Abstracts of Periodical Literature

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DIRK BOUWENS, **Clay Lump in South Norfolk: observations and recollections,** *Vernacular Architecture,* 19 (1988), pp. 10–18. For about one hundred years clay lump was the major walling material in the Chalkly Boulder Clay districts of East Anglia. In some parts it is difficult to find houses built between 1850 and 1900 which do not include clay lump. The material was still being used for council houses in the 1920s, but from the 1930s lost its supremacy to cheap mass-produced materials which became more available as the lorry replaced horse-drawn transport. Printed reports on clay lump before the publication of John McCann's article in *Vernacular Architecture* 18 have been confusing, misleading and ill-informed. This paper brings together the writer's observations and first-hand reports by others. Materials and equipment are described, with some discussion of the distribution and introduction of clay lump and the types of building in which it was used. Advice is given about the identification of clay lump buildings.

RICHARD DENNIS, **The Geography of Victorian Values: philanthropic housing in London, 1840–1900,** *Journal of Historical Geography,* 15 no. 1 (1989), pp. 40–54. There was a spatial as well as a social dimension to philanthropic housing in Victorian London. Housing agencies learnt by experience to avoid the poorest parts of London, where it was impossible to satisfy the financial demands of philanthropic capitalism. But they could afford to build in more favourable districts only by taking advantage of indirect subsidies offered by aristocratic landlords and the Metropolitan Board of Works. The mismatch between areas of need and areas of supply made it unlikely that the poor benefited, even indirectly, through "levelling up". The author's analysis, although primarily social, also underlines the pragmatic (commercial) conditions circumscribing efforts to build low-cost housing.

LAURA JACOBUS, **On "Whether a man could see before him and behind both at once": The Role of Drawing in the Design of Interior Space in England *c.* 1600–1800,** *Architectural History,* 31 (1988), pp. 148–65. This article considers the history of a particular architectural drawing convention, the so-called "laid-out wall elevation", which first became significant in English practice in the early eighteenth century and was to become a standard form of interior drawing for much of the century and beyond. Concentrating on one drawing-type the discussion raises wider considerations about the nature and role of drawings in the design process.

BERNARD H. JOHNSON, **Further Thoughts on Rafter Holes,** *Archaeological Journal,* 144 (1987), pp. 308–16. This paper argues that the holes in the lower ends of certain rafters of early date were made for the purpose of fitting onto a jig which would determine the exact size and angle of the rafter couples and their component parts. From this follows the sequence which would have been used to set out the jig and the steps required to fix the rafters on the jig. Finally comes determination of the slope of the intended roof and the possible absence of any sophisticated measuring tools.

HEATHER N. LECHTMAN & LINN W. HOBBS, **Roman Concrete and the Roman Architectural Revolution,** in W. G. Kingery (ed.), *High Technology Ceramics, Past, Present and Future,* 3 (Westerville, 1986), pp. 81–128. Hydraulic-setting cement was an attractive ceramic medium for imperial buildings. It could be processed at ambient temperature from readily available raw ingredients, and cast into large designated spaces to produce integral monolithic structures which could be incrementally extended. The authors examine the social context for the public construction which accompanied adoption of concrete as a building medium, describe the ways in which building in concrete evolved, review the relevant materials science of the microchemical and micromechanical setting reactions involved, and speculate on the role played by this important ceramic technology in the Roman architectural revolution.

MILES LEWIS, **The Diagnosis of Prefabricated Buildings,** *The Australian Journal of Historical Archaeology,* 3 no. 1 (October 1985), pp. 56–69. Prefabricated buildings are diverse in materials, construction and origin, and often difficult to distinguish from conventional buildings. This paper describes those characteristics which may suggest that a building is prefabricated and which may, in some cases, indicate the country of origin or even the individual manufacturer. Examples are specimens of mid-nineteenth-century prefabrication in south-eastern Australia.

MEREDITH PARSONS LILLICH, **Gothic Glaziers: Monks, Jews, Taxpayers, Bretons, Women,** *Journal of Glass Studies,* 27 (1985), pp. 72–92. Medieval stained-glass windows have many admirers, and the manufacturing process described by the twelfth-century monk Theofilus is remarkably similar to the method employed up to the present day. However, our information about the largely anonymous craftsmen who designed and made stained glass is slim, particularly in the period regarded as the apogee of this expensive and highly complex building art. Concentrating on thirteenth and early fourteenth-century Paris and Arras, and employing work contracts and taxrolls, the author identifies a number of glaziers and locates their workshops. In Paris the glaziers were distributed much more widely than the small group concentrated in the Rue de la Verrerie.

VALENTINA MONCADA, **The Painters' Guilds in the cities of Venice and Padua,** *Res,* 15 (Spring 1988), pp. 105–21. Guilds emerged throughout Europe during the economic resurgence of the late Middle Ages, when they played an important role in the building industry and its related crafts. Even within a single region, associations of artisans went under a variety of different names; in Italy we find *fraglie, matricole, scuole, compagnie,* and *arti,* all of which protected their members' interests by preventing unfair competition and providing for their training and welfare. This study

of the painters' guilds of Venice and Padua uses a wide variety of documentary sources to shed light on the social, economic, and legal history of organisations which claimed professional autonomy in important sectors of the construction industry.

ROBERT OUSTERHOUT, **Rebuilding the Temple: Constantine Monomachus and the Holy Sepulchre,** *Journal of the Society of Architectural Historians,* XLVIII no. 1 (March 1989), pp. 66–78. The reconstruction of the Church of the Holy Sepulchre in Jerusalem *c.* 1042–1048 by the Byzanthine emperor Constantine IX Monomachus marks an important turning point in the history of the building. An analysis of the surviving remains of this phase of construction suggests that the plan was determined by an architect from the Byzantine capital, and that construction was carried out by two teams of masons. One workshop was apparently from Constantinople, and the other was trained locally in or around Jerusalem. An analysis of wall and vault construction bears out this conclusion. The analysis also distinguishes between the recessed brick technique (hallmark of 11th and 12th century Constantinopolitan construction), the banded vousoirs of alternating brick and stone (common in earlier Byzantine construction), and the squared stone construction and slightly pointed arches of the Islamic tradition, which probably influenced the local Christian workshop.

J. E. C. PETERS, **Post-Medieval Roof Trusses in Some Staffordshire Farm Buildings,** *Vernacular Architecture,* 19 (1988), pp. 24–31. Little has been written about the development of roof trusses from the end of the Middle Ages onwards. This article traces their development in farm buildings in part of Staffordshire from the early seventeenth to the late nineteenth century, noting, *inter alia,* the change from vernacular to more polite forms of construction. It defines each truss type without taking account of purlin positions or the presence of a ridge member, and it differentiates between two truss types which are often confused.

ILAN SHARON, **Phoenician and Greek Ashlar Construction Techniques at Tel Dor, Israel,** *Bulletin of the American Schools of Oriental Research,* 267 (August 1987), pp. 21–42. This study describes the ashlar construction techniques used at Dor from the late Iron Age to the Hellenistic period; the primary typological criterion used is the pattern in which the blocks are set in the wall. The study then attempts to reevaluate the question of Palestinian ashlar construction using the new data and typology.

W. G. SIMPSON, **Work on Lincoln Cathedral Roofs,** *Archaeological Journal,* 144 (1987), p. 443. Short progress report on work mainly concerned with the completion of the survey of the Angel Choir and tree-ring dating of its timbers. It has been shown conclusively that the roof was built originally without any internal longitudinal bracing (i.e. ridge-piece or purlins) and it now seems certain that this must apply also to the other medieval high roofs of the cathedral. The vertical stability of the roof frames was dependent on the external boards nailed to the rafters which provided the base for the lead. Before this cladding was put on, the Angel Choir frames were held in position by means of temporary boards nailed across the upper collars and struts. This form of construction was sufficient to ensure that no major repairs were required for at least 400 years after its completion in 1280. It has often been remarked that medieval

timber-framed roofs contained no metal parts but nails were a vital element in Lincoln cathedral's roofs.

MALCOLM THURLBY, **The Former Romanesque High Vault in the Presbytery of Hereford Cathedral,** *Journal of the Society of Architectural Historians,* XLVII no. 2 (June 1988), pp. 185–9. In his article on 'Hereford Cathedral' in the *Archaeological Journal* of 1877, Sir George Gilbert Scott suggested that the Romanesque presbytery was originally covered with a high groin vault, on the basis of the suitability of the broad pilasters on the piers for supporting transverse arches of such a vault. While Scott's case for a high vault has been generally accepted, it has not been seriously tested through a detailed examination of the fabric. This note presents new evidence in the masonry above the eastern crossing arch in support of the Romanesque high vault, considers the manner of its construction in relation to other vaults in the West Country School of Romanesque architecture, and examines the case for its being of groined or ribbed design.

MALCOLM THURLBY, **The Romanesque Priory Church of St Michael at Ewenny,** *Journal of the Society of Architectural Historians,* XLVII no. 3 (September 1988), pp. 281–94. The little-known former priory church of St Michael at Ewenny (Glamorganshire) is examined in the context of West Country Romanesque architecture. Documentary evidence dates the church between 1116 and 1126, and connects it with St Peter's abbey (now cathedral), Gloucester. Details of the fabric are related to Gloucester and other West Country buildings. It is argued that the original high vault in the presbytery is the most precise extant reflection of the former Romanesque choir vault at Gloucester, and its selective use of the diagonal rib it is a fine illustration of the purely aesthetic application of this motif.

R. C. TURNER, **Early Carpentry in the Rows of Chester,** *Vernacular Architecture,* 19 (1988), pp. 34–41. The Rows of Chester are a unique two-tier shopping system. They retain a large number of buildings whose origins are in the late thirteen or fourteenth century. The Rows Research Project is making a thorough record of the buildings and has recently completed a survey of Watergate Street. This has revealed an important group of medieval carpentry structures of three different types (Samson-post arcades, corbel tabling, and braced ceiling beams) in a density unknown elsewhere in England. Their form, date and parallels are analysed in this paper.

GUS V. VAN BEEK, **Arches and Vaults in the Ancient Near East,** *Scientific American,* 257 no. 1 (July 1987), pp. 96–103. Arches and vaults originated in lower Egypt or Mesopotamia. Remains of mud-brick early constructions are described and illustrated with diagrams and photographs.

FU XINIAN, **Rarest Treasures of Wooden Structures in China—Halls in Foguang Temple, Wutai, Shanxi,** *Building in China,* 1 no. 4 (December 1988), pp. 16–25. The Foguang (Buddha's Halo) temple dates back to the reign of Emperor Xiao Wen (471–499) of the Northern Wei Dynasty. It suffered serious damage during the widespread Buddhist persecutions of 845 by the Emperor Wu Zong of the Tang Dynasty, and was rebuilt later. The existing architecture of the temple includes the Zushi (Master Monk) pagoda of the late Northern Dynasty, the east main hall built in 857, and the Manjusri (Bodhisattva of Wisdom) built in 1137. Being the earliest but one of the surviving wooden structures in China and also the largest of Tang structures extant, the east main hall has great historical value and represents a unique example of Tang architecture, sculpture, painting and calligraphy combined in a single building. The author, a senior architect in the Institute of Architectural History of the China Building Technology Development Centre, provides a detailed account of the column-beam-and-strut construction systems used in the temple. The description is supported by excellent isometric and perspective drawings.