ences for scholars of vernacular architecture, historic preservationists, and more traditional architectural historians. However, the last will likely find Jennings’s book the more useful for its broader scope and ambitions as well as its investigation of interior design theory. Taken together, these books illustrate the dramatic social and economic disparities of the Gilded Age and Victorian era, and the grounding of architecture and building in larger systems of economics and production. Perhaps most importantly these two books on nineteenth-century vernacular architecture—one about a single tenement-turned-museum, the other about popularizing domestic design—help bridge the gap between the study of the everyday environment and that of high culture. In reality, they were, and are, not so far apart.

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The Taylorized Beauty of the Mechanical: Scientific Management and the Rise of Modernist Architecture


In 1911 a self-made engineer from Pennsylvania, Frederick Winslow Taylor, published a pathbreaking study in industrial efficiency, The Principles of Scientific Management. Scientific management made cardinal virtues of careful planning and waste reduction in the performance of all tasks in the industrial workplace. The introduction of flow charts, standardization, and time and motion studies reduced each job to its most basic, efficient steps, at all times supervised and improved upon by expert managers. Of immense appeal to a young generation of architects interested in combining engineering with artistic principles, scientific management, author Mauro F. Guillén tells us, enabled modernist architects to move away from prevailing eclecticism and present themselves as organizers, technocrats who could ameliorate social conflict and improve standards of living (4). Although developed in the United States, scientific management inspired architects first and foremost in Continental Europe, and the resulting philosophy and forms of modernist architecture were by and large reexported back to the United States and, indeed, to many other parts of the world beginning in the 1930s and 1940s.

In Guillén’s brief but wide-ranging account of architects’ experiences with Taylorist principles we learn, for example, that Charles-Édouard Jeanneret read Taylor’s book in 1917. Shortly thereafter, Jeanneret’s and Ozenfant’s purism would reflect a Taylorist penchant for a “law of mechanical selection” that sought to bring the rationalism of the engineer into harmony with more artistic sensibilities. By the time Jeanneret completed his self-fashioning into Le Corbusier in 1920 in the pages of the avant-garde journal L’Esprit Nouveau, the architect was advocating rigorous analysis and clarity in the statement of architectural problems: a direct application of Taylor’s principle that each task should be understood in its simplest, clearest form. Vers une Architecture/Towards a New Architecture, published in 1923 and then widely accepted as the most influential text on architecture in the twentieth century, was a veritable Taylorist tract. Le Corbusier compared architecture’s “unhappy state of retrogression” to the field of engineering, which, he maintained, was soaring to its “full height.” Drawing on Taylor, Towards a New Architecture saw the reformulation of the house as a “machine for living in,” the armchair as “a machine for sitting in,” and so on (Le Corbusier quoted in Guillén, 31). Le Corbusier unambiguously concluded that “In order to BUILD: STANDARDIZE to be able to INDUSTRIALIZE AND TAYLORIZE” (32).

By 1927, Walter Gropius and his Bauhaus colleagues would employ stopwatches to put into practice Taylor’s time and motion studies at projects in Dessau and Praunheim, maximizing the efficiency of serialized housing construction. Two years later, the “minimum existence housing unit,” the product of close Taylorist analysis, would be the subject of presentations at the second International Congress of Modern Architecture, or CIAM. The group’s La Sarraz Declaration (1928) promoted the “simplification of working methods on the site and in the factory” and the “employment of less specialized labor working under the direction of highly skilled technicians” (26).

Yet for all its success in recalling architects who became enamored with scientific management, this book has a far more ambitious agenda. Guillén, a professor of international management and sociology at the University of Pennsylvania’s Wharton School of Business, combines his earlier studies of organizational change with significant new material on the development of twentieth-century architecture in the six largest countries in Europe (Russia, Germany, France, Great Britain, Italy, and Spain) and the four largest countries in the Americas (the United States, Brazil, Mexico, and Argentina). Without question, firms like Mannesmann, Siemens, and the AEG in Germany, Aeroplanes Voisin in France, and FIAT and Olivetti in Italy were leading early adopters of Taylor’s principles. The author underscores the importance of these firms in helping launch the careers of such innovators as Peter Behrens, Le Corbusier, and Giacomo Matte-Trucco. While these vignettes provide architectural historians with valuable institutional and historical context, they are especially important as evidence in the argument assembled by Guillén. Such cases of industrial creativity and architectural innovation in discrete national contexts help Guillén advance a multifaceted argument concerning modern organizational behavior in general, and the evolution of complex fields such as architecture between 1890 and 1940 in particular.

To Guillén, the rise of scientific management offers the key to understanding how architecture could “modernize” in the first place: in the world’s leading industrial nations, the success of modernist architecture depended on the
interaction of various combinations of industrial and state sponsors with a new set of architects, who were disposed toward combining artistic and engineering elements in their effort to wrest control over the field of architecture from their more fine-arts oriented, frequently technophobic forebears. Guillén analyzes national and metropolitan contexts around the globe for signs of competition in which proponents of the new scientific approaches sought to prevail against political reaction, social conservatism, or professional forces (such as Beaux-Arts-oriented schools) that were otherwise resistant to change. Only through such an approach, Guillén argues, can the relatively slow pace of acceptance of modernism in Great Britain, birthplace of the industrial revolution, be understood in comparison with the relative success of “modernism without modernity” (chapter six) in countries like Mexico and Brazil in the early decades of the twentieth century.

Guillén openly professes dissatisfaction with explanations by architectural historians that “fail to consider that the likelihood of change depends on whether the actors that mobilize for such change [namely architects] command enough resources to overcome historical inertia, undermine the entrenched power structures in the field, or triumph over alternative projects for change” (43). Historical factors normally cited by architectural historians in their accounts of the rise of modernist architecture, in other words, are found lacking, or at least insufficiently examined. Architectural historians, the author maintains, are certainly correct to emphasize the significance of industrialization, the professionalization of architecture, sociopolitical upheaval, class dynamics, and new state and industrial patrons in the rise of modernist architecture. However, the mere existence of these factors in different countries fails to explain adequately, and in cause-and-effect terms, the rise of modernist architecture at different rates, and with different degrees of success, in diverse national contexts. This is particularly true when one looks at the variety of configurations of these factors and their relative impact in individual national settings.

Thus relationships among industrialization, technology, and the state played particularly important roles in the emergence of modernist architecture in France, Germany, and to a lesser extent in Britain in the opening decades of the twentieth century. Italy, Russia, and Spain, meanwhile, would each develop their own particular strains of modernist architecture, backed by revolutionary ideologies and by the state and/or industry, before revolution or civil war would significantly alter the trajectory of modernism in these countries. In Russia, for example, ASNOVA formalists like El Lissitzky and constructivist architects like Moisei Ginzburg and the Vesnin brothers were both favorably disposed toward Taylorism. However, the aggressive approach of the latter group in a revolutionary context helped constructivists to win more frequently in the competition for numerous state and industrial commissions, and to gain the upper hand in forming the Moscow Higher State Artistic and Technical Workshops, or VKhUTEIMAS.

Beyond the Russian, Italian, and Spanish cases, Guillén discusses a variety of important individual dynamics affecting architectural developments within Mexico, Argentina, and Brazil. He further notes that the individualist focus of pioneering architects in the United States, such as Frank Lloyd Wright, frequently led American architects to establish far less consistent relationships to the state and industrial establishment than, say, Juan O’Gorman or Juan Segura in Mexico; Gregori Warchavchik, Lucio Costa, and Oscar Niemeyer in Brazil; or, to a lesser degree, Alberto Prebisch and Antonio Ubaldo Vilar in Argentina.

Guillén’s study sets itself apart most clearly from the works of architectural historians in its social science methodology. Analysis of the “Number of Leading Architects Cited in Ten Histories or Encyclopedias of Architecture” leads to a table by that name, followed by another table of “Architects Cited by All Ten Histories or Encyclopedias of Architecture.” This latter table interestingly lists ten architects: five are associated with Germany—Behrens, Gropius, Mendelsohn, Mies van der Rohe, and Hannes Meyer; two with France—Auguste Perret and Le Corbusier; and one each with Italy and the United States—Terragni and Wright, respectively. Other discussions draw on tables summarizing “Key Features of Scientific Management, and Why They Appealed to the European Modernist Architects,” and a fascinating diagram illustrates “Networks of Apprenticeship, Collaboration, and Education in the Modernist Architecture Field, Ten Countries, 1890–1940.” There is, in short, plenty of food for thought for architectural historians who are, at this time of ferment in the field, increasingly incorporating global approaches into their teaching and research.

A drawback of Guillén’s social science–based analysis is the tendency to rely on quotations from survey textbooks by William Curtis or Reyner Banham in declaring what the “field” of architectural history holds to be its articles of faith. On another occasion the classic work of Joan Campbell is cited as the lone source on an important organization like the Deutscher Werkbund, revealing a certain superficiality in the research. While there are evidently cases in which it is clear that the author has read more deeply, the book is far stronger in its citations of literature from organizational psychology, management, and sociology. The lack of familiarity with architectural historical research leads to numerous cringe-worthy mischaracterizations: the Weissenhofiedlung is placed in Dessau, rather than Stuttgart; Mies van der Rohe is discussed as a “leading figure” in the pre-World War I Werkbund, at a time when the young Mies was conspicuously absent from the association; Le Corbusier is listed in the appendix as having been educated at the Ecole des Beaux-Arts, rather than at L’Eplattenier’s School of Applied Arts in his native La Chaux-de-Fonds; and the critique of Adorno and Horkheimer is discussed in terms of the “cultural industry,” a slight but nonetheless revealing difference from the actual Frankfurt School critique of the “culture industry.”

These serious factual errors aside,
this book offers fresh analysis of architecture as a manifestation of new forces at a particular time in the evolution of this complex profession. It makes for illuminating and worthwhile reading, and its methodology demonstrates how scholars from other disciplines have much to offer architectural historians. Students and researchers alike will discover sources to steer them in new directions when conducting inquiries into the relationships among architects, state and industrial patrons, and the forces that push and pull architects from within and outside their profession as they compete for success in a variety of national contexts. By contributing an insightful chapter to the history of what he calls the “lost” aesthetic of scientific management, Guillén challenges architectural historians to identify other overlooked factors in the development of twentieth-century architecture as well.

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Beatriz Colomina

Domesticity at War
Barcelona and Cambridge, Mass.: Actar and MIT Press, 2007. 448 pp., 156 color and 327 b/w illus. $49.95, ISBN 9780262033619

This is a “double” book within a single cover; the pages are laid out so that the top part contains images and the lower part text, although sometimes the images stretch over both the upper and lower books. While the format resonates with the author’s intention to treat images as source materials in their own right, it does not provide for comfortable reading. Anyone interested in postwar architecture should, nevertheless, take this in stride, because the subject at hand is interesting.

Beatriz Colomina deals with the impact of military technologies and war-related anxieties on the discourse and practice of architecture and domesticity, looking at the role of the media in redefining private and public. If this short description sounds as if you already came across these ideas before, you probably did—earlier versions of most chapters have been published in various journals and edited volumes. They are now brought together as discrete pieces that together should form a whole. Unfortunately, the seams, overlaps, and stitches remain rather visible. The book thus forms a patchwork of well-written and provocative fragments that do not add up to a completely convincing argument.

Colomina’s introduction evokes the strange contradictions of postwar architecture, which was “aggressively happy” (12). Modern architecture borrowed the techniques and materials of the military, but turned them into tools to shape a new sense of domesticity. This new and happy domesticity was at the same time used as a weapon in the Cold War. The American suburban home, full of appliances and commodities, was positioned as the opposite of the far less spacious Soviet apartment, with its correspondingly far less comfortable household routines. In Homeward Bound: American Families in the Cold War Era (1988), Elaine Tyler May highlights the central role of domesticity in the Cold War discourses on both sides, and Colomina provides us with an extensive array of images to support this argument and make it bear forcefully upon architecture. For instance, the image of the domestic bliss of Walter and Ise Gropius in their house in Lincoln provides the framework for a discussion of the changing image of the architect—no longer the heroic figure of the prewar years, but now simply a casually dressed and relaxed man “at home.”

The chapters themselves move back and forth between a discussion of well-known figures in modern architectural culture and an analysis of topoi related to the house and domesticity in the media and popular culture. The architects singled out by Colomina—Buckminster Fuller, Charles and Ray Eames, Alison and Peter Smithson—were all fascinated with popular culture. They worked with materials and approaches derived from everyday experiences, such as vernacular buildings in the case of Fuller (the round grain bins of the Midwest), plywood and assemblage techniques in the case of the Eames, and advertisements in the case of the Smithsons. Moreover they directed their efforts not only toward a well-informed and well-educated group of peers and possible clients, but also to a much larger audience. They participated in popular exhibitions (House of the Future by the Smithsons, the Moscow exhibition by the Eames) and published in a diversity of media. Because their work was closely linked to Cold War politics and technology and hence invested in postwar militarization—either by implication (Fuller and the Eames had worked for the Army during the war) or by default (the Smithsons)—Colomina argues that it contributed to the “domesticity at war” logic that pervaded postwar homes. By unraveling the multiple ties that connect Fuller and the Eames to these Cold War efforts, Colomina conveys this argument well. It works less well in the case of the Smithsons, whose House of the Future necessitates an additional twist to make it part of Cold War rhetoric. The author finds that twist by comparing the house with a camera pointing to outer space (the only place where one can “look out” is in the interior courtyard, where one can indeed only “look up” to the sky and beyond), thus linking it with the race to conquer space.

The architect-centered chapters provide interesting analyses from somewhat unexpected angles, but I found the chapters dealing with popular culture the most compelling, possibly because I had not read them before. Chapter four, “The Lawn at War,” looks at how the lawn becomes a central element in the American representation of home and family life. The lawn acts as a symbol of the good life, a key element of the suburban qualities of freestanding homes, where inhabitants freely enjoy the pleasures of outdoor living. Colomina draws attention to the remarkable advertising tradition of displaying a family’s possessions spread out over the lawn—exemplified by advertisements from 1946, 1952, and 1996 (images 202–5). This is not just consumer exhibitionism, but also points to the hidden military logic of insecti-