum of Modern Art, 1966); and Robert Venturi, Denise Scott Brown and Steve Izenour, *Learning from Las Vegas* (Cambridge Mass.: MIT Press, 1972).

4. Fergusson, *The Illustrated Handbook*, 1: xxvii.

5. Fergusson, *The Illustrated Handbook*, 1: xxvi.

6. Fergusson, *The Illustrated Handbook*, 1: xxvii.

7. Fergusson, *The Illustrated Handbook*, 1: xxvii.

8. Fergusson, *The Illustrated Handbook*, 1: xxvii.

9. Fergusson, *The Illustrated Handbook*, 1: xxviii.

pavement.”⁶ Division B, characterized by superimposed piers from which spring round arches in the uppermost level was a small improvement, since the addition of the piers and arches began to indicate the carrying of structural forces: “In this stage, the building belongs to civil engineering, which may be defined as the art of disposing the most suitable materials in the most economical but scientific manner to attain a given utilitarian end.”⁷

In the following façade, consoles are attached to the cornice, additional superimposed piers further articulate the vertical carrying of loads, and the wall area below the windows receives a form of rectangular panel. Despite this “slight amount of ornament applied,” division C still belongs to the useful, “technic arts,” since all the additions are primarily functional in intent: the cornice protects the wall from rain, the consoles support the cornice, and “the mouldings at the springing of the arch may be insertions required for stability.”⁸ (Because Fergusson’s term technic applies to the muscular powers of a human being, which are deployed in the making of a prosaic art, it is distinguished from the notion of a tectonic form. The latter applies specifically to the structural frame of a building. Fergusson incorporated this within a wider conception of prosaic technic forms that carry loads).

The transition from engineering to architecture is effected in division D, where ornament is applied to the surface. In this façade, the vertical piers disappear, and the four floors are articulated by means of more or less conventional Italianate forms, including the rusticated base and two tabernacle windows. At the upper stories, the piers reappear in the form of pilasters between rectangular and then rounded windows, and the cornice is more elaborate. Although the relatively simple nature of the ornament left Fergusson unenthusiastic, it is clear that the addition of non-functional ornament marked the crucial divide: “though it may be bad art, still the amount of ornament applied, all other things remaining the same, entitles this division to rank as a work of the fine art, architecture.”⁹

The final façade is intended as a triumphant visualization of all aspects of architectural art. Its morally elevated status in relation to the four façades that preceded it is emphatically conveyed in its much wider expanse, over double that of the earlier stages. As the culmination of the design process, division E presents a richly elaborated façade, characterized by a profusion of superimposed columns or pilasters, rusticated piers and other mouldings, as well



as foliate carving above the uppermost arches and what appear to be inset sculpted reliefs. These are the building's phonetic ornaments.

Assumed in Fergusson's illustration of the stages of development from prosaic structure to a fully architectural product is a hierarchy of the respective domains of the builder, engineer and architect. The transformation of raw building into architecture involved a strict division of professional tasks. The builder was presented as the lowest on the scale of contributors: his art "consists in merely heaping materials together, so as to attain the desired end in the speediest and readiest fashion."¹⁰ Were they not directed by superiors, the builders' purely muscular labours would lead only to the poorly organized, brute structure of division A. Initial guidance would come from an engineer, whose task lay "in selecting the best and most appropriate materials for the object he has in view, and using these in the most scientific manner, so as to ensure an economical but satisfactory result."¹¹

10. Fergusson, *The Illustrated Handbook*, 1: xxviii-xxix.

11. Fergusson, *The Illustrated Handbook*, 1: xxix.

The input of the architect began "where the engineer leaves off," to create the ornamented divisions D and E. The architect's role was to reshape the form determined by builder and engineer into an aesthetically pleasing creation. "[T]he materials of the engineer" were to be arranged "not so much with regard to economical as to artistic effects, and by light and shade, and outline, to produce a form that in itself shall be permanently beautiful." The final product, division E, required the labours of the muscles, the senses and the intellect in its production. In this way, the illustration succinctly represents Fergusson's hierarchy of values applied to different attributes of a human being and work.

Despite occupying an elevated position in the hierarchy of labour, architects were restricted to ornamenting a structural form, conceived without their input. The architect should understand construction, but "it would be well if . . . he could delegate the mechanical part of his task to the engineer, and so restrict himself to the artistic arrangement and the ornamentation of his design."¹²

This assignment of the "prose" and "poetry" of building to different professions was necessary because "Perfect artistic and perfect mechanical skill can hardly be found combined in one person . . . it is only by their joint assistance that a great work of architecture can be produced." Fergusson's understanding of the human being in terms of its distinct functions was the source of authority for hierarchical specialization in society: "This division of labour is essential to success, and was always practised where cost was a reality."¹³

12. Fergusson, *The Illustrated Handbook*, 1: xxix.

13. Fergusson, *The Illustrated Handbook*, 1: xxix.

Fergusson distinguished two stages in the architect's "cal-aesthetic" task of reshaping the prosaic form. Both of these are visible in the final façade of the drawing, division E. The initial stage was what he termed "ornamental construction," which involved the creation of an aesthetically pleasing composition by adapting the structural form itself. In the façade of division E, Fergusson called attention to the harmonious organization of the constituent parts, "so disposed as in themselves to produce a more agreeable effect."¹⁴ Slight adjustments in the size and location of the windows and manipulation of the masses to create a pavilion-like effect fall under the same category of ornament inherent in the construction.

14. Fergusson, *The Illustrated Handbook*, 1: xxviii.

Once the technic forms had thus been suitably adapted, the architect effected a second transformation, by applying ornament to the surfaces. For Fergusson, this "doubles the effect of the disposition he [the architect] had just made, and by its elegance throws a charm over the whole composition."¹⁵ This purely additive refinement Fergusson termed "ornamented construction." Ramifying his classificatory system even further, he proposed that this was itself composed of two stages. Citing historical "true styles" as his guide, he distinguished between "constructive" and "decorative ornament."¹⁶ The former was the most important and difficult to perfect. It included "all those contrivances, such as capitals, brackets, vaulting shafts, and the like, which serve to explain or give expression to the construction." The latter term referred to "mouldings, frets, foliage, &c., which give grace and life either to the actual constructive forms, or to the constructive decoration."

15. Fergusson, *The Illustrated Handbook*, 1: xxix.

16. Fergusson, *The Illustrated Handbook*, 1: xliii.

Fergusson's definition of "constructive ornament" was founded on an understanding of the real construction, its concealment and representation. It is instructive to consider such embellishments in his designs. The 1855 composite elevation first displayed his central argument, with division E exhibiting an array of superimposed ornaments that represent structure, articulating the internal organization of floors, bays or walls. Unlike division D, the residual wall has almost completely disappeared, concealed beneath added elements. These include major and minor piers, several differently sized and proportioned pilasters or attached columns, and the horizontal members, comprising the entablatures, string courses and cornice. Each form was an aesthetic representation of a technic or useful source. Thus the cornice capping the wall was conceived differently from that in B



or C, as it was not only structurally sound and served to shed the rain but, according to his theory, would “suggest an appropriate support for the roof.”¹⁷

17. Fergusson, *The Illustrated Handbook*, 1: xliiv.

With his drawing, Fergusson revealed considerable understanding of one role of ornament. This was conveyed despite the awkward quality of the designs, particularly that of division E, where the base, extending through two solidly rusticated levels, slender *piano nobile* and robust attic are poorly related. This flaw, however, was absent from his scheme of the following year for the Government Offices. In this design, Fergusson organized his three-storey wings according to a strict structural and aesthetic rationale, even successfully employing buttress-like supports to denote the concealed presence of load-bearing walls. Fergusson revealed a better grasp of the relationship between real and represented structure. The former, devised by engineers, transmitted gravitational loads through the structural forms to the ground. This mechanical function of providing support was concealed by an aesthetic form. The act of covering was not illogical for Fergusson so long as it cogently represented the actual structure. By expressing gravitational force, ornament assured the beholder that the building was structurally sound.

Fergusson clarified the definition of “constructive ornament” in the *Handbook* through analyses of the “true styles” of the Western tradition, particularly Gothic and Greek. In his view, Gothic architects devised forms to rhetorically draw attention to the means of support for their vaults. In what he identified as “early experiments,” this was achieved with a bracket or corbel.¹⁸ However, such motifs were not entirely divorced from structural necessity, and therefore belonged to the domains of both building and architecture. Ornament exhibiting a purer kind of architectural beauty could be found in later buildings, where the bracket or corbel was replaced with a vaulting shaft “carried down to the capital of the pillar, and afterwards to the floor.” By representing the structure in forms no longer essential to actual stability, “the eye was satisfied, the thin reed-like shafts being sufficient to explain that the vault rested on the solid ground.” Freed from the demands of structure, the architect could choose a form that elegantly conveyed an image of stability.

18. Fergusson, *The Illustrated Handbook*, 1: xliii.

In Fergusson’s view, the idea of the vaulting shaft was initially formulated in the grand interiors of the Roman basilicas and baths.¹⁹ In such buildings, the load of the vault, while apparently carried to the ground by prominent Corinthian columns, was

19. Fergusson, *The Illustrated Handbook*, 1: xliiv.

actually supported by the partially concealed piers. With little structural work to perform, the column was an object of aesthetic embellishment. The Roman architects, however, failed to perform their proper task of imparting to the column the attribute of structure, and it thus remained at a transitional stage of development. Only in the Gothic cathedral was the aesthetic role of the column as a representation of gravitational loads exploited to the full, when “three small shafts tied together at various intervals” gathered the visual lines of force from quadripartite ribbed vaults and carried them to the ground.²⁰

20. Fergusson, *The Illustrated Handbook*, 1: xliii-xliv.

The principle of “ornamental construction” had also guided Greek architects, who employed such motifs as triglyphs, mutules, and cornices “to explain, not only that these parts had originally been of wood, but that the temple still retained its wooden roof.” Like the early Gothic buttresses, the marble entablature was valued because related to, but not constrained by, the actual structure concealed from the eye. Fergusson stressed the “cal-aesthetic” nature of the entablature motifs: “Having no constructive use whatsoever, these parts were wholly under the control of the architects, and they consequently became the beautiful things we now so much admire.”²¹

21. Fergusson, *The Illustrated Handbook*, 1: xliv

Fergusson was also fascinated by the refinements of the structural forms, particularly the orders. To explain the formal subtleties of the orders, he invoked his theory of technic and aesthetic labours. In his view, ancient Greek architects did not contribute to the structural development of the column. Their task was to modify this given technic form, determined by the builders, through the introduction of entasis, an attribute which had been discovered by C. R. Cockerell in 1810 and analysed by his friend Francis Cranmer Penrose in the *Investigations of the Principles of Athenian Architecture* (1852).²² Referring to this text, Fergusson wrote of “a number of refinements, whose existence was not suspected till lately, and even now cannot be detected but by the most practiced eye.”²³ As he continued, “The columns were at first assumed to be bounded by straight lines. It is now found that they have *entasis*, or convex profile . . . and are bounded by a very delicate hyperbolic curve.”²⁴ Although this kind of transformation did not entail the superimposition of ornaments on the actual structure, and therefore cannot be strictly classed as “constructive ornament,” Fergusson believed that it achieved the same “cal-aesthetic” end, drawing attention to the statical function. Arguing that “the want of it [*entasis*] gives rigidity

22. David Watkin, *The Life and Work of C. R. Cockerell* (London: Zwemmer, 1974), 124, 126.

23. Fergusson, *The Illustrated Handbook*, 1: 268-69.

24. Fergusson, *The Illustrated Handbook*, 1: 269.



and poverty to the column which is observable in modern [Greek Revival] examples,” he stressed that, with the added refinement of sloping all the columns inwards, “an idea of strength and support [is imparted] to the whole.” This dramatization of the load-bearing function complemented that other mode of suggesting structure, the addition of lithic ornaments to convey the presence of the actual timber roof.

The beauty of the “constructive ornaments” of any “true style” could be enhanced through the judicious application of “decorative ornaments.” These Fergusson divided into two classes: lithic mouldings and forms “copied from the vegetable kingdom.”²⁵ The former included scotias, cavettos, ogees, toruses, rolls, frets, scrolls, bead and reel, egg and dart, billet and dog-tooth, as well as “the thousand and one forms that were invented during the middle ages.” The most perfect example of the second category, the honey-suckle moulding, “has all the conventional character of a purely lithic, with all the grace of a vegetable form.” Closer imitation of nature gave rise to the Roman acanthus leaf ornament and, in Gothic work, virtually “every form of vegetable ornament, from the purest conventionalism, where the vegetable form can hardly be recognised, to the most literal imitation of nature.” Fergusson connected such formal variety in medieval buildings to the character of the architects, not the sculptors, as Ruskin did in his *Stones of Venice*. Nonetheless, Ruskin’s famous book was the obvious source for Fergusson’s Gothic designer, characterized by a “disregard of precedent, and untrammelled wildness of imagination.”²⁶

25. Fergusson, *The Illustrated Handbook*, 1: xlv.

26. Fergusson, *The Illustrated Handbook*, 1: xlv.

In contrast to such wide-ranging fancy, Fergusson advocated a sober and principled approach to the production of all categories of ornament in the nineteenth century. Unlike Ruskin, he believed that manual workers should follow precisely the instructions of architects who, after all, were responsible only for the building’s aesthetic ornaments. Fergusson’s principles were therefore addressed to architects alone. With regard to “decorative ornament,” however, he could be of only limited assistance. He merely suggested that stone ornaments should be designed by resolving the competing demands of the structural logic of the material and the desire to imitate vegetable forms.²⁷ On the other hand, his theory of the representation of the real structure in “constructive ornament” constituted a significant contribution to contemporary architectural debates.

27. Fergusson, *The Illustrated Handbook*, 1: xlvi.

Unfortunately, Fergusson failed to deliver design solutions worthy of his “true principles.” At best, schemes like his façade drawing

of 1855 and the Government Offices project reveal a thoughtful imitation of ornaments drawn primarily from the Renaissance tradition. Associations were deemed irrelevant to the experience of such forms, which simply belonged to an ongoing, modern idiom, a vernacular broadly accepted and understood throughout much of Europe. Existing buildings had saved Fergusson the trouble of reflecting as a designer on the deeper logic of a technic form represented in a surface ornament.

Yet Fergusson's ideas were intended to stimulate designs by others, with the most impressive architectural manifestation of his views found in America. Fergusson's books were known to writers like Ralph Waldo Emerson who, along with Horatio Greenough and Henry David Thoreau, had also called for a natural, progressive architecture, free of debilitating historical references.²⁸ Continuing this theoretical tradition, Louis Sullivan achieved what Fergusson could not; and devised an innovative, ornamental surface for his tall buildings. In a compelling essay of 1896, "The Tall Office Building Artistically Considered," Sullivan argued for a relationship between prosaic and artistic forms in terms that can be appreciated by referring to those formulated at mid-century by Fergusson. The two strategies can be compared. The British theorist was concerned with a load bearing masonry wall, which provides an extensive surface for an architect to create the aesthetic image of structure. In America, a hidden steel frame was encased and expressed through ornament. Nonetheless, Fergusson's technic form could be reinterpreted in Sullivan's essay as the "sterile pile' [of] the speculator, the engineer, [and] the builder."²⁹ In addition, he outlined stages of refinement from prosaic building to final product, emphasizing that it was the "hand of the architect" that fashioned the "fine art" of architecture.³⁰

Fergusson's theory of construction also serves as a basis for appreciating the complexity of Sullivan's theory, as well as the designs for the Wainwright Building (St Louis, 1890-91) and Guaranty Building (Buffalo, 1894-95). In each of these, functions and structure were concealed and yet illuminated by an ornamental surface. Functions were expressed by a three-part division, comprising the lower two levels, the "indefinite number of typical office tiers" and the attic.³¹ This initial artistic statement was followed by the concealment of the even, structural grid behind a surface comprised of accentuated piers set in front of recessed lintels. Although conceived as an addition, it was not arbitrary but a dramatic restatement of structural truth.

28. On these writers and the links to Fergusson, see R. W. Winter, "Fergusson and Garbett and American Architectural Theory," *Journal of the Society of Architectural Historians* 15 (1958): 25-29.

29. Louis Sullivan, "The Tall Office Building Artistically Considered," in his *Kindergarten Chats and Other Writings* (1918, New York: Dover, 1979), 202.

30. Sullivan, "The Tall Office Building," 205, 213.

31. Sullivan, "The Tall Office Building," 205.



In a further departure from Fergusson's reasoning, Sullivan explained that the vertical emphasis of such ornamental masking could convey a distinct "sentiment," a "lofty" quality to suitably characterize the design as a modern, American tall building.³² Yet despite this emphasis on a particular emotion, Sullivan achieved what Fergusson sought: a convincing connection between the real and fictitious attributes of a building. In the Wainwright building, Sullivan performed that most human of tasks, the creation of ornament superfluous to human survival but expressive of social progress. This ornament was not copied from the past, but was the representation of the underlying structure and function.

32. Sullivan, "The Tall Office Building," 206.