

Book Reviews

Emeritus Professor Henry Jacob Cowan AO (1919-2007)

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Professor HJ Cowan completed the following book reviews in the final few weeks before his death.

Urbanism and Cinematography

4559

Cinematic Urbanism: A History of the Modern from Reel to Real, by Nezar AlSayyad. *Routledge, New York, USA, 2006 (our copy from Taylor and Francis, PO Box 6329, Basingstoke RG24 8DR, United Kingdom). 256 pp., ill., index. Pbk. Price: £ 25.00.*

AlSayyad is Professor of Architecture, Planning and Urban History in the University of California, Berkeley, and Chair of its Centre of Middle Eastern Studies. Furthermore, he is the Director of the International Association for the Study of Traditional Environments, and editor of its journal *Traditional Dwellings and Settlements Review*. He is the author of a number of books, and the publisher notes on the back cover that some of these show how utopian ideals harbour within them their dystopian realities, and how nostalgia for tradition may reveal a cynical modernity and rebellion against its idealism.

This book reviews twenty films in nine chapters, proceeding from the advent of modernity to post-modernity. The opening chapter deals with industrial modernity, and discusses Berlin-die Sinfonie der Gross-stadt, made in Germany in 1927, which describes a day in the life of the metropolis. This is the only one of the films reviewed in this book that shows the events realistically, and perhaps for this reason this film is rarely seen or referred to today. The other film in Chapter 1 is Charlie Chaplin's *Modern*

Times, produced in 1936, which is still popular. It is an American critique of the efficient design of manufacturing promoted by Taylor and by Ford. Its highlight is a feeding machine devised to eliminate the need to give workers a break for lunch. The malfunction of this machine and Chaplin's comic response make this a masterpiece of the silent film era. However, while very entertaining, it is quite unrealistic.

Most of the other films discussed are open to the same criticism. In Chapter 3, dealing with Orwellian modernity, the author discusses *Metropolis*, made by Fritz Lang in 1927. This brilliant film is still shown from time to time in art cinemas. However, it bears no relation to the realities of Weimar-Germany. No factory owner in the 1920s would have permitted the appalling living conditions of the workers, and the elevated super-highways of the film, which attracted much attention at the time, were never realised.

Chapter 4 on Cynical Modernity is built around two French films of the 1950s and 60s by Jacques Tati about an absent-minded character, Monsieur Hulot, whom Tati plays himself. Again, these bear little relation to reality. Neither do the two films in Chapter 7: *The Modernity of the Sophisticate* and *The Misfit*, produced and acted by Woody Allen, about life in Manhattan.

This is an interesting and easily readable book about successful films critical of various aspects of urban life. However, it does not have any comments on the changes needed in architectural design and town planning to remedy the problems.

A Distinguished Portuguese Architect

4560

Alvaro Siza, published by Phaidon, London, 2006 (our copy from Bookwise International, PO Box 2164, Regency Park SA 5942). 620 pp., ill., index. Pbk. Price: \$A 79.95.

This book originally appeared in Italian in 1999. The first English edition was published by Phaidon in 2000, and the paperback in 2006.

It consists mostly of drawings and photographs. There is a preface by Francesco del Co, which deals with Siza's early life, a sixty-page essay reviewing his architecture by Kenneth Frampton [the architectural historian who is presently Ware Professor at Columbia University NY], and a short note of homage by Fernando Távora, for whom Siza worked before establishing his own practice. There are also ten short articles by Siza, published previously in magazines, on his own buildings and on those of Le Corbusier and Aalto.

The illustrations take up about six hundred pages. Some are only sketches, which implies that the project was not taken beyond its initial stage; some include proper drawings, but no photographs, and presumably, these were not built; others also show photos of the architecture.

Siza was born in Matasinhos, near Porto, after Salazar assumed power as a pro-fascist dictator. He studied at the University of Porto, where he is now a part-time member of the academic staff. The Salazar regime was overthrown ten years after he set himself up in professional practice. His political sympathies are evidently with the socialist

left, and this shows in his social housing, which constitutes a substantial part of his work.

Most of his buildings are in Portugal and in Galicia, the region of Spain [around Santiago de Compostela], which is nearest to Northern Portugal. There are also many buildings by him in Italy, France, Germany, and The Netherlands, and one each in Denmark, Finland, the USA, Brazil and China.

A large part of Siza's work is on the domestic scale. Among his larger buildings are the Boa Nova Tea House and an adjacent swimming pool at Matasinhos, a spectacular early design, the reconstruction of the Chiado District of Lisbon, the Galician Centre of Contemporary Art at Santiago de Compostela, and the Portuguese Pavilion at the 1998 Expo in Lisbon.

A great deal of Siza's architecture utilises the white rectangular off-the-form concrete without protective overhangs favoured by Le Corbusier, and this will evidently weather badly, as has the concrete in similar buildings by the French Master, although this is not visible on photographs taken immediately after completion. However, most of Siza's buildings have beautifully finished interiors in natural stone and mosaic, and some use natural stone externally.

Siza has been a visiting professor at universities worldwide, and his awards include six honorary doctorates, the Gold Medal of the Alvar Aalto Foundation, and the Pritzker Prize.

At the age of 74, he has become one of Europe's most respected architects, and his completed buildings are of great interest. However, it is open to question whether it was appropriate to publish "his complete works" as the title page correctly claims. The numerous rough sketches of designs not taken to a further development stage with only the briefest of sub-titles and no commentary are very difficult to decipher for anybody unfamiliar with the purpose of the buildings, and they make this an unwieldy volume.

Cities in Conflict

4561

Architects without Frontiers: War, Reconstruction and Design Responsibility, by Esther Charlesworth. *Architectural Press, Oxford, 2006 [our copy from Elsevier Australia, 30-52 Smidmore Street, Marrickville 2204]. 175 pp. ill., index. Price: \$A 92.50.*

In this book Esther Charlesworth, an Australian architect, traces her journey living and working in three cities troubled by ethnic conflict: Nicosia, the capital of Cyprus; Beirut, the capital of Lebanon; and Mostar in the former Yugoslavia. As a result, she suggests that architects could play an important part in post-war relief and reconstruction, somewhat like the French-founded organization *médecins sans frontières*.

Nicosia presents the simplest problem. Cyprus has a majority Greek population and a substantial Turkish minority. When it gained independence after having been a British colony, the Greeks used their parliamentary majority to claim the right to govern. This continued for several years, but eventually a Turkish military force invaded the island to protect the interests of the Turkish minority, which led to the division of the country. The dividing line is now patrolled by a United Nations force, including Australian police. This division is an economic disaster for Cyprus, but few lives were lost. The 'architectural' contribution to coexistence was a bi-communal sewerage project.

The other two cities suffered far more. Mostar has a population that is partly Bosnian and Muslim, and partly Croat and Roman Catholic with a Serb and Greek Orthodox minority, and the main dividing line is the Neretva River. This was crossed by a number of bridges, including the Stari Most, an elegantly thin arch bridge of international repute erected several centuries ago during the Turkish era. The peace was kept during the years of Turkish and Austrian government, and under the firm dictatorial rule of President Tito. After the break-up of Yugoslavia there was some bloody fighting. Mostar did not get the democratic government that the West Mostar planner Darko Minarek wanted, but an administration and reconstruction team imposed by the European Union. Eventually Mostar was split into three non-cooperating Bosnian, Croat and Serbian entities. The reconstruction of the old Turkish arch-bridge was financially supported by the Aga Khan Foundation. However, there was no money for rebuilding the houses destroyed in any of the three entities.

Beirut was devastated partly by a civil war and partly by Israeli bombardment after Muslim militias attacked the border territory. However, it had skilful politicians

and wealthy citizens who organized the reconstruction of the city centre by private enterprise. Esther Charlesworth devotes more than thirty pages to a description of the reconstruction and the unsolved problems of the suburban regions; these cannot be summarised in a few lines.

In the later chapters of this book she describes a design studio project on the reconstruction of Mostar conducted with students at the University of Melbourne in 1998, another studio project on the architectural problems of Beirut she conducted at the American University of Beirut while she was a visiting professor, and a further studio project on the effect of the dividing line in Nicosia, in which she cooperated with Professor Sorkin at the City University of New York.

The account of these studio projects and the conclusions reached are of considerable interest. However, there is a significant difference between architects without frontiers and *médecins sans frontières*. The help of doctors during and after a war is generally welcome to both sides in a conflict; but the advice on reconstruction offered by foreign architects would evidently gain more support from the side in the conflict that it favours.

Roman Mosaics

4562

Tunisian Mosaics: Treasures from Roman Africa, by Aïcha Ben Abed. *Getty Conservation Institute, 1200 Getty Center Drive, Los Angeles CA 90049-1682 (our copy from Windsor Books International, The Boundary, Wheatley Road, Garsington, Oxford OX44 9EJ). 140 pp. 136 colour ill. Price: \$US 29.95.*

This volume is the result of the first major exhibition in the United States solely devoted to ancient mosaics, and it marks fifteen years of help given by the Getty Conservation Institute towards their preservation. The author is the Director of Monuments and Sites at the Institut National du Patrimoine of Tunis.

Between the 2nd and the 5th century AD, elaborate mosaics were created to pave the floors of the town houses and the rural estates of the Roman settlements in North Africa. These stunning mosaics were particularly widespread in the colony of Africa Proconsularis, which covered roughly the same territory as the modern state of Tunisia. The floor mosaics dealt with a wide range of subject matter, from

scenes of daily life and classical mythology to abstract floral and geometric designs of rare vibrancy and complexity. A distinctive "African" style emerged, whose influence eventually extended throughout the Mediterranean region.

The Californian exhibition was limited to twenty-six mosaics that could be transported from Africa to America. The excellent colour illustrations in this book show many more, together with some pictures of the archaeological sites where they were discovered.

Floor mosaics are, of course, the part of an ancient building most likely to survive its demolition by accident or by enemy action. The ruins of the building generally cover the mosaic and help to preserve it, and the ancient Roman mosaics were mostly built with naturally coloured stone tesserae, so that they were very durable. Some are still in their original position, and only a few have been given new roofs for protection. Others have been removed to museums. The most notable collection is in the Bardo Museum in Tunis, which utilises a magnificent palace built by one of the Beys of the Husseinite Dynasty in the 18th Century. There are other, smaller collections in the Sousse Museum and the El Jem Museum.

Not many tourists get to Tunisia nowadays, and the artistic and constructional excellence of the mosaics reproduced in this book will surprise readers familiar only with the Roman floor mosaics of Italy and Greece. There are brightly coloured geometric patterns and floral arrangements, detailed pictures of ships at sea operated by their crew during rough weather, of farmers with their animals, of a fight in an amphitheatre, and there is a very natural-looking fishpond, which is in fact its mosaic floor. Then there are numerous mythological pictures, such as Leda and the Swan, Bacchus riding a panther, victorious Neptune holding his trident high, and Orpheus charming wild animals.

Church Acoustics

4563

Worship, Acoustics, and Architecture, by Ettore Cirillo and Francesco Martellotta. *Multi-Science Publishing Company, 5 Wates Way, Brentwood CM15 9TB, London, 2006. 216 pp., ill. Pbk. Price: £ 32.50.*

Many books have been written on the acoustics of concert halls and theatres; but

little has been published on the acoustic behaviour of old or new churches, and indeed, there has hardly been any research on the subject. This paperback by a professor and another staff member of the Department of Technical Physics of the Polytechnic University of Bari [on the southeast coast of Italy] aims to remedy this deficiency. It is not a technical book: most architects, musicians, and clergy interested in acoustics should be able to follow it. The first fifty pages deal with acoustic concepts and measurements, and one hundred and sixty pages then review the acoustic behaviour of churches, ranging in age from the early Christian to the present era.

The authors explain that the original layout of the church was derived from that of the Jewish synagogue, which in turn was based on that of the Temple in Jerusalem. As a result, both had an ark and a raised platform, the bema. The auditorium of the Catholic church was usually divided, and the eastern part, the Chancel, had an altar. The relatively slight differences between Catholic and Greek Orthodox churches are then discussed, and the much greater differences resulting from the Reformation, which gave more emphasis to the intelligibility of the Sermon. There is also an account of the effect that the decisions of the Second Vatican Council had on the acoustic design of modern churches.

The various criteria for determining the quality of church acoustics are then considered. The reverberation time, defined by W.C. Sabine, a Harvard physics professor, in the late 19th century remains the main criterion, and it can be measured easily and accurately. Other descriptors deal with loudness, tonal balance, clarity, and spaciousness. Their measurement is explained, and there are charts showing how they varied with the changes in architectural style, particularly from Romanesque to Baroque. The authors argue that the musical quality of the Gregorian chant was determined by the architectural character of the medieval churches, rather than vice versa.

The greater part of the book is devoted to a description of thirty-four churches, all in Italy. Since the book was originally written in English, it is presumably intended for an international audience. From the authors' point of view, it is understandable that a substantial proportion of the churches are within driving distance of Bari, and the

authors acknowledge their indebtedness to the archbishops of Bari and Taranto for facilitating access and acoustic testing of the churches in their dioceses. This is, however, a part of Italy off the beaten tourist track. The small towns where nine of the thirty-four churches are located do not even appear on a map covering the whole of Italy, and four of the six churches in Rome are unfamiliar. None of the great Italian churches, such as St. Peter's in Rome, or the cathedrals of Florence and Milan, is included.

Among familiar churches discussed are the Byzantine Sant' Apollinare in Classe in Ravenna; the Romanesque Cathedral of Modena; and the Gothic Cathedral of Orvieto. Three of the Renaissance churches are well known: Brunelleschi's San Lorenzo in Florence, Alberti's Sant' Andrea in Mantua, and Vignola's Church of Gesso in Rome; and two of the Baroque churches: Borromini's Sant' Agnese in Agone on the Piazza Navona in Rome, and Santa Croce in Gerusalemme, also in Rome, built in the 4th century and rebuilt in the 18th by Gregorini and Passalacqua.

These give enough examples for the church acoustics described in this book. However, a study of the other twenty-six churches would evidently be worthwhile for readers who have the facilities and the time to go to the provincial towns, about half of them in the compartimento Puglia.

The Architectural Characteristics of Concrete

4564

Liquid Stone: New Architecture in Concrete, edited by Jean-Louis Cohen and G. Martin Moeller Jr. *Princeton Architectural Press, New York, 2006 [our copy from Birkhäuser Verlag, PO Box 133, CH-4010 Basel, Switzerland]. 288 pp., 604 ill., index. Price: 79.90 Swiss Francs.*

Most of the illustrations used in this massive tome are taken from an exhibition "Liquid Stone – New Architecture in Concrete" presented at the National Building Museum in Washington DC, and many of the papers originated at a symposium on the same topic held by the School of Architecture of Princeton University. Both were made possible by financial support from the Lafarge Group in Paris, a manufacturer of cement and other materials used concrete, and the copyright of this book is vested in it. The editors and

most of the authors of the various sections are American or French.

The introduction relates the rediscovery of concrete, an Ancient Roman invention that was lost in the fall of the West Roman Empire, in the 18th century, and the development of reinforced concrete in the 19th century, which remedied concrete's lack of tensile strength by placing steel reinforcement in those regions of the structure where tension occurs.

Jean-Louis Cohen gives the credit for declaring concrete the ideal material for Modern Architecture to Le Corbusier. However, he also considers that he was responsible for the principle of structural honesty that requires its off-the-form surface to be its visible architectural surface. This can produce some ugly stains because of the problems created by the chemistry of cement. Unlike gypsum plaster, which expands when it combines with water, cement contracts and thus forms fine cracks. These are barely visible if the concrete is protected from the weather, but if rainwater is allowed to run down its surface, the micro-cracks fill with dirt. The concrete soon looks shabby, and there is no satisfactory method of cleaning it. This does not show on photographs of Le Corbusier's buildings taken soon after completion, but it shows later on the buildings. It is a weakness of this section that this is not specifically discussed. However, in the later chapters there are some interesting suggestions for overcoming this problem, many of them novel.

Four fifths of the book are devoted to descriptions and excellent illustrations of numerous recent buildings from all over the world. The first section deals with structure, and it includes the Torre Agbar in Barcelona by the French architect Jean Nouvel, the National Theatre of Okinawa by Takamatsu and Arup Japan, and the Millau Viaduct in Southern France by Foster and Partners with Ove Arup. Some of these structures have metal cladding that obviates the problem of concrete surface deterioration.

The next sections deal with "Surface". While it includes some unsatisfactory off-the-form concrete, most of the buildings have good surface finishes achieved by using precasting with metal formwork, by covering the concrete surface with clay tiles or with marine shells, or by using the recently introduced technology of photoengraving, in which a layer of tiny

dots is applied to a polystyrene sheet, and the image is then 'printed' on the concrete with a chemical which slows the curing rate of concrete.

The following section deals with "the Morality of Form". Martin Moeller, the curator of the National Building Museum's exhibition, asks what constitutes "truth" with respect to the material, as concrete has no 'inherent' shape. A moralistic attitude has been adopted by a number of theorists and historians, and different readers will undoubtedly make their own aesthetic judgements of the buildings illustrated. As they are all of recent construction, there is none by Nervi, Torroja or Candela. In this reviewer's opinion the most interesting in this section are by Santiago Calatrava, by Zaha Hadid, by Ingenhoven [in collaboration with Frei Otto], and by Richard Meier [with Arup as consultant].

The final, relatively brief section is devoted to "the Future of Concrete". It deals with Self-Consolidating Concrete, with Ultra-High-Performance Concrete, and with Autoclaved Aerated Concrete, all of which became possible through the development of appropriate additives. Then there are descriptions of Translucent Concrete and of Bendable Concrete, of Fabric-Formed and Fabric-Reinforced Concrete, and finally of Robot-Laid Concrete.

This is a book with a great deal of novel and interesting information on concrete, and even specialists in the field are certain to find something that is new.

Old Australian Homesteads

4565

Great Houses of Australia: 50 Homes with a Story to Tell, Text by Denis Gregory, Photography by Alf Manciangli. *Cameron House, Adelaide, 2006 [our copy from Bookwise International, PO Box 2164, Regency Park SA 5942]. 208 pp, ill. Price: \$A 59.95.*

Denis Gregory is a distinguished journalist who received an OAM for service to the rural community of New South Wales. The fifty houses described and illustrated in this book are mostly in NSW; a few are in Victoria, Queensland, and in the Northern and Australian Capital Territories. Although the book is published Adelaide, none are included from South Australia [or from Western Australia]. Few of the houses, published

in alphabetical order, are well known; but the author evidently had access to the present or a previous owner, which enabled him to describe the houses and their present use in some detail.

The most impressive of those included is Camden Park, built for John Macarthur, one of the first settlers to produce fine wool for export, in his old age by John Verge, the leading Australian architect at the time. Macarthur died shortly before it was finished in 1835; however, it is still in the hands of his descendants, and it is the Australian house that most closely resembles an 18th century English country house.

The other important building in this volume is Yarralumla, now the residence and office of the Governor-General of Australia. It was built in 1831 by Francis Mowatt, a customs officer in Sydney, as a hunting lodge in the country. At the time, the region was chosen as the site for the Australian Capital it was owned by Frederick Campbell, a prosperous sheep farmer. The house has since been extended to include a 50-seat dining room, a reception area for 150 people, and a room for distinguished visitors, such as the Queen.

Old Errowanbang at Mandurama NSW was built by William Lawson, one of the pioneers of the first crossing of the Blue Mountains in 1813. He subsequently became one of the colony's biggest landowners, with a holding of 155 000 acres. It is a traditional building with a large verandah, a huge timber woolshed, and a two-storey shearing shed.

Another impressive building is Abercrombie House, a 52-room granite house with marble fireplaces, built by a son of Major-General Stewart, a Bathurst pioneer and later Lieutenant Governor of New South Wales. It is now owned by Rex Morgan, an author and at one time the head of a major private school.

Iandra is another big house, with 57 rooms. It was built by George Greene in the 1870s of brick and sandstone with marble fireplaces. The eccentric exterior seems to have been designed partly by his wife and partly by the building contractor, W. T. Millard of Young. The small town of Greenethorpe grew around it, and its church is on the Iandra property.

Other interesting buildings described in this book are the Government House in Darwin NT, built in 1871, which

survived Cyclone Tracy, that devastated Darwin in 1974, and two earthquakes; Vacluse House, greatly extended by Charles Wentworth, the “father” of responsible government in Australia and the founder of the University of Sydney, who bought it in 1827; and Captain James Cook’s cottage, originally built in 1755 in Yorkshire. It was bought by Sir Russell Grimwade in 1927, dismantled, the stones numbered, and re-erected in Fitzroy Gardens in Melbourne.

This book makes interesting reading, and it is illustrated by numerous excellent professional photographs. The choice of the buildings is, however, selective.

A History of Garden Design

4566

Sensations: A Time Travel through Garden History, by Nadine Olonetzky. *Birkhäuser Verlag, PO Box 133, CH-4010 Basel, 2007. 127 pp., 62 ill., index. Price: 49-90 Swiss Francs.*

Nadine Olonetzky is a Swiss author on various aspects of cultural history. In this pocket-sized book she recounts the history of gardens, from a presumed beginning in Mesopotamia around 4000 BC to the year 2006 AD, in short entries ranging from a few lines to a page, illustrated with contemporary paintings and modern photographs. She notes that Paradise was a walled garden with fruit-trees, and a place of tranquillity; the word probably came from Pasargadae, where Kyros the Great, King of Persia, built in the 6th century BC a well-watered garden in desert country. A park, from the Latin *parricus*, was originally a forest-like garden, and often a hunting ground.

The Hanging Gardens of Babylon, actually a series of terraces supported on columns, were built and planted in the 6th century BC, by Nebukadnezar II for his wife Amytis, a Median princess, to remind her of her birthplace.

The Academy and the Lyceum were originally gardens where the peripatetic [that is, strolling] philosophers of classical Greece argued in the shade of the trees.

These were, however, relatively small. The wealth of Rome resulted in much larger gardens, often in conjunction with working farms. We are better informed about Roman gardens than about those that preceded them, partly because of descriptions in the surviving Latin literature, partly because of the gardens buried in Pompeii and Herculaneum, and partly from surviving

ruins, such as the Emperor Hadrian’s Villa Adriana.

The most interesting medieval gardens that still exist are those of the Alhambra, the last Moorish palace in Spain to fall to the Christian re-conquest. In the Middle Ages, Christian gardens had been limited by defensive considerations, but they grew in size and flourished in imaginative design in the Renaissance. The 16th-century garden of the Villa d’Este in Tivoli on the outskirts of Rome was one of the finest.

The Baroque parks of the 17th century reflect the power and the formality of the absolute monarchies of the European Continent; André Le Nôtre’s Versailles is the unsurpassed masterpiece, and its extravagance was a cause of the French Revolution. The English Garden was the counterfoil, a natural park that improved on nature. Its design spread from the English countryside to that of Continental Europe.

Technology began to play a part in garden design and maintenance from the 17th century. The Ha-Ha, a wall invisible from the inside of the garden, prevented sheep from wandering in to graze on the manicured lawns. The new iron-and-glass construction allowed the building of orangeries, initially to make it possible to grow oranges in a cool climate. Later these greenhouses were also used for other sub-tropical and for tropical plants.

The new rationalism encouraged scientific endeavours. A *hortus medicus* was established in Padua. The tropical greenhouses of Kew Gardens, surrounding a royal summer palace, were used to acclimatise rubber plants smuggled out of Brasil, to establish a rubber industry in Malaya. Scientific drawings recorded accurately the new plants found on the voyages of discovery; many of the ships carried artists skilled in accurate drawing and in water colouring. The *Botanical Magazine* was launched, with hand-coloured illustrations, to publicise the discoveries.

In 1830, the first lawn mower was invented. The 1851 International Exhibition in the Crystal Palace featured the first show garden, and this gave rise to the Chelsea Flower Show and other regular exhibitions. Television gardening programs later gave publicity to the prizes awarded at these exhibitions.

This eminently readable book gives a great deal of interesting information, and it is presented in an unusual artistic cover.

The Change in the Representational Techniques Used by Architects

4567

The Portfolio and the Diagram: Architecture, Discourse, and Modernity in America, by Hyungmin Pai. *MIT Press, 55 Hayward Street, Cambridge MA 02142, 2006. 403 pp., 128 ill., index. Pbk. Price: \$US 22.95.*

This book was originally published as a hardback in 2002. Its author is Associate Professor of Architecture at the University of Seoul, and the arguments he advances seem to be largely based on his postgraduate studies at the MIT during the late 1980s and the early 90s.

His dissertation starts with an account of the French Beaux-Arts system, which greatly influenced early American architectural education, and led to the establishment of the [American] Beaux Arts Institute of Design. World War I saw the demise of the Beaux-Arts portfolio of drawings, and the emergence of the discourse of the diagram, which provided a new possibility for the architect’s relation to words, images and buildings, and a complex formation of texts, concepts and modes of representation. Pai discusses in detail the part played by the various American architectural journals, and the use of photographs rather than drawings.

The economic changes and the scientific advances in building technology, which occurred after WWI and partly because of it, led the architectural profession to study the efficiency methods introduced into industry by Frederick Winslow Taylor and by Henry Ford, and this led to an economic approach to architectural design, and a greater standardisation of architectural construction.

Sweet’s *Catalogue of Building Construction*, now a multi-volume publication, is a design aid based on advertising information supplied by the manufacturers of building materials. The later, more compact, *Architectural Graphic Standards* by Charles Ramsey and Harold Sleeper became the prototype of similar publications in America and in Europe. They relate the available materials to the accepted standards and to the human scale.

Due to the time that has elapsed since the modern theory dominated American architecture, Pai can take a mature view of its failings, notably the slums that resulted from the use of high-rise buildings for

subsidised low-cost housing, as evidenced by the demolition of the Pruitt Igoe Housing Estate in St Louis which he illustrates and discusses, and by the use of in situ off-the-form concrete.

In this book, he is less concerned with constructing a new type of modernism than with explaining the boundaries and structures of modernity. In doing so, he draws attention to historical precedents for the emergence of architecture as a socially oriented practice.

Recent Australian Up-Market Homes

4568

New Directions in the Australian House, by Anna Johnson, with photographs by Patrick Bingham-Hall. *Pesaro Publishing, PO Box 74, Balmain NSW 2041, Sydney, 2006. 245 pp., ill. Price: \$A 70.00.*

This book consists largely of colour illustrations of twenty-four recently constructed houses. Half are in Victoria (mainly in Melbourne), two are in Brisbane, and the rest are in New South Wales (mainly in Sydney). Most are the work of domestic architects; only two are by firms primarily known for their commercial or public buildings: Ashton Raggatt McDougall and Denton Corker Marshall.

The volume opens with an Introduction by Ihab Hassan that characterises all the designs as examples of an International Trend in Modern Architecture. Each house is then described by Anna Johnson, a member of the staff of RMIT University in Melbourne, who notes the differences in their design, rather than their similarities.

Many of the houses follow a common Modern Australian trend which takes due account of the climate in providing thermal comfort and good natural lighting. Most have interiors of carefully selected polished timber. Some have unpainted hardwood exteriors. The structures of most have metal or timber frames, and some use copper or aluminium sheeting externally. Only a few use concrete or brick. The furniture looks architect-designed, and it includes some interesting pieces, notably the chairs in dining rooms and bars.

Some of the houses are in expensive suburbs of Melbourne and Sydney, and

all appear to have wealthy clients. The majority are spacious, with splendid views and swimming pools. This is, however, a very varied collection of buildings. Two are extensions of Federation Houses, one is a converted Paddington terrace house. There is a house clad in translucent red glass scales, and another fitted into a copper-clad dome. Two have off-the-form concrete exteriors, which already shows signs of deterioration; but most of the buildings look as if they will weather well. The majority have sensibly designed interiors: only one has a glass staircase with minimal handrails and without risers. A house by Neeson Murcutt, the firm of Glen Murcutt's son, bears a striking resemblance to his father's designs, except that the exterior consists of unpainted grey hardwood instead of steel sheet.

This interesting collection of buildings, based on a wide range of design concepts, should help to introduce some of the architects to new clients.

Aural Architecture

4569

Spaces Speak, Are you Listening: Experiencing Aural Architecture, by Barry Blesser and Linda-Ruth Salter. *MIT Press, 55 Hayward Street, Cambridge MA 02142-1315, 2006. 544 pp., index. Price: \$US 39.95.*

Blesser is a former professor at MIT and a founder of digital audio. He has worked for the last forty years at the junction of audio, acoustics, perception, and psychology. His wife, who is the co-author, has spent a quarter of a century on post-doctoral studies focusing on the inter-disciplinary relationship of art, space, culture and technology.

This book is not entirely the result of the computer age, but a very large part of the discussion is concerned with creating a virtual aural space for a recording, for a film, or for a radio transmission in place a physical recording in an auditorium. The author explains in an introductory note that this book relates his adventure story about transforming a narrow topic that had engaged his professional interest for thirty years into a set of broader issues. In the 1970s, he developed and commercialised the first digital signal-

processing products or the recording industry: an audio delay and an artificial reverberator. A quarter of a century later, this has expanded into a multi-billion dollar industry permeating our culture and supporting thousands of innovators making incremental contributions. Looking backwards it is now clear to Professor Blesser that his initial goal of electronically reproducing the auditory experience of a concert hall had a much broader meaning. Therefore, in this book he has expanded that limited engineering goal into an interdisciplinary research project: the experience of space by attentive listening, because the aural architecture of spaces requires a consideration of the artistic, the social, the historical, and the philosophical context.

Blesser notes that auditory spatial awareness can be traced back to pre-history. Many blind people, and some with good eyesight, can sense in the dark the existence of walls and other obstacles, and this must have been a factor in the prehistoric tribes who made their homes in these caves. He then reviews this history of aural space from this prehistoric era to the present day, including the Greek and Roman theatres, the highly reverberant Gothic cathedrals, and the acoustic geography of traditional European villages.

Thereafter he discusses the use of musical spaces for the aural arts, including the use of sound absorption and reverberation; if the time interval between the original and the reverberant sound is small, the two merge, but a greater interval produces a distinctive separate sound, and a still greater interval an echo; the invention of virtual spaces for the presentation of music is then considered. Later in the book, he discusses the recreation of much larger Greek-style theatres, such as the Hollywood Bowl with the aid of modern a sound reinforcing devices. This takes up the first half of the book, and it should present no problems for architects or musicologists with some knowledge of acoustics.

The second half is concerned with modern music presentation, and with the creation of virtual spaces for music reproduction. A good knowledge of computer technology will make the reading of this part more rewarding.