Industrialization: Architecture's Resistance and Adaptation

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Cultural change is expressed in many different ways and affects society economically, politically and socially. Architecture is often a means of personal and cultural expression and reflects the current attitudes and customs of civilization. The post-Civil War era was an especially significant time for architectural advancement and exposed a major shift in schools of thought and design. Mid-nineteenth century architecture reflected America's resistance to advancements in industrialization, the rapid population growth, and the nostalgia surrounding the resurgence of American nationalism. Many professionals, both in the field of architecture and beyond published works in response to these ideas, offering praise or criticism on the proposed ideas of progressive reformers.

With the victory of the Union North and the failure of reconstruction, America looked for ways to reunite the nation and create a unifying spirit. The American Centennial fast approached, and as Leland M. Roth wrote, "the general enthusiasm and the public attitude that change was possible, desirable, and inevitable were invigorating…"[1] Increased technological advancements and easier access to modern conveniences were met with both excitement and resistance at all levels of society. People felt nostalgic and wanted to return to a simpler way of life. An abundance of new architecture reflected the surge in industrialization, and many professional architects felt that returning to classic design and preserving older styles fed the public's nostalgic attitudes.

Charles Follen McKim, a nineteenth century architect who later helped establish the popular firm of McKim, Mead, and White, published an article in *The New York Sketch Book of Architecture* in 1874 that highlighted the importance of Colonial Architecture[2].

McKim used example houses from Newport, Rhode Island to illustrate this style's significance. He stressed that though many people looked at these buildings as ugly, they were far more stable and desirable than the current dwellings he described as "shingle-palaces," homes characterized by the use of shingles throughout the entire exterior.[3] He wrote, "…there is a greater charm to be found about the front-door step of one of these old houses, more homeliness and promise of comfort within, even more interest about its wrought scraper, than in most of the ambitious dwellings of the present day."[4] Those modern dwellings, often built in the Queen Anne or Stick Style, reflected advancing industrialization through their elaborate designs and the newly developed shingle material used in construction.[5] Even though Colonial homes were simple in design and did not utilize the newest building materials, McKim argued that each was stable, comfortable, charming, and ultimately appealed to America's idea of returning to "the good ol' days." He also argued that "many of them have stood up for a hundred and fifty years…Just now, while streets are widening, and committees have full swing, is the time to make amends."[6] McKim used American nostalgia to promote his ideas, but many other period writings were more cynical in their critique of the built environment and its response to industrialization.

A key element of industrialization was the idea of capital gain, and nineteenth century industrialists used the advances in technology to make more money not only for their companies, but also for themselves. An increased population created a need for more jobs and industrialists responded accordingly. Simultaneously, the need for more housing grew and factory towns popped up in major urban areas, many established by industrialists who hoped "that providing amenities for their workers would forestall unionization, prevent strikes, and ultimately increase corporate profits."[7] They used sound construction, provided modern utilities that promoted cleanliness

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[1] Roth, Leland M, *American Architecture: A History* (Boulder: Westview Press, 2001), 211.

[2] The Colonial style of architecture predominated during the 17th and 18th centuries.

[3] Charles Follen McKim, "On Colonial Architecture," in *America Builds: Source Documents in American Architecture and Planning*, ed. Leland M. Roth (New York: Harper & Row, Publishers, Inc, 1983), 233.

[4] Ibid.

[5] Queen Anne was a popular architectural style during the late 1800's that was often characterized by large front porches and decorated gables. Stick Style was a popular architectural style during mid-1800's that used wood structural elements on the exterior of homes.

[6] McKim, "On Colonial Architecture," 233.

[7] Roth, *American Architecture*, 226.

and convenience, and offered access to cultural amenities like theatres that would, in turn, make the workforce happy and promote increased factory production. George M. Pullman, a nineteenth century industrialist famous for assembling railroad sleeping cars, established such a town twelve miles south of Chicago to house his factory workers. Though his residents eventually rioted against the company in 1893, his community served as a model for many other urban developments in the years that followed its establishment. [8]

Pullman's community received an equal amount of praise and skepticism. Richard Theodore Ely, a critic and economist, wrote an article for *Harpers Weekly* in 1885 that studied Pullman's town and its effect on society. "Pullman: A Social Study" explored Pullman from a social perspective and questioned the success and utilization of his ideas both in the present time and in the future. The community was picturesque and clean, with trees lining the streets and an abundance of well-kept lawns in front of each residence. He mentioned the various public squares that broke-up the monotony of the street lines and the accessibility to amenities such as markets and theatres. He indicated the housing styles "bear no resemblance to barracks; and one is not likely to make the mistake, so frequent in New York blocks of 'brown-stone fronts,' of getting into the wrong house by mistake." [9] He alluded that all of the rooms inside each residence had access to gas and water and the town used a sewage system to move waste away from the town. All of these ideas promoted cleanliness in the home and aspired to create a sense of comfort and well-being in the home of each worker. [10]

Ely ended his positive criticism here, and Roth quotes him: "the basis of Pullman was un-American: 'it is benevolent, well-wishing feudalism, which desires the happiness of the people, but in such a way as shall please the authorities.' " [11] Ely saw two critical societal detriments alive in the town of Pullman. One was the underlying goal of increasing revenue. He noted how much cheaper it was for the company to keep lawns well-kept and streets clean because dirt would be less likely to blow onto the houses. This helped diminish repair costs and made them last longer. [12] Pullman wanted to

promote clean living, but saving money and generating more revenue through increased production by his laborers was the ultimate goal. He also mentioned that everything in Pullman was owned by the company, and no one living there was a permanent resident. Ely claimed that every American strived to own a home because it symbolized the future of a successful career. He further declared that "a large number of house owners is a safeguard against violent movements of social discontent. Heretofore laborers at Pullman have not been allowed to acquire any real property in the place. There is a repression here as elsewhere of any marked individuality." [13] This loss of individual freedom promoted a loss of moral principles. In the end, Ely credited Pullman on his savvy business skills but felt that imitating his ideas of commercial growth through manipulation and control was detrimental to society.

Even though many Americans criticized industrialization, several found ways to adapt to the changes. One of the major arguments that surrounded industrialization was that it promoted unhealthy living and demeaned American morals and principles. Professional architects entered this debate and developed design principles that utilized new technological advancements and promoted good morals. Catherine Beecher and Harriet Beecher Stowe published *The American Woman's Home: or Principles of Domestic Science, being a Guide to the Formation and Maintenance of Economical, Healthful, Beautiful and Christian Homes* in 1869 as a response to increased technological advancements and how they were utilized in the American home. These two women wrote to a primarily Christian, female audience, but hoped their designs and suggestions would speak to professional architects and designers.

The two argued that women should receive the same amount of credit for their household duties, considered "professional" in a domestic sphere, as men received for their professional work outside the home. Women nursed their children, instructed and governed inhabitants of the household, including servants, and ran the daily activities of the family, providing the moral backbone of the household: "When, therefore, the wise woman seeks a home in which to exercise this ministry, she will aim to secure a house so planned that it will provide in the best manner for health, industry, and economy, those cardinal requisites of domestic enjoyment and

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[8] Ibid., 226-27.

[9] Richard Theodore Ely, "Pullman: A Social Study," in *America Builds*, 207-8.

[10] Ibid.

[11] Roth, *American Architecture*, 203.

[12] Ely, "Pullman," 213.

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[13] Ibid., 215.

success."[14] The Beechers offered design suggestions that promoted a moral and Christian lifestyle by saving time and money and in the end created a healthy and cheerful atmosphere. They suggested that using moveable screens to separate rooms efficiently utilized space, and creating extra shelving units for easy access to everyday utensils and cleaning implements positively lent itself to the needs of female household laborers. The Beechers claimed that large rooms "…can be made to serve the purpose of several rooms by means of a moveable screen. By shifting this rolling screen from one part of the room to another, two apartments are always available…."[15] This not only maximized the use of each interior space but also the efficiency of time spent in each room by eliminating the unnecessary movement between rooms.

Another element that the Beechers focused on was the idea of increased ventilation and sanitation in the home. Small, dark spaces promoted disease, and the incorporation of new items such as stoves, made the threat ever more present. Their solution was "…to have a passage of pure air through every room, as the breezes pass over the hills, and to have a method of warming chiefly by radiation, as the earth is warmed by the sun."[16] The Beechers did try to integrate modern amenities as much as possible, however. In one design, they incorporated the use of the stove to help warm the house. They suggested, "the radiated heat from the stove serves to warm the walls of adjacent rooms in cold weather; while in the warm season, the non-conducting summer casing of the stove sends all the heat not used in cooking either into the exhausting warm-air shaft or into the central cast-iron pipe."[17] The Beechers used these and other such designs to show how new technological conveniences, when used efficiently, promoted healthy and comfortable living. The end result left the female household laborer with more time to create a home that reflected the Christian ideals many felt were lost in the midst of industrialization.

The adaptations of architecture to the increased threats of industrialization occur in private residential design and in city planning. In 1868 Frederick Law Olmstead and Calvert Vaux, two influential nineteenth century architects, submitted a proposal to the city of Riverside, Illinois, that incorporated the increased dependency on technology with the attitudes surrounding the ideals of suburbia. The two architects submitted their "Plan for Riverside Illinois" to the Riverside Improvement Company with the idea that suburban towns be designed to combine the elements of urban conveniences while promoting the healthy, clean, and comfortable living advantages of country living. Olmstead and Vaux recognized the important role Chicago played in Riverside's existence and that many residents commuted back and forth between the cities. They also recognized that even though the idea of a suburb was to escape the urban lifestyle, the conveniences of city living need not be abandoned in light of achieving that goal.[18] The first idea proposed a roadway to and from Chicago that accommodated walking, riding, and driving. Trees and other shrubbery lined the drive, and various promenade grounds provided a break in the tediousness of travel: "There is probably no custom [promenade grounds] which so manifestly displays the advantages of a Christian, civilized and democratic community…there is none more favorable to a healthy civic pride, civic virtue, and civic prosperity."[19] In the end, people acquired the necessary access to the city but did not sacrifice the tranquility and comfort of suburban living.

Olmstead and Vaux incorporated this idea into their designs of Riverside's city streets, as well. Their designs called for roads without sharp curves and increased space that suggested leisure and comfort while traveling. The two followed the current trend of cleanliness in society and designed a system of gutters along the side of each road that collected water and other debris that accumulated on the streets.[20] Olmstead and Vaux claimed that the drainage system kept roadways clean and smooth and promoted their longevity and durability. The two also suggested the establishment of private driveways that led to households and implemented landscape design along roadways, adding to the picturesque setting of the suburb and comfort of the residents. Olmstead and Vaux successfully designed an urban-influenced suburb without the unhealthy and distasteful conditions so many associated with industrialization.

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[14]Catherine Beecher and Harriet Beecher Stowe, "The American Woman's Home," in *America Builds*, 58.

[15] Ibid., 59.

[16] Ibid., 66.

[17] Ibid., 68.

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[18] Frederick Law Olmstead and Calvert Vaux, "Plan for Riverside, Illinois," in *America Builds*, 194.

[19] Ibid., 196.

[20] Ibid., 199.

Writers such as McKim, Ely, Beecher and Beecher, and Olmstead and Vaux recognized architecture's influence on society. With the emergence of industrialization and American nationalism, it was only a matter of time before the attitudes and ideas merged their way into these professionals' designs and personal philosophies. Post-Civil War architecture experienced both an advancement in convenient design as well as a resurgence in the popularity of old styles, and proves, to this day, a vital primary source in the study of cultural and social history of the mid-nineteenth century.