The American Country Club: Its Origins and Development
James M. Mayo
Rutgers University Press, 1998
243 pp., 39 illustrations
$25.00 (cloth)

Country clubs are an icon of the American suburb, a symbol of wealth, status, and exclusion. This engaging and sometimes surprising book presents a thorough history of the country club and an examination of it as an elite landscape, a space that both reflects and sustains social status.

The American Country Club draws from historical and archival sources to create an overview of the creation and evolution of the country club as an American institution, from its roots in nineteenth-century city clubs and country resorts to its modern form. Mayo highlights the country club as a resilient institution that has adapted to changing economic fortunes and social norms and values as well as to changing technology, from transportation to landscaping. Especially interesting are the thoughtful and detailed discussions of the evolution of clubhouse architecture and, to a lesser degree, of golf course design and country club landscape architecture. All are well complemented by photographs and plans.

Country clubs allowed the urban elite not just an escape from city noise, bustle, and cramped spaces, but a way to combine their interest in sport and social life with the values of country living and separation from the lower classes. Over time, financial pressures and a changing socioeconomic environment led increasingly to the country club as a business. The book effectively charts this striking trajectory from social clubs founded and controlled by local elites to the modern country club industry, professionalized, corporatized, and national in scope.

No small part of this development is due to the integration of the country club with residential real estate, and Mayo devotes a fascinating chapter to the slow adoption of this innovation. Early on developers began to link their houses to a club, with both residences and clubhouse providing added prestige and separation for each other, but did not develop the club itself. As the country club movement evolved into an industry, the modern pattern of developing both together emerged.

The American Country Club raises many questions. Larger issues of the impact of country clubs, such as the effect on suburban life or on racial and ethnic segregation and economic inequality, are dealt with mostly indirectly. The book, true to its title, focuses primarily on the country club itself and on issues internal to it. For instance, while there is a discussion of the limited history of Jewish and black country clubs, the still-contentious problem of discrimination against minorities is viewed primarily as a dilemma for the institution of the country club, rather than for the broader society.

Gender issues are more to the fore; country clubs had left behind much of the men-only restriction of the city clubs from the start. Mayo examines the opportunities country clubs offered for women outside of the confines of the home, the limits placed on their facilities and participation, and their growing access as social norms progressed.

In a final chapter, Mayo presents a brief but provocative discussion of various views of the country club: from the conservative standpoint of the country club as an expression of the liberty of free choice in a free market, to the liberal position of the country club as socially discriminatory and environmentally damaging. Mayo steps outside this traditional pro and con argument, preferring to understand the country club from a political economy perspective. In this view, the country club is a form of elite leisure consumption that is both shaped by and participates in the broader political economy of the United States. Membership in a country club does not simply confirm the elite status of members, but also furthers it through the exclusion of nonelites and the business and social networks that clubs provide. And even as the professionalization of country clubs has reduced control by the elite, they remain gatekeepers, and their values and preferences remain reflected in the design and management of clubs. Although one could wish for a more protracted and detailed explication of this critique, Mayo’s perspective is well-integrated throughout The American Country Club.

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Design as a Catalyst for Learning
Meredith Davis, Peter Hawley, Bernard McMullan, and Gertrude Spilka
Association for Supervision and Curriculum Development, 1997
147 pp. with illustrations and bibliographical references
ASCD member price: $28.95. Nonmember price: $34.95

Based on a national study of the integration of design into elementary and secondary curricula and published by a mainstream educa-
tion organization, this book is a must for advocates of K–12 design education. The study was commissioned by the National Endowment for the Arts and conducted by the OMG Center for Collaborative Learning, a policy and research group, with guidance from a national advisory panel. Literature was reviewed, 160 teachers were surveyed (out of a pool of 900), and ten schools were observed, with various constituencies at each school being interviewed. By studying a range of approaches to K–12 design education, OMG hoped to identify those characteristics that can help advance education reform. The book was not produced by OMG but rather was coauthored by four individuals with varying relationships to that organization, all possessing impressive credentials in education and design.

The authors most outstanding contribution is the inclusive perspective they offer on design education—one that bridges the competing, discipline-centered K–12 approaches that have emerged over the last thirty years in architecture, historic preservation, planning, environmental science, and technology, among other fields. The authors also provide a valuable explanation of design relative to science (understanding how the world works), technology (inter- vening in that world), and art (aesthetic intervening but without a humanistic intent). Design, they say, encompasses all these enterprises, while also serving human purposes, giving it an added edge in helping children develop pro-social values.

In distinguishing activities that focus on design for its own sake (usually taught in art or industrial art classes) from those that use design inquiry to explore traditional subjects, the authors demonstrate that design skills are imbedded in the national discourse on K–12 education in history, social studies, language arts, mathematics, science, and technology. For example, they point to language arts standards specifying students’ ability to extract information from graphic material and to teaching recommendations in science and math that emphasize learning principles, not in the abstract, but in a variety of applied contexts. They also show how design correlates with many of the innovations suggested by recent educational research. For example, design promotes visual literacy—a valuable skill at a time when students increasingly need to process visual, as well as quantitative and verbal information. Further, the authors say teachers believe that design helps students manage ambiguous situations; pose and solve problems; pursue alternative outcomes; and self-critique, communicate, and understand the consequences of their actions—all skills required by future generations.

Despite its potential contribution to education reform, the authors acknowledge that design education is mostly an individual effort, identifying barriers to its institutionalization in elementary and especially in secondary schools that are more invested in the disciplinary frameworks of higher education. Barriers include lack of time, space, and other resources; lack of teacher preparation, administrative support, and published reference materials; education schools’ inattention to research findings; and spotty documentation of the benefits of design education.

In spite of these strengths, the book unfortunately falls short of advancing the cause of design education due to its lack of rigor in presenting the research. To point out a few problems, the population sample was selective, not random, and the authors do not specify how it was chosen or why the response rate was so low (just 18 percent). The socioeconomic make-up of the sample is only informally described and not till the end of the book. The literature is quite thin—the concept “multiple intelligences” is explained in a single paragraph—and is not used effectively to substantiate the findings. Neither the methods of analysis nor the results are presented so the reader can assess their veracity. In fact, the reader is not told why the authors, not OMG, published the study, or which group did the analysis.

What the reader does encounter are repetitive, feel-good anecdotes, with a single teacher or program being mentioned many times throughout the volume. This impressionistic reporting of data, along with the cursory literature review, prevents the authors from going beyond story telling to theory building. Instead, they create a “catch-22,” arguing for design because it helps students explore multiple outcomes rather than single, teacher-defined answers, then subverting this benefit by concluding that broad implementation of design requires data from standardized tests to validate its usefulness—the very tests that require predetermined answers. Most disconcerting is the lack of any critical assessment of design as an activity or method of inquiry. Clearly design education is not the unproblematic panacea the authors have presented. A naive, romanticized view of its benefits is unlikely to convince naysayers that design education can help transform traditional pedagogy, as the authors suggest it can.

Nevertheless Design as a Catalyst for Learning is a significant work, if only to illustrate the need for inventing assessment methods for K–12 design education that are both rigorous in terms of research and imaginative in terms of critically deciphering the nature and untapped potential of a designerly way of thinking.

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Shaping Structures: Statics  
Waclaw Zalewski and Edward Allen  
Drawings by Joseph Iano  
John Wiley & Sons, Inc., 1998  
424 pp., 457 illustrations  
$99.00 (cloth/CD ROM)

Understanding Structures  
Fuller Moore  
WCB/McGraw-Hill, 1999  
480 pp., 503 illustrations  
$80.43 (paper)

Structure is fundamental to architecture, yet in schools of architecture the separation of technical subjects taught by specialists in the lecture hall, from design taught by generalists in the studio, frequently fails to enable students to successfully integrate structural form with other architectural intentions. Faculty who teach building technology face a changing professional and educational context that continues to transform the technical knowledge base central to architectural practice. Traditional structures textbooks reflect historic, though still prevalent, patterns in engineering education that introduce structural behavior by focusing on individual building components rather than the broader structural issues that influence architectural design decisions. More alternative educational materials are needed. Shaping Structures and Understanding Structures are two new architecturally oriented textbooks, geared to a beginner’s level of analytical experience, that take a holistic approach to the nature of structure in architectural design. They present case-based introductions to structural concepts with an emphasis on visual methods of description and analysis.

The more innovative of the two, Shaping Structures, by Zalewski and Allen, essentially revives late nineteenth- and early twentieth-century graphical methods in which the relationship between structural forms and forces is explored geometrically through the manipulation of scaled vectors. The text (with a supplementary CD-ROM available) invites students to analyze structures through hands-on experimentation with graphical techniques and to generate simple structural forms of their own design. Understanding Structures, by Moore, is survey-style compilation of several classic nonquantitative approaches to structures education presented through analogies drawn from everyday life, diagrams of analytical concepts, and images of physical demonstration models. Both books present a departure from the use of mathematical expressions and calculations as the primary vehicle for introducing structural concepts. Neither addresses the potential for using the computer-based analytical methods to introduce students of architecture to structures.

It is interesting that Zalewski and Allen select a historic analysis technique to introduce the conceptual building blocks of statics, given that structures is a field that has been revolutionized by computer methods and that computer-based learning in beginning structures courses in schools of architecture has recently become common. But the rationale for learning statics through drawing as a means to becoming graphically as well as numerically fluent is compelling. Shaping Structures provides educators and students with a tool that effectively merges qualitative with quantitative learning. It is demonstrated in a straightforward step-by-step format using actual structures—their geometries, dimensions, quantities, and loads—in such a way that students can discover the relationship between them and learn to understand and appreciate elegant, suitable structural forms. Emphasis is placed on long-span cable-stayed structures, suspension structures, arches, and trusses featuring classic works by internationally known designers including Eiffel, Maillart, Nervi, and Saarinen. In several cases, the behavior of these structures is traced to the details of connections at a level of specificity and clarity that is rarely found in textbooks. Effective visualization is critical to understanding structures, and Zalewski and Allen’s visual approach, using a blend of photographs, freehand sketches, diagrams, and scaled graphical constructions places an array of visualization tools in the hands of students. The methodical rigor of the presentation and the authors’ skill at breaking down an intimidating subject into manageable yet intriguing activities succeeds in stimulating students’ interest while helping them to develop the reasoning skills necessary to conceptualize structural form.

Instructors considering adopting this book may need to resolve problems with what it omits. In presenting the most elegant examples of how graphical methods can be used to understand and shape structures, Zalewski and Allen focus on systems composed of tension and compression elements and do not include much discussion on the nature of the common beam. Although students skilled in graphical analysis can use the method to generate bending-moment diagrams, the graphical method seems to be a cumbersome way to introduce the concept of bending, so critical to developing an understanding of the structural systems employed in most buildings. The book also does not cover the strength-of-materials concepts behind understanding deflection, concepts that are usually presented in introductory courses. The building examples and exercises focus on structurally expressive long-span roof and bridge design rather than the kinds of structural problems that architects more routinely face and students are more likely to encounter in beginning design studios.
Understanding Structures, a compact paperback, is a learning resource that readily complements most survey courses concerning building structures. Abbreviated case studies, ranging from masonry monuments of antiquity to recent long-span achievements, serve as an introduction to significant, instructive structural works every architecture student should study. Moore’s equal treatment of space frames, pneumatics, shells, and other lightweight and long-span systems typically underrepresented in foundation structures courses is fascinating reading. The book’s greatest contribution to currently available textbooks is its illustration-intensive format. All concepts discussed in the text are presented visually in a manner similar to Frank Ching’s illustrated textbook series. The sketches and diagrams are particularly accessible to beginning students and help them connect their intuition to analytical concepts and the written word. The best of these are a series of labeled details of structural assemblies that would make excellent slides for lectures featuring the case studies while providing students the kind of visual learning resource that makes it possible for them to review lecture concepts and apply them to design thinking. Moore’s illustrations of many of the physical models developed by Richard Kellogg also place documentation of classroom experience into the hands of students, but there is little explanation of the materials and methods used to construct the series of demonstration models that otherwise play such an important role in communicating concepts. A final chapter is on structural layout, with illustrations about framing plans and sections that can be introduced into schematic design. It begins to address design methods, a subject rarely treated in structures texts. Unfortunately, the treatment is too cursory and its introduction too late to effectively support study of the structural design process. Readers seeking new insights and innovative approaches to structures education will be disappointed. As Moore explains in his introduction, “I’m struck by how little original material I have contributed . . . and how indebted I am to others on whose work I have so heavily drawn.” But Moore’s sensibilities as a compiler, editor, commentator, and illustrator of structures concepts result in a clear and technically appropriate presentation of structures.

For educators these books raise the questions of when and how mathematical tools should figure in introductions to structural theory. The trend over recent years has been toward reducing the level of mathematics required of students prior to and during the study of structures. This is due in part to a pedagogical shift from engineering-based to architecturally based faculty and curricula. It is also a response to the uneven and sometimes inadequate preparation in mathematics that students bring to structural studies. In his preface to Understanding Structures, Moore suggests that the book’s qualitative approach be used as a prerequisite to quantitative studies. It is also appropriate for courses geared toward students in related fields such as architectural history or interior design. But the limitations of an exclusively qualitative approach is evident in the first two chapters concerning structural theory, where the absence of mathematical tools seem to make communication of some fundamental scientific principles more cumbersome than necessary and less rigorous than desirable. Qualitative, nonmathematical approaches to technical communication are not always the most direct. In the forward to Understanding Structures, Edward Allen argues that practicing structural designers develop forms and select systems prior to engaging in mathematical analysis, and that one of the greatest flaws of most introductory texts is the early emphasis on computational methods. Computation, however, plays a pedagogical role in educational settings that differs significantly from its use as a tool in professional practice. The language of mathematics aids beginning students in understanding structural concepts. For this reason, purely qualitative books like Understanding Structures rarely serve as the sole text of structures courses. Shaping Structures is unique in the way it manages to address qualitative issues using numerical information. The text contains mathematical expressions presented alongside graphical figures in a way that enhances student learning of design principles and engages them in the construction of both form and thought.

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