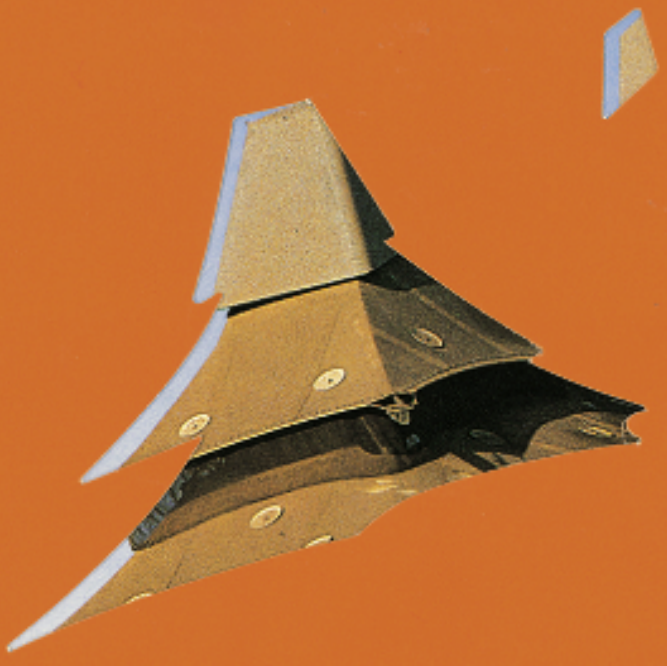
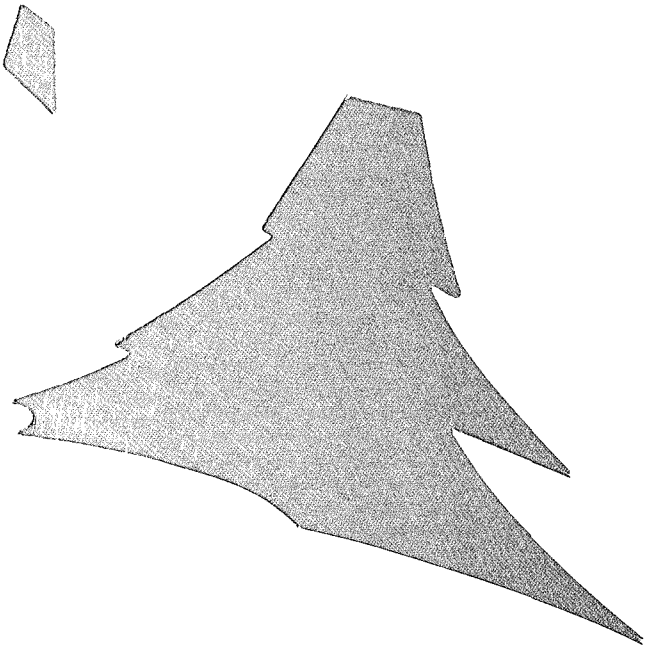
MIMAR

ARCHITECTURE
IN DEVELOPMENT



MIMAR 4•1982



MIMAR® is published quarterly by Concept Media (Singapore) Pte Ltd whose registered office is:- Suite 1718, 17th Floor, International Plaza, 10 Anson Road, Singapore 0207

MC (P) No 107/6/81

Printed by Eurasia Press, Singapore

ISSN 0129-8372

MIMAR: Master Builder/Architect. ARCHITECTURE IN DEVELOPMENT: Design alternatives unifying building and culture. MIMAR: A quarterly international architectural magazine exploring environments in the developing countries.

Right: Sportshall, Jeddah
Photograph: Courtesy of Institute of Lightweight Structures
Back Cover: Rattan furniture stacked in a Jakarta manufacturer's workshop
Photograph: Steven Cohn

MIMAR 4 April — June, 1982

Office Suite 1718
17th Floor, International Plaza
10 Anson Road
Singapore 0207

Telex: RS 23363

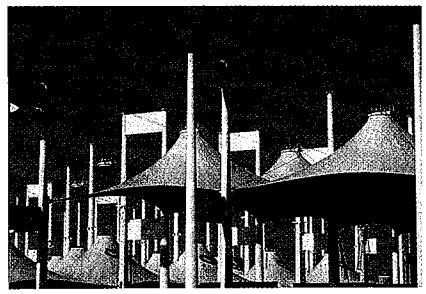
Editorial cartoon is by Salih Memecan, who has recently completed his doctorate in architecture at the University of Pennsylvania He has had several one man shows and his cartoons have been published in publications both in the United States and Turkey

The borders used in the thematic feature for this issue are from a design on the main band of a Kazak Yurt

9 Mimar Gallery

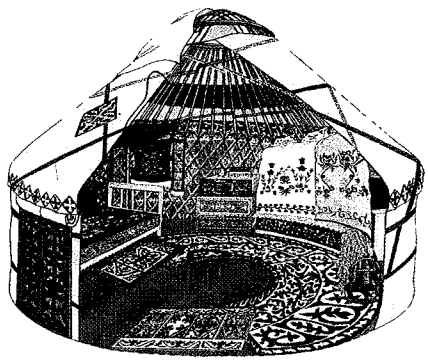
A presentation of traditional indigenous housing of West Africa

36 Haj Terminal, Jeddah



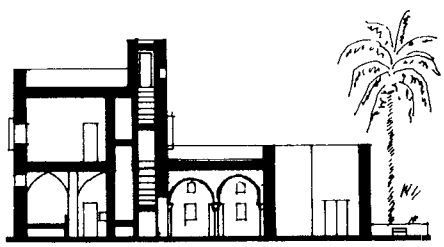
Skidmore, Owings and Merrill's recently completed terminal building uses tent structural principles to create high-tech spaces

50 The Kazak Yurt



The Kazak Yurt's ancient dome form has not changed for centuries and is still used for contemporary living

64 Borjs and Jneins of Sfax — a student project



Identifying traditional Tunisian architecture

Back to
Table of contents

BOOKS

Architekten Der Dritten Welt (Architecture of the Third World)

By Udo Kultermann
DuMont Buchverlag, Köln, 1980
190 pages
Reviewed by Kamal Husnayani

Professor Udo Kultermann seems to churn out books rather like a production machine. This is a much needed one as an inventory of Third World architects It's interesting

that the book has been published in German — a language unknown to most Third World people — but, I understand, that an English version may be forthcoming.

The author's choice of architects is arbitrary, leaping from South American designers, to a Moroccan firm, to India's Charles Correa and several South-east Asian architects. The work too is varied, much of it in the 'international style', with only a few attempts here and there to create locally appropriate buildings. It does bring to the readers' attention the great variety of approaches to design in countries whose architectures are not well known. (In this respect the book appears to have the same aim as MIMAR.) The architects covered in the book are only presented in passing, for example, only one of Yasmeen Lari's projects is presented. It would have been more useful and interesting to see the range of an architect's work as opposed to a glimpse.

In spite of all its shortcomings this work is a welcome one simply because it covers ground that is not covered elsewhere.

Mr Husnayani is a young architect who has just started his own practice in Jakarta, Indonesia

Kamran Diba, Buildings and Projects

By Kamran Diba
Hatje, Stuttgart 1981
243 pages, hardbound
Reviewed by Farokh Derakshani

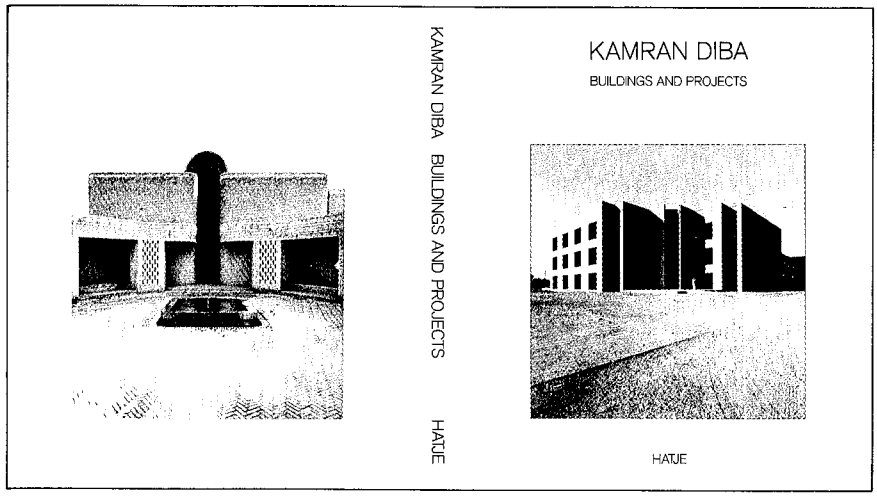
This is one of very few books published on a contemporary Iranian architect's works, and it is welcome precisely because of the dearth of material on recent Iranian architecture. Given the recent social and political events in Iran, this provides opportunity to revaluate architectural projects undertaken within the last decade

What has happened in architectural terms over the last several decades in Iran is obviously not a continuation of Persian Architecture With the general invasion by Western culture in the early twentieth century, modern architecture was imposed in planning and construction also, making them symbols of modernisation This new phenomenon, bringing modern technology with it, replaced the traditional *mimars* with a new generation of Western-educated architects; even the architecture schools moulded a generation of professionals to whom their vernacular environment was alien. The result was the spread of an anonymous architecture throughout the country — especially during the construction boom of the Seventies — rapidly changing the physical environment.

A parallel, but sporadic movement searching a new cultural identity started in the last Sixties, influencing a young generation of architects who tried, individually, to create a new *Iranian* architecture One of the younger architects who distinguished himself through his work in the recent decade is Kamran Diba After completing his studies in the United States, he started off in the mid-Sixties as Kamran Diba and Associates, (later developed into DAZ Consulting Engineers), and, as he was well-connected, he carried out a vast number of projects up until 1978

The book is primarily a graphical presentation of his work with very little commentary. In the introduction of his book, Mr. Diba presents himself as someone who is sensitive to the sociological aspects of architecture: "My interest in architecture has always transcended its physical dimensions. One of my obsessions was to influence and intensify human interaction and activity"

Furthermore he also tries to develop an awareness of Persian culture, by trying to explain how his work has been inspired by it. As a matter of fact, in this book he has not been able to put into words what he has



created. However, by going through the illustrations one can nonetheless discover what is implicit

Within his work one can discern two distinct concerns of orientations: spatial continuity and the use of material One finds in his later work especially a kind of discovery of space, a flow of movement that provides for a continuous chain of human interactions within a physical shell. "I often try to organise a social event by making a building . I deliberately attempt to build an environment which multiplies and enhances the quality of interaction" This can be seen in the so-called "multi-faceted, central pedestrian boulevard" of his Shushtar New Town, as well as in the corridors of Tehran Museum of Contemporary Art

One of his public projects on a vast scale is Shushtar New Town, an architectural attempt to create a new urban fabric with the specific aim to"put together a new town which is sympathetic to the cultural values of Iranian society and yet maintain a traditional continuity with the past" The urban silhouette is actually a conscious continuation of the old city The use of brick in a thoughtful way, giving just the right texture to the vernacular-influenced urban spaces, has made this project quite successful when compared with so many other new towns been built recently in Iran. Mr Diba talks about a sociable, warm and human environment but the most important task accomplished in this project is that one feels familiarity with one's surroundings in taking a walk down its shaded allies

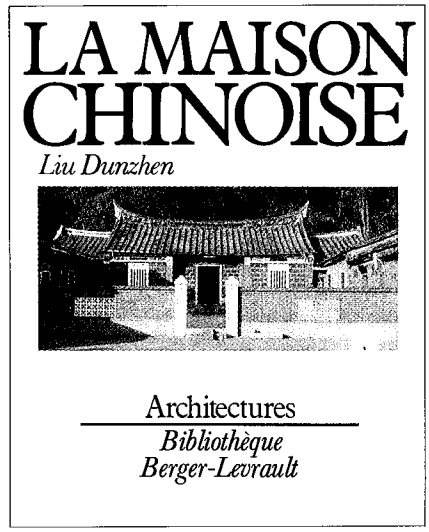
Kamran Diba's work should be regarded as having been influenced by Persian architecture in a figurative sense, giving an Iranian touch to an International architecture of the Seventies. However, despite his attempts to take a glance into traditional realms, Mr Diba has not been able to seize fully the profoundity and significance Eastern ways of thinking in relation to architecture

The drawings themselves in the book are in general very expressive but unfortunately the photography, which could have given a much better spatial understanding of his built projects, are poor technically and are not really architectural photography.

Farokh Derakshani, an Iranian architect, graduated and worked in Teheran He is now studying in Paris

La Maison Chinoise

By Liu Dunzhen
Bibliothéque
Berger-Levrault, 1980
234 Pages
Reviewed by Else Glahn



"Aucun des arts chinois n'est si mal connu que l' architecture" wrote Professor Paul Demieville in 1925. A few Japanese articles and the works of Ernst Boerschmann about Chinese architecture had been published at that time. The subject was not studied by Chinese scholars until the foundation of Zhongguo Yingzao Xueshe, the Society for Research in Chinese Architecture in 1930 in Beijing In 1931 Liu Dunzhen came in charge of textual material and Liang Sicheng of field-work in the society Together they measured and described a great number of important old buildings in north China The members of the society were interested in the history of the public Chinese architecture which was homogeneous over most of the country.

After the Japanese occupation of Beijing the members of the society "went west" with their families It was in this period that Liu Dunzhen became interested in domestic architecture and measured dwellings in Yunnan and Sichuan In 1945 he became professor of architecture at Nanjing University and continued his studies all over China. In 1957 his book *Zhongguo zhuzhai gaishuo (Outline of Chinese Habitation)* was published.

The first part describes the development of domestic architecture traced through archaeological finds The second and most important part deals with different types of Ming and Qing dwellings. The subdivision of this part is somewhat unnatural as the author admits. The houses are grouped according to the shape of their ground plans: circular, vertically rectangular, horizontally rectangular, L-shaped, *sanhe* or three buildings around a courtyard, *sihe* or four buildings around a courtyard, combinations of *sanhe* and *sihe,* ring-shaped and cavedwellings

The circular dwellings are the Mongolian yurts and the semi-permanent buildings in the same area The expressions vertically and horizontally rectangular may sound peculiar to western architects Vertically rectangular means that the entrance to the house is placed in a short side of a rectangular ground plan This is less common than the horizontally rectangular ground plan with the entrance in a long side of the house The circular, rectangular, L-shaped and *sanhe* belong mostly to village dwellings. The most extensive sections deal with *sihe* and combined *san-* and *sihe* ground plans of city dwellings The ring-shaped ground plans belong to the interesting and unique three-storeyed Hakka dwellings, also described in A Boyd's, *Chinese Architecture.*

The short conclusion states that village habitations are built with local material with many variations from place to place A sub-division according to geographical criteria might have been more convenient It could have illustrated the great differences between the standardised public architecture and the many variable types of dwellings

The French translation is preceded by an introduction about recent archaeological finds of old dwellings and a list of western literature about Chinese architecture It ends with a useful Chinese-French vocabulary of architectural terms. The layout of the French translation is carefully prepared. Unfortunately it has not been possible to present some of the ground plans as they appear in the original.

This review is extracted from 'The China Quarterly', Volume 86, June 1981

Publications from HRDU

The Housing Research and Development Unit at the University of Nairobi, Kenya, is a body which explores housing and community development problems in their social, economic and technical aspects. The Unit is directed by T.S. Chana and works in close cooperation with Kenyan Government and international agencies Their research is published and available by mail order Here we list some of their most recent works of interest For further information write to: The Director HRDU, University of Nairobi, P.O Box 30197, Nairobi, Kenya

G.J W de Kruijff, T S Chana
Case Studies of Site and Service Schemes in Kenya
September 1980,
150 pages KSh 70.00 (US$7.85 approx)

In 1979 fifteen sites and service schemes were studied by HRDU Project data, costs, house type plans, site layouts and photographs are presented in a standardised format This report includes summary sheets of interviews with scheme tenants.

Hans Feerlink, P A Erkelens
Appropriate Building Technology. In Katangi Agricultural Project of the Undugu Society of Kenya
November 1980,
66 pages KSh 50 00 (US$5 65 approx)

The report describes the adopted low-cost construction methods and technologies based on earlier research by a number of Kenyan institutions

HRDU report
Grass Thatch Roofing
June 1981,
28 pages KSh 35 00 (US$4 00 approx)

This short monograph presents the data collected in the field on existing grass thatch roofing and also presents some methods for improving thatch roofing for rural housing

A. Guido
Space Standards for Urban Low-cost Housing in Kenya
September 1979,
136 pages KSh 50.00 (US$5 65 approx)

The study outlines an approach for the definition of space standards for urban low-cost dwellings, plot sizes and densities It takes into account, climatic zones, housing development types and building heights The report also includes a complete review of space standards presently applied in Kenya

Bibliography on Chinese Architecture

The following bibliography has been compiled by Pierre Clement, architect and researcher at the Institut Francais d'architecture, Paris.

Blaser Werner
Courtyard House in China
Bale Birkhauser Verlag, 1979
111 pages.

Boerschmann, Ernst
Baukunst and Landschaft in China (Architecture and Landscape in China)
Zeitschrift der Gesellschaft fur Erdkunde zu Berlin, 5, 1912
Pages 321-365

Boerschmann, Ernst
Die Baukunst und religiose Kultur der Chinesen: Pagoden
Berlino-Lipsia, 1911-31

Boerschmann, Ernst
Chinesische Architektur
Berlin, E Wasmuth, 1925
Two volumes

Boyd, Andrew
Chinese Architecture and Town Planning — 1500 BC-AD 1911
London Alec Tiranti (and the University of Chicago Press). 1962
VI + 166 pages, 84 fig., 158 pl. h.t photos, biblio., index

Buchanan, K
The Transformation of the Chinese Earth Aspects of the evaluation of the Chinese Earth from earliest times to Mao Zedong
London: G Bell & Sons, 1970
XVIII — 336 p , fig tables, cartes, pl , biblio
Pages 322-328, index

The Bureau of City Plan Administration of Peking. Peking under construction
Peking, 1858

Callery, J.M
De l'architecture Chinoise
In Revue de l'Architecture et des Travaux publics.
Vol. 15. 1857, col. 23-32; vol 17 1857 col. 5-18, 49-56, 97-113, 145-157, 199-206, 245-256.

Chambers, William
Designs of Chinese Buildings, Furniture, Dresses, Machines and Utensils
New York: Benjamin Blom, 1968
19 pages XXI pl (1st edition London 1757)

Chang Kwang Chih
The Archaeology of Ancient China
New Haven, 1963

Chang, Sen-Dou
Some Observations on the Morphology of Chinese Walled Cities
Ekistics, n182, Jan 1971,
Pages 91-98
Annals of the Association of American Geographers' March 1970 pages 63-91
(l'article d'Ekistics est un condensé de l'AAAG)

Chavannes, E
Mission archeologique dans la Cbine septentrionale
Parigi, 1913-1915
5 Volumes

Chen, Charles
Chinese Architectural Theory
The Architectural Review
Vol. 102, July 1947, pages 19-25, illus.

Chen, Charles
Some Ancient Chinese Concepts of Town and Country
Town planning Review Vol 19, Summer 1947
Pages 160-163

Cheng, Te-K'un
Archaeology in China
Cambridge: W. Heffer & Sons 1959-1966
4 Volumes

China
Architectural Design
n° 3 (special issue) 1974
Pages 138-157

China
Architectural Review
(special issue) July 1947

Collotti, Pischel E
Citta e campagna nella Cina contemporanea
in «Controspazio»
n. 1, gennaio febbraio, 1971

Decker, Paul
Chinese Architecture, civil and ornamental
Being a large collection of plans and

elevations
London: printed for the author, and sold by Henri Parker and Elisabeth Bakewell, Piers and partner, 1759
Lexington (Mass)
Gregg International Publishers, 1759
Reprint 1968
2 Volumes

Delatour L -Fr
Essai sur l'architecture des Chinois, sur leurs jardins, leurs principes de medecine et leurs moeurs et usages
Paris, L -Fr Delatour, 1803
XII-568 pages

Demiéville P
Che-Yin Song Li Ming-tchong Ying tsao fa che
Edition photolithographique de la methode d'architecture de Li Ming-tchong des Song, 1920, 8 fasc.
B.E F E.O (Hanoi), 1925
Pages 213-264

Dorn, Frank
The forbidden city The biography of a palace
New York: Ch Saibner's sons, 1970
XX + 312 pages, pl

Edkins J
Chinese Architecture
in Journal of the China Branch of the Royal Asiatic Society (Shanghai)
XXIV, n 3, 1889-1890
Pages 253-288

Fergusson J
History of Indian and Eastern Architecture
Londres, Murray, 1910
Two volumes

Feuchtwang, Stephen D.R
An Anthropological Analysis of Chinese Geomancy
Vientiane (Laos): Vithagna, 1974

Fuller Myron L et Frederick G. Clapp
Loess and Rock Dwellings of Shensi, China
in Geog Review (New York) Vol 14, 1924
Pages 215-226 12 fig dont 4 plans

Gavinelli Corrado et Maria-Cristina Gibelli
Citta e territorio in Cina
Bari

Cina, Architettura e Urbanistica 1949-1970
a cura di C Gavinelli e V Vercelloni, in 'Controspazio' n 12, dicembre 1971

Gernet J
Le monde chinois
Paris, Armand Colin. 1972

Glen T.T
Chinese Cities, Origins and Functions, in 'Annals of the Association of American Geographers'
Vol XLII, 1952

Grousset R
La Chine et son art
Parigi, 1951

Haskins I F
Pan-p'o, a Chinese Neolithic Village, in 'Artibus Asiac'
XX, 1957
Pages 151-58

Hoa, Leon
Reconstruire la Chine
Paris, 1981

Hommel, Rudolf P
China at work
New York, The John Day Company, 1937
(reed M I T Press 1969)

Hsu, Francis L.K
Under the Ancestors Shadow, Chinese Culture and Personality (1re ed)
Londres, Kegan Paul, 1949
XIV 317 pages, plans tableaux

Hugo-Brunt, Michael
- *Bibliography of Architecture, Planning and Landscape in China*
  Monticello (Illinois) Vance Bibliographies, 1974
  68 pages
  (Council of Planning Librarians Exchange Bibliographies n° 535)
- *Architecture and Planning in China, Mongolia and Korea*
  Monticello (Illinois) Vance Bibliographies,1976
  Pages 79
  (Council of Planning Librarians Exchange Bibliographies, n° 1055-1056)

Inn Henry, (Juan Mien-Chhu) et S C Lee (Li Shao-Chhang) (avec la contirbution de Chhen Ṣhou-yi Thung Chung, Chhen Jung-Chich et al)
Chinese houses and gardens
Honolulu (Hawaii), 1940 2e ed. New York, Hastingshouse Bonanza Books 1950
148 pages

Jenyns, R S — Ecke, G.
Chinese Domestic Furniture
Pechino 1944

Johnston, Robert Stewart
Planning and Architectural Design in China
University of Nottingham, 1972
330 pages, Ph, D in Architecture

Kelling, R.
Das Chinesische Wohnhaus
Tokyo. Deutsche Gesellschaft fur Natur and Volkerkunde Ostasiens, 1935
IX — 128 pages + 27 pages de lexique.
(Suppl 13 der Mitteilungen der Deutschen Gesellschaft fur Natur und Vol-kerkunde Ostasiens)

Keswick, Magie
The Chinese Garden History, Art and Architecture
Keswick, Magie
Londres Academy Editions 1978
216 pages

Kwok, Reginald Yin-Wang
Urban-rural planning and housing Development in the People's Republic of China
New York: Columbia University, 1973
438 pages
Ph D in Urban and Regional Planning
(microfilm-xerographic facsimile produced in 1979 by University Microfilms International, Ann Arbor, Michigan, USA)

Lamprey, John
On Chinese Architecture
R I B A papers 1866-67
Pages 157-178 pl
(Transactions, Royal Institute of British Architects)

Laterza
1976, 273 pages, 73 illus , 13c et graph

Lartigue, J
Resultat Archeologlques, in 'Journal Asiatique' maggio-giugno
1961 pages 407

Le Rouge, Georges-Louis
Detail de nouveaux jardins a la mode, jardins anglo-chinois, Paris
1776-1787, 21 cahiers Nouvelle edition, Paris, Jardin de Flore, 1978

Lewis, J.W (En d)
The city in Communist China
Standford: University Press, 1971
XII + 499 pages, tabl, index

Liang Ssu-Ch'eng
China's Architectural Heritage and the Tasks of Today, in 'People's China'
Vol I, n 21, Nov 1952

Liang, Si-Cheng
Town planning in Communist China
EKISTICS, n° 43, May 1959

Liu, Dunzhen (Tun-Chên)
- *Aperçu historique sur l'habitation Chinoise Traduction et adaptation francaises par G. et M.H. Métailié, S. Charpentier et P Clement* — Paris: C E R.A.
- *A short study of Chinese domestic architecture* (Edited by Architectural and Engineering Press, Pekin, 1957) Abridged translation, without illustrations, by Liao Hung Ying and R T.F. Skinner — London: Collet 1957
- *Domestic Houses, Origins,* — in 'Chien-chi-hsueh pao' n. 4, 1956

Mirams, Dennis George
A brief history of Chinese architecture
Shanghai, Kelly & Walsh, 1940
XXIV — 132 pages, illus , plans, croquis

Miyazaki, I
Les villes en Chine a l'epoque des Han, in 'Toung Pao'
XLVIII, 1960, 4-5, Pages 1-18

Mo Tsun-Ch'ang
Architectural Decoration, in 'China Reconstruct'
Vol. IV, n 9, 1955

Mortari Vergara Caffarelli P
Cina, in Dizionario di Architettura e urbanistica'
Roma, 1968, Vol I, Pages 568-583

Munsterberg, M.O
Chinesische Kunstgeschichte
Esslingen, Paul Neff Verlag (Max Schreiber)
1910-12 2 Vol. T 1 : Vorbuddhistische Zeit. Die Hohe Kunst T 2: Die Baukunst -Das Kunstgewerk

Needham, Joseph
Science and Civilisation in China
Cambridge, The University Press, 1971
Vol. IV: Physics and Physical Technology T 3: Civil Engineering and Nautics
Pages 58-144 + 54 pl

Pen, Colin
Chinese vernacular architecture, in 'The Journal of the Royal Institute of British Architects'
Vol LXXII (1965), n 10
Pages 502-507

Pirazzoli-t'Serstevens, Michele
China Living Architecture'
Londra, 1971

Prip-Moller J.
Chinese Buddhist Monasteries
Copenaghen-Londra, 1937

Sickmann, L — Soper, A
The Art and Architecture of China
Harmondsworth, 1956; ediz, italiana, Torino, 1969

Siren, O
- *Les capitals chinoises de l'ouest,* in 'Japon et Extreme Orient'
Nov-Dic. 1924
- *Gardens of China*
New York, 1949
- *Histoire des arts anciens de la Chine, IV, l' "Architecture"*
Parigi-Bruxelles, 1929-30
- *The Walls and Gates of Peking*
Londra, 1924
- *The Imperial Palaces of Peking*
Parigi-Bruxelles, 1926
Three Volumes

Skinner, R.T.F
Chinese Domestic Architecture in J R I B A. (Journal Royal Institute of British Architects)
65, Oct 1958, Pages 430-431

Spencer, J E.
The Houses of the Chinese in Geographical Review (New York)
XXXVII, Avril 1947
Pages 254-273, 10 fig. et photos

Stein, R A.
Jardins en miniature d'Extrême Orient
B E F.E O., Hanoi 1942

Su, Gin-Djih
Chinese Architecture — past and contemporary
The Sin Poh Amalgamated (H K) Limited, King's Road, Hong Kong 1964; Swindon Book Co , Kowloon, Hong Kong, 1964

Sun, Yitai
Presentation sommaire des constructions surelevees malan des Zhuang de Guangxi
Trad G et M H Metailie. A S.E M.I VI, 2-3, 1975, Pages 133-146

Thilo, T.
Klassische Chinesische Baukunst
Vienna: Edition Tusch, 1977

Urbanisme et architecture en Chine
Populaire 1950-1978. Supplement au Bulletin d'information inter-establissement (C E R A.) n° 35, Octobre 1978
10 pages, biblio

Wallacker, B.E Edit
Chinese Walled cities. A collection of Maps from Shina Jokaku no Gaiyo
Hong Kong, 1979

Wang Chi-Ming
The Style of Chekiang Houses in China Reconstructs, Vol. XII, n. 3, March 1963
Pages 12-15

Wang Cuilan
Habitations populaires thai a la frontiere du Yunnan
trad G et M.H. Metailie, in A S E M I , VI, 2-3, 1975, Pages 147-158.

Wheatley, Paul
- *The Ancient Chinese City as a cosmological symbol*
EKISTICS, n 232, March 1975
Pages 147-158
- *The Pivot of the Four Quarters. A Preliminary Enquiry into the Origins and Character of the Ancient Chinese City*
Edimbourg, University Press, 1971
600 pages

Willets, William
- *Chinese Art*
London, Penguin Books, 1958 2 Vol in 16, 391 pages + 363 pages, index (Pelican Books A 358)
- *Foundations of Chinese Art from Neolithic Pottery to Modern Architecture* (cop Taiwan)
1967 — 456 pages + 322 pages
L'art de la chine des poteirs neolithigues a l'architecture modern
Lausanne: Edita, 1968, 494 pages ill

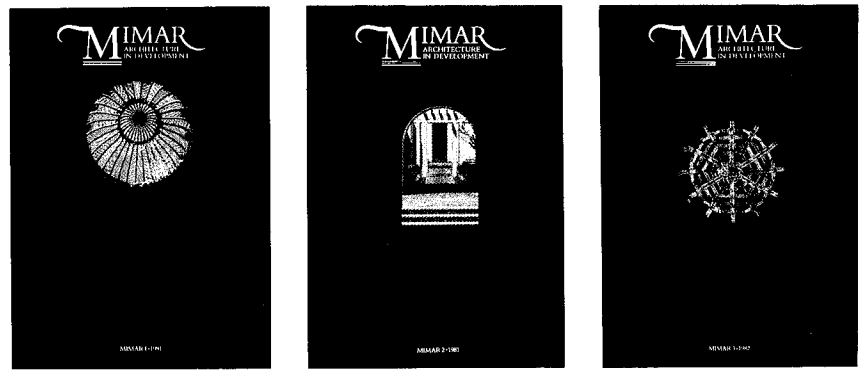
Wright, A F.
Symbolism and Function, Reflections on Changam and other Great Cities, in 'Journal of Asiatic Study', XXIV, n. 4, 1965

Wu, N
Chinese and Indian Architecture
New York, 1963
London, Studio Vista 1968

Yang, Martin C
A Chinese Village, Taitou, Shantung Province (1re ed)
Londres, Kegan Paul, 1947
XVII — 275p., 26 fig.

Yetts, P
Writings in Chinese Architecture, in 'Burlington Magazine', Marzo, 1927

MIMAR Subscription



MIMAR Introductory Personal Subscription

Name _____

Address _____

_____

Signature _____

Date _____

☐ Yes! Please send me one year (4 issues) of MIMAR.

☐ Cheque/Banker's Draft payable to Concept Media Pte Ltd enclosed

Rates	1 year	Single issue
N & S America, Japan, Europe, Mid & Near East	US$34 00	US$10 00
Other countries	US$25.50	US$ 7.50

Subscriptions will be mailed 4 — 6 weeks after receipt of order Subscriptions will start from MIMAR 1 1981 unless otherwise noted

Please mail subscription form to MIMAR, Suite 1718, 17th Floor, International Plaza, 10 Anson Road, Singapore 0207

MIMAR Gift Subscription

Please send my gift of one year's subscription of MIMAR to:

Name _____

Address _____

_____

From:

Name _____

Address _____

_____

Signature _____ Date _____

☐ Cheque/Banker's Draft payable to Concept Media Pte Ltd enclosed

Rates	1 year	2 years
N & S America, Japan, Europe, Mid & Near East	US$34 00	US$68 00
Other countries	US$25 50	US$51 00

Subscriptions will be mailed 4 — 6 weeks after receipt of order Subscriptions will start from MIMAR 1 1981 unless otherwise noted.

Please mail subscription form to MIMAR, Suite 1718, 17th Floor, International Plaza, 10 Anson Road, Singapore 0207

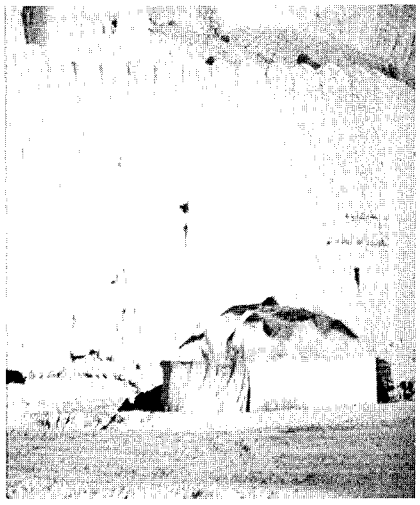
Inside MIMAR · 4

April-June 1982

Thematic Features

On mobile and temporary structures in Asia and Africa, including articles on:

- Arab tents
- Bantu grass huts
- Hong Kong houseboats
- Kazak yurts
- Pakistani trucks
- Singapore street stalls



Special Articles

- Sahel vernacular architecture by Jean Paul Bourdier
- The second of the series on 'Arab Architects' by Udo Kultermann
- Announcing the second MIMAR competition

Regular Sections

- Crafts and craftsmen
- Education
- Book reviews

and more ...

Coming In MIMAR • 5

A look at contemporary **Open to Sky Spaces,** including courtyards, balconies, roofs and architectural elements in landscapes.

The publication of the winning projects of MIMAR's first **Design Competition.**

Advertising

Enquiries regarding advertising rates should be addressed to MIMAR, Suite 1718, International Plaza, 10 Anson Road, Singapore 0207 or the agents in the following countries:-

Italy:
Mrs Cinnaghi
Novamedia
Piazza Missori, 3
20123 Milano
Italy

Middle East
Mr Talal Dhulaymi
Tihama Est
Jeddah

Pakistan
Mr Anwar Rammal
Asiatic Advertising
Finlay House
I I Chundrigar Road
Karachi

Singapore/Malaysia
Mr Lim Yew Hoe
Eurasia Press (Offset) Pte Ltd
10/14 Kampong Ampat
Singapore 1336

Distribution: Sales and Subscriptions

MIMAR is distributed through its office in Singapore and exclusive in the following countries:-

France/Belgium/Italy
Sales/Subscriptions
L'Equerre V O
117 Rue Notre Dame De Champs
75006 Paris
France

India
Mr T N Shanbhag
Strand Book Stall
15C, "Dhannur"
Sir P M Road, Fort
Bombay 400 001
India

Middle East
Mr Talal Dhulaymi
Tihama Est
Jeddah

Pakistan
Mr A Hussein
Liberty Bookstall International Division
P O Box 7427
Karachi
Pakistan

Singapore/Malaysia
Mrs Lena Lim
Select Books Pte Ltd
Room 214/215
Tanglin Shopping Centre
19 Tanglin Road
Singapore 1024

Switzerland
Mr Rene Simond
Naville S A
Rue Levrier, 5-7
1201 Geneva

United Kingdom
MIMAR is available now in these stores:

- The Design Centre
  28 Haymarket, London SW1
- A Zwemmer Ltd
  Books on the Arts
  76-80 Charing Cross Road, London WC2
- RIBA Publications Ltd
  Bookshop
  66 Portland Place, London W1

North and South America
F Lasell Whipple
The MIT Press
28 Carleton Street
Cambridge, Massachusetts 02142, U S A

Inside This Issue

Thematic feature
The Islamic and rural architecture in the north of the People's Republic of China including articles on:
- Underground Dwellings
- Courtyard Houses
- Mosques
- Soil Technology

MIMAR Gallery
"Magnificent Mud — the mosques of Mali" — a photo presentation.

Special article
Arab Architecture — the first of a series of articles on contemporary Arab architects and their buildings.

Regular sections
- News from around the world
- On History — looking back at a 14th century building
- Book Reviews

And more ...

Back to
Table of contents

ON HISTORY

At least a nodding acquaintance with the major achievements of the European architectural traditions is part of every contemporary architect's visual baggage The essence as well as the details of the architectural language of the Pantheon, of Chartres or even Haussmann's Paris form a storehouse of visual references and have been internalised to some degree at least. Only rarely do the achievements of the Islamic architectural traditions, the Selimiye, the complex of Sultan Hassan, and Cordoba take their place in the same storehouse. Even more rarely are their conceptual and formal aspects internalised

In this column by Dr Renata Holod MIMAR intends to present highlights of the great traditions of Islamic architecture: individual builders and their buildings, aspects of regional and period styles, or problems of a more conceptual nature. Through these small features, it is our hope that the achievements of the past can be an inspiration and sounding board for the designers of the present.

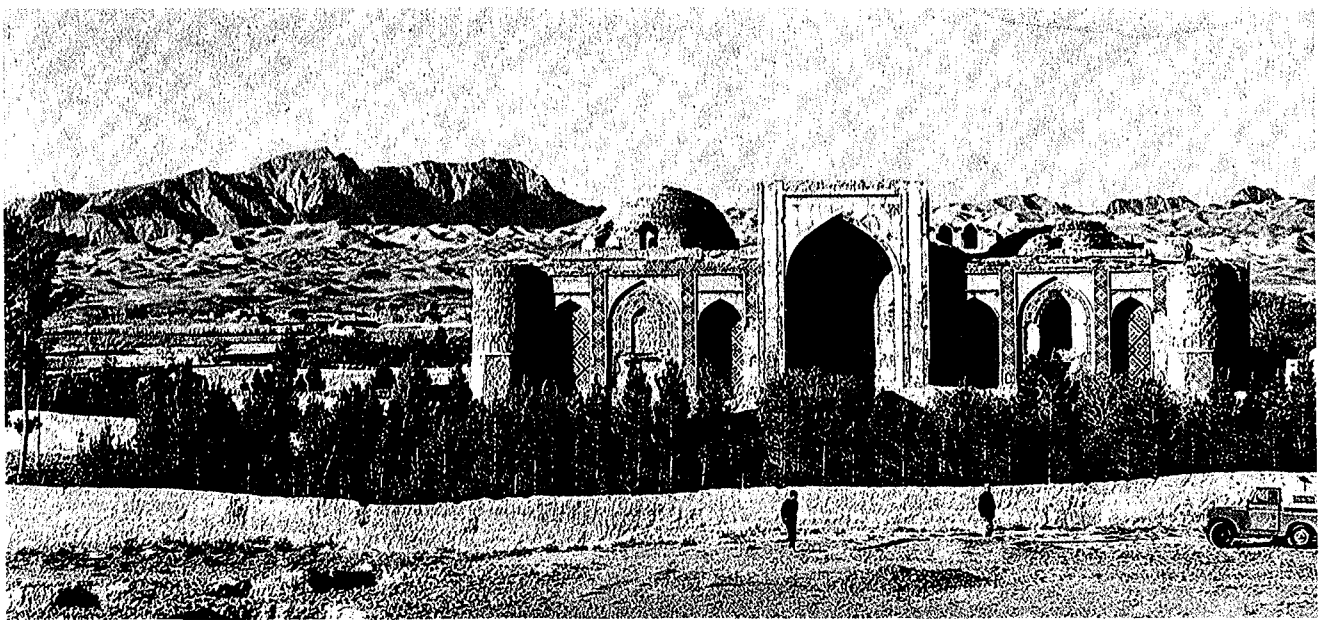
Madrasa Al-Ghiyasiyya

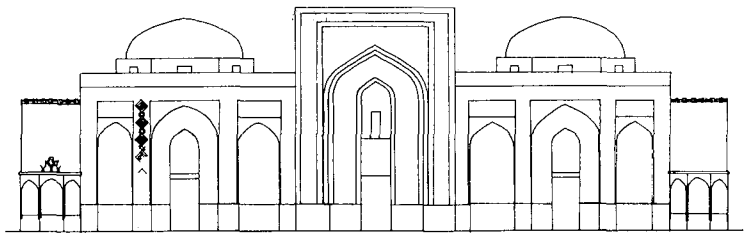
As a first feature I have chosen the less well-known group of ninth/fifteenth century buildings of the Shirazi group, built in the Timurid realms of present Iran, Afghanistan and Soviet Central Asia These are crucial buildings for they served as models and inspiration for the subsequent builders of Mughal India, Safavid Iran and even, to a smaller extent, of Ottoman Turkey But, even without these demonstrable influences, each building of the Shirazi atelier has that fine orchestration of proportions, that clarity of layout, that sureness of structure and elegance of decoration which places it among the best works of mankind

The Shirazi school of the Timurid period began with the enforced transfer to Samarkand of building masters and technicians by Timur at the end of the fourteenth century. I can only reconstruct the barest details of these events. Yet, because of the major building programmes of Timur, his family and descendants and their courtiers, these Shirazi masters appear to have established a workshop tradition which functioned and developed for more than fifty years, incorporating both the old Shirazi usages as well as the local Central Asian ones Buildings from this period numbers into the hundreds (Lisa Golombek with Donald Wilber are completing a major study and catalogue of them to be ready for print within a year) It is their atelier, however, which produced the major monuments of Timurid architecture and whose tone and style was widely imitated by more regionally based workshops

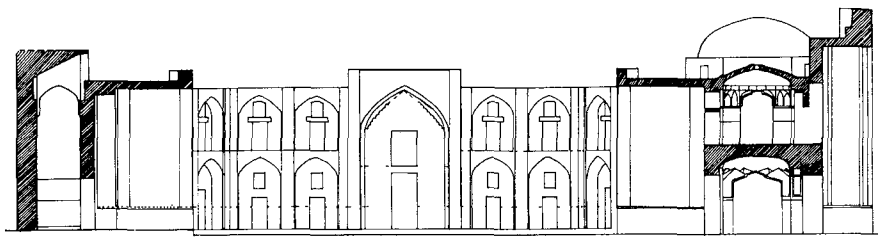
I know little about the internal history of the Shirazi atelier One personality does emerge, however, both from the contemporary biographies of notable men of the realm as well as from the builders' inscriptions on the monuments It is Qavām ad Dîn ibn Zayn ad-Dîn Shirāzî who died in 842H/1438 AD He was noted for his skills as an outstanding designer, engineer, and builder as well as astrologer and appears to have had a fairly influential position at the court of Timur's son, Shahrukh. He worked directly for Shahrukh and, in particular, for his wife, Gawhar Shad. The great mosque of Gawhar Shad built in 821H/1418 AD in the shrine at Mashhad was the direct inspiration for the Masjid-i-Shah at Isfahan. The complex of mosque, madrasa and mausoleum of Gawhar Shad built between 820-842H/1417-1438 AD in Herat was the central focus of the fifteenth century city with its large walled plaza marked by corner minarets The last building for which Qavām ad Dîn was responsible and which he did not see to completion is the exquisite Madrasa Al-Ghiyasiyya built between 842-848H/1438-1444 AD for a grand vizier I am presenting it here because it is better

Entrance facade elevation

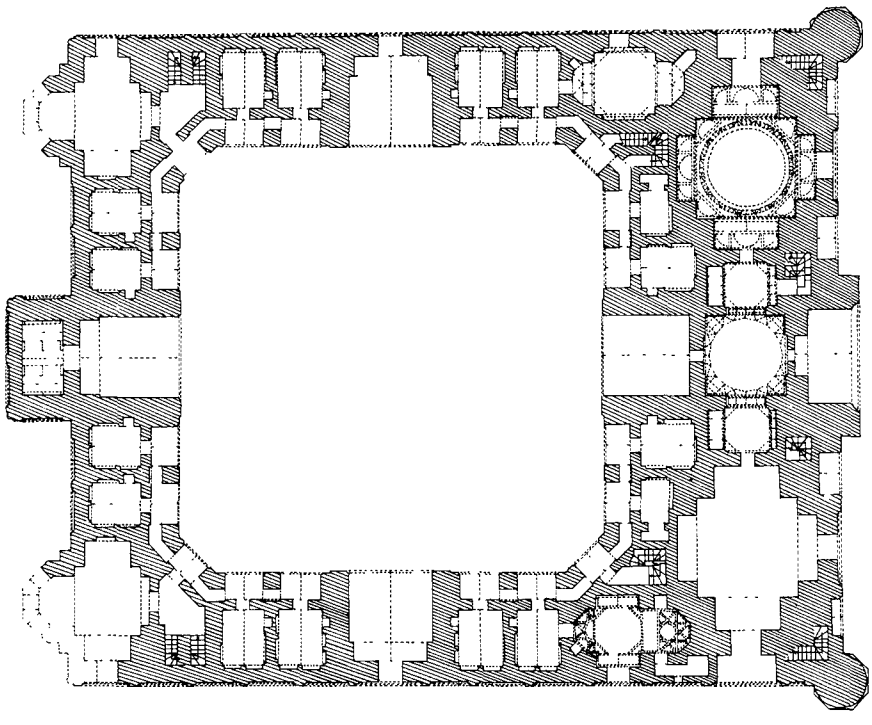




Entrance elevation



Section

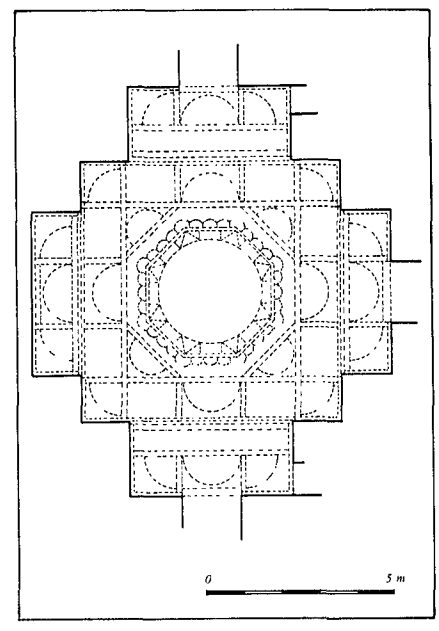


Upper storey plan

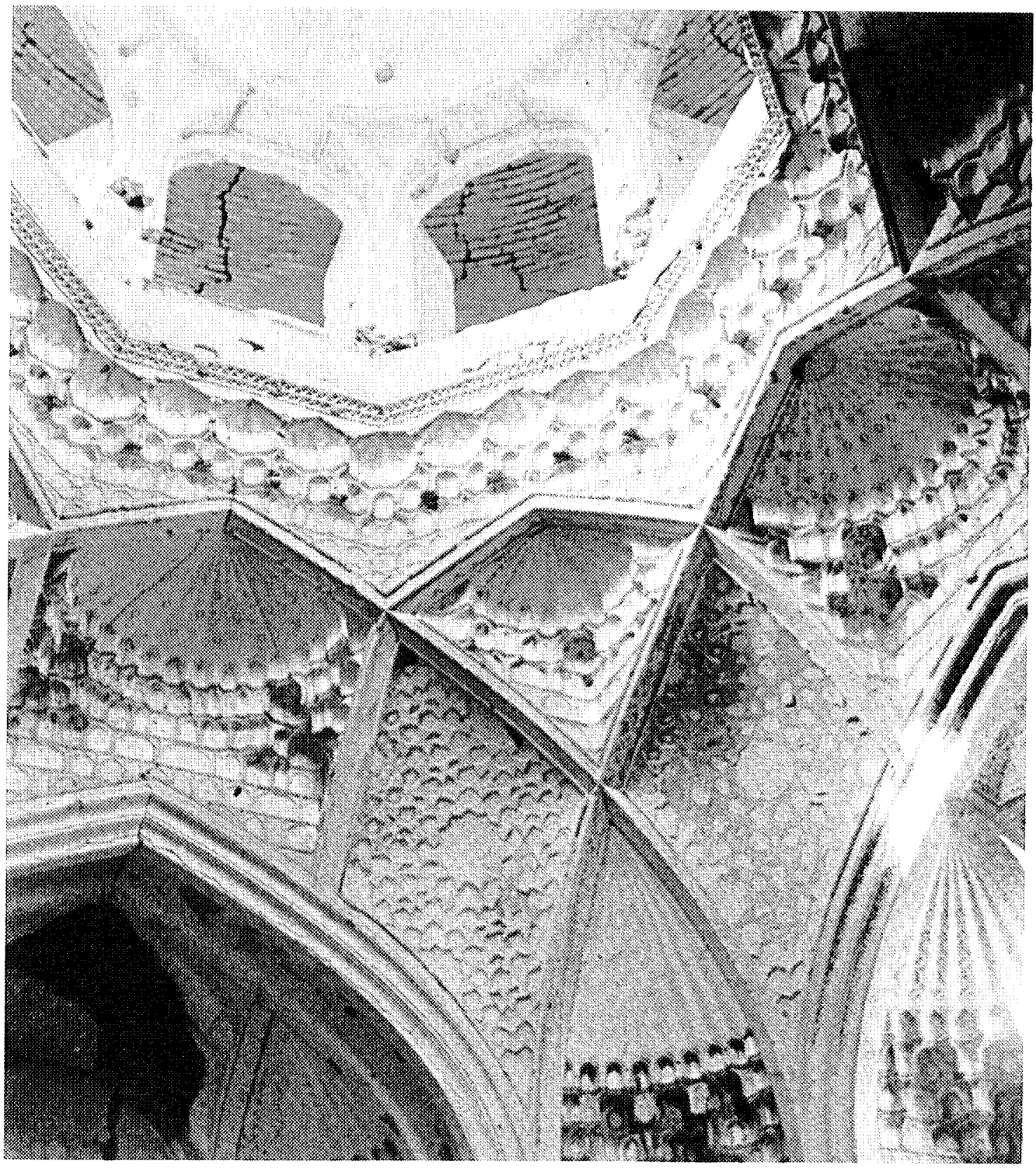
preserved than other buildings and has been well documented. It also displays, in a summary fashion, the characteristic features of the high Timurid style

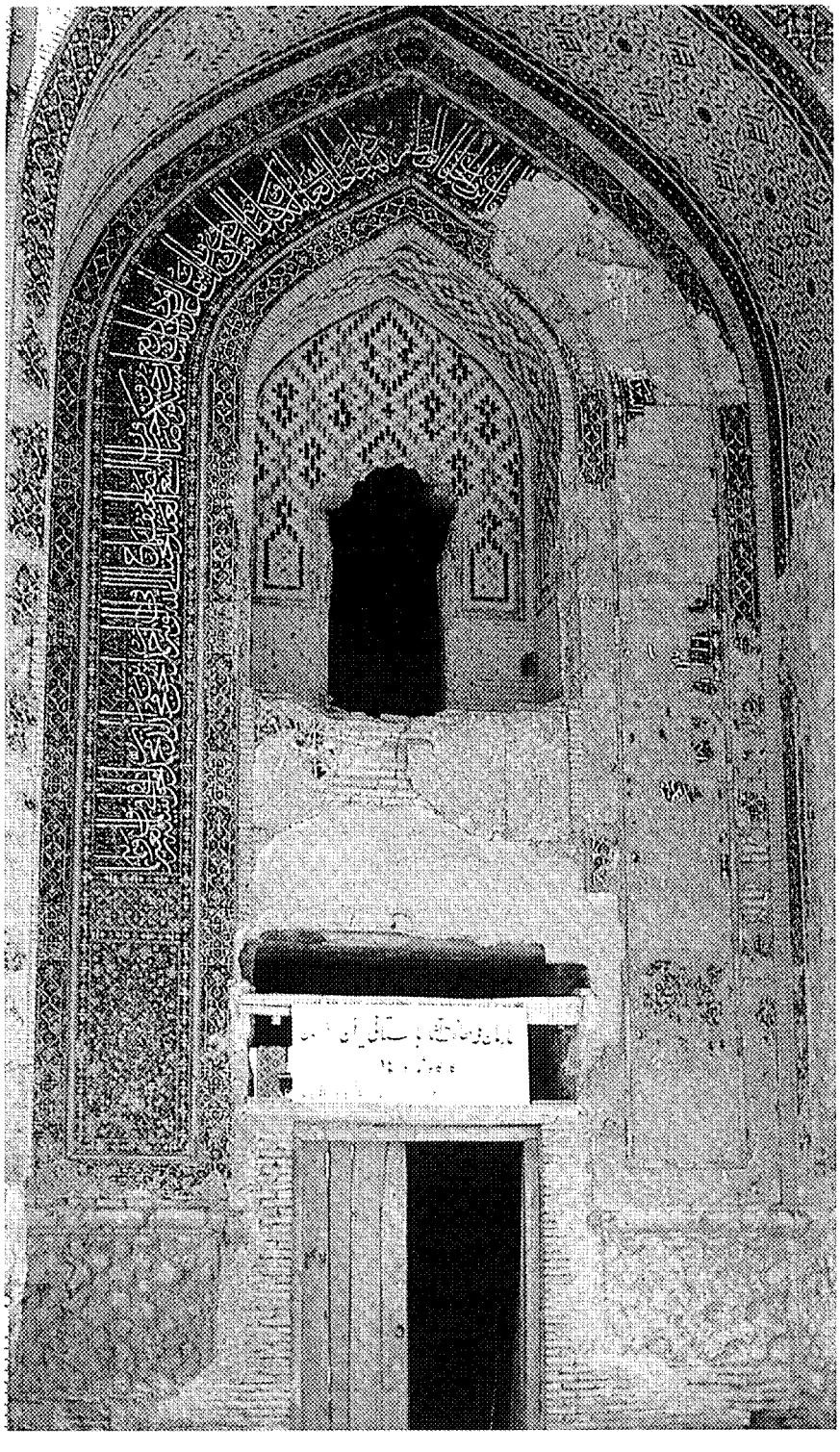
Standing in the countryside, rather than in a compressed urban setting, the building has a finished and decorated exterior It is a two story building with its rooms and halls organised around a court, a common enough type, particularly useful for residential colleges such as this was But it is the arrangements of the rooms, the location of the stairs and proportions of the bays that make it special The development of the corner (the problematic area of courtyard buildings) into self-contained 'apartments' is an inventive solution Four *eyvans* mark the cross axiality of the court facades. Yet there is a differentiation among the *eyvans,* the most interesting providing additional air movement for the court as well as a cooler sitting area by incorporating a wind tower *(badgir)* in its back wall. While we know of the existence of the earlier wind towers through texts (undoubtedly, they were part of the repetoire of residential building for many centuries), the wind tower in this madrasa is the earliest dated monumental example

Vaulting, and particularly the way in which crossing or transverse arches were



Details, vaulting of the north-east Chamber





Far left: North-east chamber walls and dome
Left: Court — close up of Iwan

used to bring light into interior, has been mentioned as the major achievement of Timurid architecture In the Madrasa al-Ghiyasiyya, the dome over the northeast lecture hall displays the full vocabulary of these techniques with the special added feature of a central lantern built with a double shell. The finished dome over this hall would have been three shells, an outer tile cap (no longer standing or never completed) as well as the double inner shells.

The richness of geometric, epigraphic and floral designs on the mosaic tile and the composite tile and brick decoration would require a separate essay Suffice it to say here that the inventiveness of the geometric patterns, the proportions of the individual letters and the delicately balanced colours of the floral motifs indicate that the Shirazi atelier worked closely with the major painters and calligraphics at court.

Renata Holod is an architectural historian and professor of Islamic art, architecture and urban history at the University of Pennsylvania

Bibliography

Survey of Persian Art
Byron, R
A.U Pope and P. Ackerman, eds.,
Oxford, 1939
The Timurid Shrine at Gazurgah
Golombek, L.
Royal Ontario Museum,
Art and Archeology occasional Paper 15,
Toronto, 1969
Architecture of the Islamic World
Michell, G , ed
London — New York, 1978
The Madrasa al-Ghiyasiyya at Khargird O'Kane, B.
Iran, XIV/1976, pp. 79-92
Tayabad, Turbat-i-Jām and Timurid Vaulting
O'Kane, B
Iran, XVII/1979, pp 87-104
Zodchesvro Tsentral'noi Azii, XV vek
Pugachenkova, G
Tashkent, 1976

Back to
Table of contents

Contemporary Arab Architecture

Toward an Islamic Identity

This is an introduction and first in a series of articles which will attempt to examine contributions made by Arab architects to the transformation of the contemporary environment in their countries. The articles will cover the writings and buildings of Hassan Fathy and other Egyptian architects, working today in Egypt and other countries such as Japan, Canada, Germany and Saudi Arabia. Other articles will look into Iraq, which developed its own architectural importance through the influence of Mohamed Saleh Makiya, and the Arab architects working in Morocco, Algeria, Tunisia, Lybia, Syria, Jordan, Lebanon, Sudan and the Arab Peninsula. The common denominator of the architects from these countries is their search for identity, which is a fundamental necessity in order to continue the great tradition of Islamic architecture

In his introduction to the book "Architecture of the Islamic World", edited by George Michell, Ernst J Grube asked the question, "What is Islamic Architecture?" In his attempt to define its specific traditional characteristics, Grube refers to the concentration given to the interior space, the continuous experience of the architecture as part of the urban fabric which Grube terms "hidden architecture", and the non-representational appearance and the meaningful application of decoration But Grube only refers to the characteristics of Islamic architecture of the past without taking its contemporary manifestations into consideration. Tradition is only valid when re-validated every generation; when the continuity of past developments are appreciated not only by scholars admiring things lost and forgotten but also by contemporary architects who are capable of continuing tradition and adding new phases to it.

Contemporary Arab architects in many of the Arab states are attempting to do this by reviewing Arab architecture of the past, selecting those works which they consider of value and creating their own models for today. Preservation of values rather than preservation of forms or ornamental detail is, as in all creative cultural revolutions, a reinforcement of identity Only with a living history can the self be found and expressed, only with roots is growth possible

One of the main characteristics of the Islamic tradition is diversity in unity, the assimilation and adaptation of existing cultural values with regional differentiations. The Muslim religion is based on reconciliation, the harmonious relation between something new and something already in existence. Islamic architecture which is based on this same principle assimilates the architectural language of the country in which it is located, thereby taking on a regional identity This assimilation can be seen in North Africa, Iraq, Sudan, Persia, Indonesia, and even — in first attempts — in the new Islamic centres in Madrid, Rome, Chicago and other cities in Europe and America But, in whatever country one finds Islamic architecture, as diverse as it might be, its Islamic identity is always visible

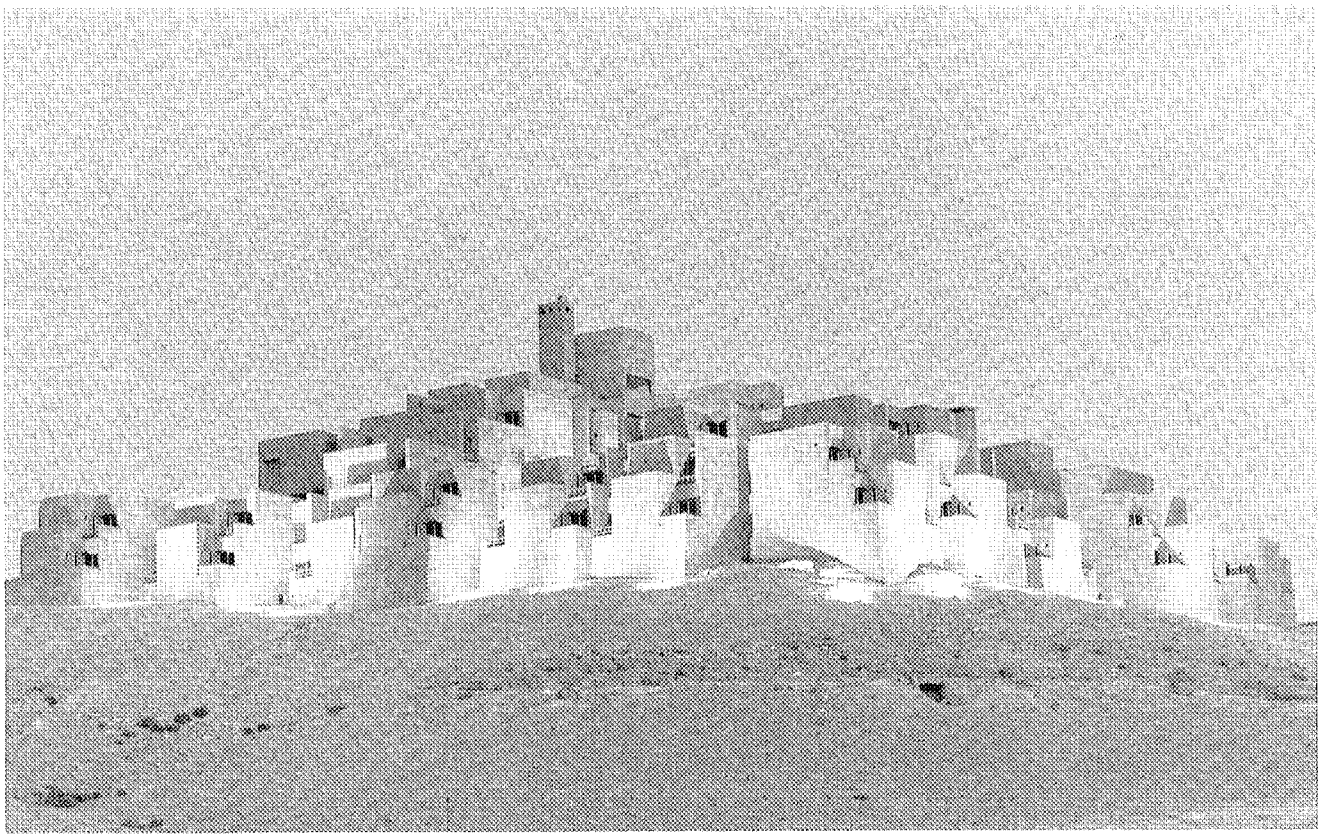
To a large extent contemporary Arab architecture is dominated by Western influence which manifests itself in technology and new building types which were unknown in traditional Islamic architecture Fazlur R. Khan, one of the revolutionary innovators of Western technology, defined these relations in his paper at the First Seminar of the Aga Khan Award for Architecture in 1978. Talking about "The Islamic Environment: Can Future Learn from the Past?" He said: "The force of modern technology, whose base is primarily Europe and America, is so overwhelming, so deceptively attractive to these countries and so responsive to their desire for fast construction of unprecedented scale and volume that it is almost impossible to resist the temptation to copy, by-and-large, their methods, forms and technology"

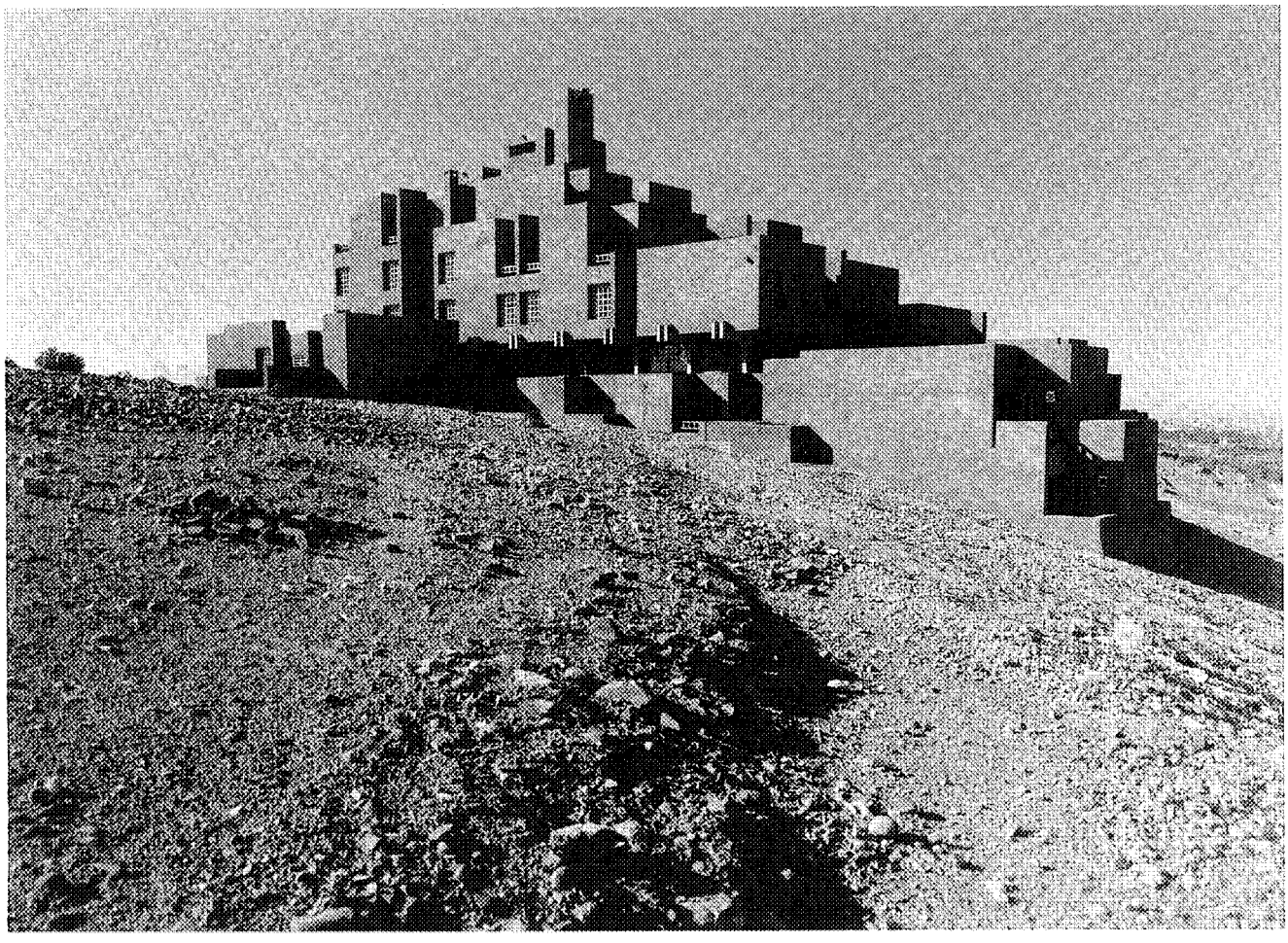
This statement accurately reflects the current architectural situation in the Arab states which is a mid-way expression between Western technology and the rediscovery of Arab tradition Representative of this ambivalence are buildings by several Arab architects A house by the Moroccan architect Mourad Ben Embarek in Rabat of 1968-1970 reveals the Scandinavian background of his education, in spite of his dedicated attempt to overcome foreign architectural forms His airport building in Casablanca is his expression of a new independent Moroccan architecture based on the most advanced modern technology Two other Moroccan architects Abdesien Faraoui and Patrice de Mazières were based on French tradition in their Family Planning Centre in Rabat in 1976, but used imaginative forms of Moroccan tradition, harmonising it with the landscape and climate, in their hotel building in Boumalne du Dades of 1972-1974

Architects from Iraq and Jordan such as Rifat Chadirji and Rasem Badran come close to revitalising the traditional Arab house, not by using formalistic adaptations but by taking the essential values and reconstituting them to suit contemporary needs Chadirji's Villa Hamood in Baghdad of 1970-1972 and Badran's Villa Handal in Amman of 1975-1977 are outstanding examples of contemporary Arab architecture

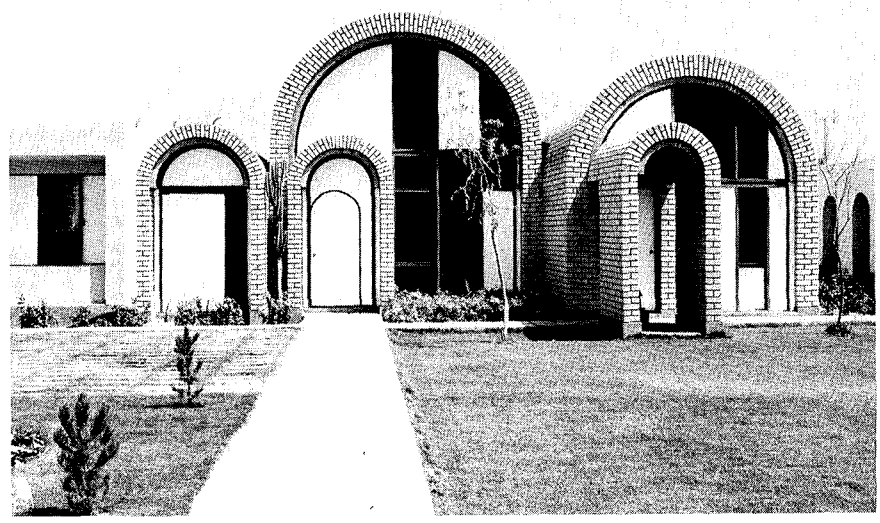
Top right and right: Hotel in Boumalne du Dades, Southern Morocco, 1974 Architects Abdesien Faraoui and Patrice de Mazieres

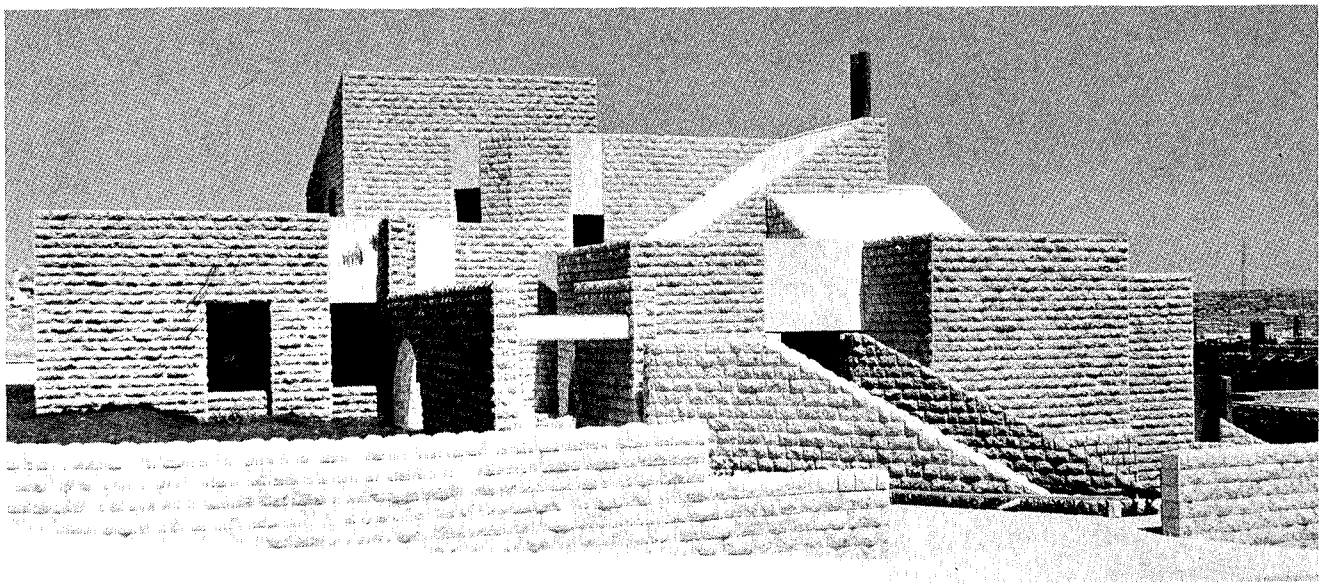
Text by Professor Udo Kultermann. Photographs courtesy of respective architectural firms



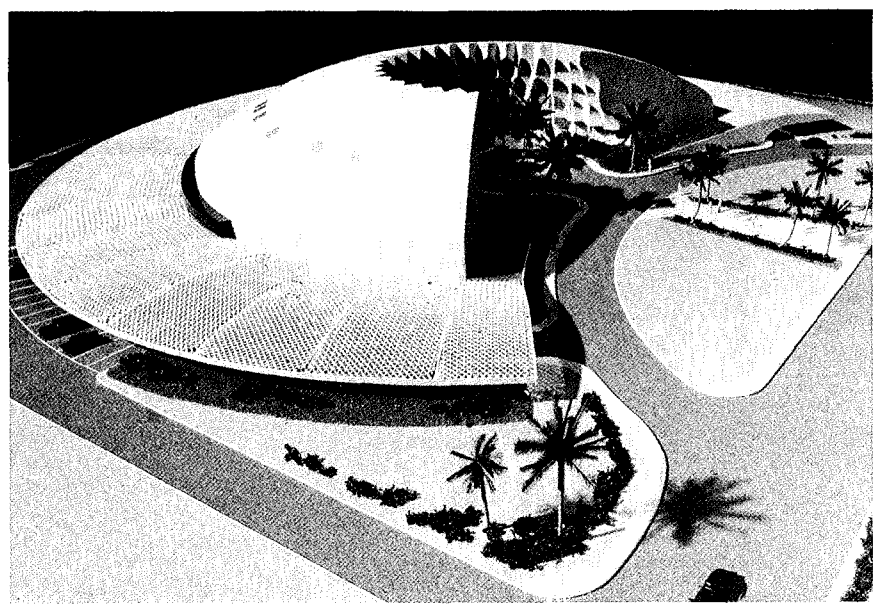


But there are other building schemes, some of them large scale universities, mosques and new cities in line with the Islamic tradition and the pragmatic requirements of contemporary Arab society Jafar Tukan's and Kenzo Tange's Yarmouk University in Jordan is an example of carefully considered campus planning. Every aspect of an academic community has been integrated into the traditional patterns of Arab planning schemes creating a harmonious synthesis of old and new The campus for the Gulf University by Kamal El Kafrawi in Doha, which was begun in 1980, is a good example of programatically integrating traditional features that have proven efficient over years into a modern and contemporary building programme. The cooling system of the old wind-tower houses in the Gulf region have been made part of the contemporary design relating the old Arab tradition with a new task.





Top: Villa Ayad Hamood, Baghdad, Iraq, 1972. Architect: Rifat Chadiriji (Iraq Consult)
Above Villa Handal, Amman, Jordan 1977 Architect: Rassem Badran.
Right: Port Authority Headquarters, Riyadh, 1979 Architect: Zuhair Fayez Photograph Thorp Model-makers Limited



Special emphasis has been given to relating recent construction of mosques to the Islamic past. The most prominent example of this can be seen in the Kuwait State Mosque by the architect Mohamed Saleh Makiya. Now under construction, this mosque, as well as other mosques by Makiya, combines past and present, which is a necessity in the perpetuation of culture. New independent works by architects from Saudi Arabia such as the palaces or the Port Authority Headquarters in Riyadh of 1979 by the architect Zuhair Fayez or the social buildings and markets by the Beeah Group Consultants signify the changing situation

of architects in Arab countries who are now capable of competing with architects from all over the world Arab architects no doubt feel a sense of self-esteem and pride as they face this new challenge.

The identity of Arab architecture seen in the context of works by large international firms based on high technology may appear simple and less sophisticated But, the basic spiritual dedication which prevails is compensation for the scientific expertise of the foreigners. Saba George Shiber, the great Arabian planner was aware of this as early as 1963 when he wrote: "Today, not only in the Arab world but elsewhere, perhaps what is needed most is not merely technical skill and knowledge, but wisdom " The know-how in matters of technology may be better handled for the time being by firms such as Skidmore, Owings and Merrill, Kenzo Tange, Rolf Gutbrod and Frei Otto and the Architects' Collaborative, and that is just as well. What is more important in the Arab States right now is not technology or the transfer of technology which has been developed in other countries but the revitalisation of the Arab past, along with an appropriate amount of technology which is needed for specific tasks. Too much technology and its inappropriate use can be enormously harmful, therefore a balance has to be found which is based on human concern and the specific needs of the Arab world A step in this direction has already been taken by the Egyptian architect Hassan Fathy in his writings, teaching and buildings

Typical open market design, Onaiza, Saudi Arabia, 1980 Architect: Abdul-Rahman O Hussani (Beeah Group Consultants, Riyadah)

Hassan Fathy was born in Alexandria, Egypt in 1900 and had a profound universal education and architectural experience in many countries, such as Greece where he worked for several years in the office of the architect Constantinos Doxiadis in Athens His name is known in the United States as well as in Europe and Japan His main goal has been the spiritual awakening of the Arab people directed toward a respect for their own architecture, and with it a respect for their own tradition and cultural identity. He designed houses and markets, a theatre and a concert hall as well as villages which in their radical traditional shape created new concepts for architecture in general

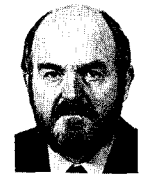
In 1945-1947 Hassan Fathy built, according to his earlier theories of adapting mud-brick for contemporary architecture, the village of New Gourna in upper Egypt near Luxor which has become a symbol of architecture of the Third world The English architectural critic J M Richards considered it a masterpiece after a visit in 1967 and wrote in "The Architectural Review": "Its basic geometry of cube and vault and rectangle emphasised by the deep shadows cast by the Egyptian sun, appeared as the essence of architecture itself"

But, Gourna is more than formal architecture of high quality, it is architecture as a process in which the designer, builder and user work in a harmonious relationship New Gourna is in line with traditional ways of living and at the same time constitutes a contemporary type of rural architecture. The emphasis was placed on a group of clients who had been forgotten in modern times: " no architect normally designs for peasants in the villages No peasant can ever dream of employing an architect, and no architect ever dreams of working with the miserable resources of the peasant. The architect designs for the rich

Hassan Fathy in Cairo, 1981 Photograph. C. Little.

man, and thinks in terms of what the rich man can pay for."

This statement is from a book by Hassan Fathy in which he describes his experience in New Gourna along with its failure due to, among other things, the lack of cooperation of the government. The book originally had the title "Gourna A Tale of Two Villages" and was published in Cairo in 1969. It was published in a second edition in Chicago in 1973 under the title "Architecture for the Poor" and has since become a handbook for thousands of architects in all parts of the world This book which challenged the sophisticated and intellectual manifestations of all branches of "modern architecture" can be seen as a programmatic statement of a new Arab identity which values spiritual and cosmic awareness more than the necessity of modern technology His book has become a moral basis for the coordinated activities of Arab architects in all Arab states and thus has eminently contributed to the first phase of a Renaissance of Arab architecture today



Udo Kultermann is Professor of Architecture at Washington University in St Louis, Missouri He is the author of numerous books and articles on modern architecture

Back to
Table of contents

Mosques of Northern China

Since its introduction in the Tang dynasty (618-907 AD), Islam has been professed by the Hui, Uygur, Kazakh, and other nationalities.

Many mosques have been built in the country and are an important part of Chinese architectural heritage. In the earlier mosques, some Central Asian features were directly copied. In the course of centuries, Chinese architects gradually absorbed and blended these features to create their own style of Islamic architecture. This is particularly evident in the Xinjiang region since the 15th century when Islam became the main religion.

Generally, Islamic architecture in China (which is equated with mosques—Editor's Notes) can be classified into four types.

The Central Asiatic Type

In the early examples the strong influence of Central Asia can be seen in material, construction and exterior treatment. The material used is either brick or stone, with arches, domes and vaults The mass of the buildings gives an effect of stability, solemnity and monumentality

The Qing Jing Si mosque, Quanzho, Fujian, is an example of this type The gate of the mosque is 20 metres and 4.5 metres wide in bluish granite Another such building is the Tughluk Mausoleum, Hucheng, Xinjiang

The Transitional Type

The Phoenix mosque, Zongshan Road, Hangzhou is an example of the transitional type. It was first built during the Tang Dynasty, destroyed in the Song and rebuilt in the Yuan. The prayer hall in brick is the oldest mosque extant The plan is a rectangle of three bays, each nearly a square, topped by a dome In this example, the entrance, the use of arches and domes, and lantern skylights reveal the strong Central Asian influence However, the use of Chinese style roofs gives the buildings a nationalistic appearance which is reflected in the transitional period

Right: Mosque in Urimqi Photograph: P Clement.
Below: Mosque in Turfan Photograph: B Taylor

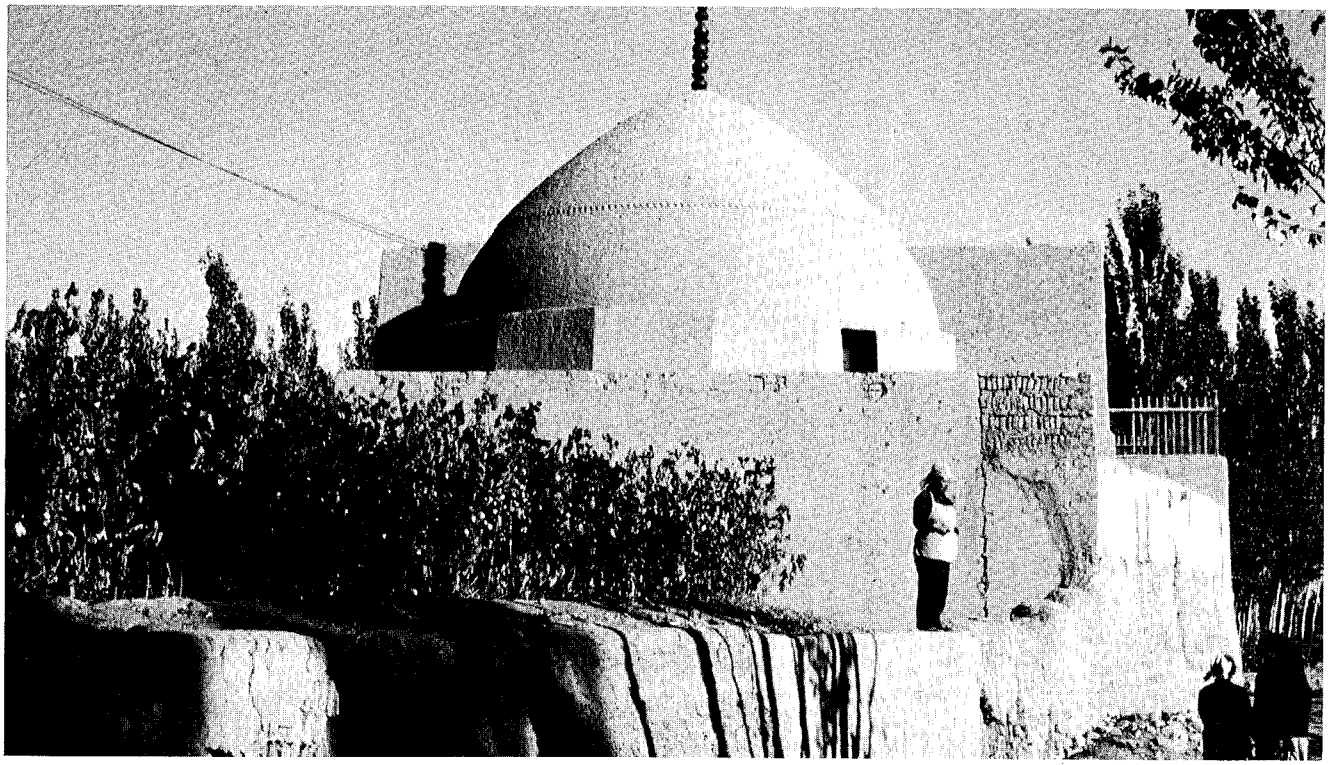
The Nationalised Type

In time, the requirements of Islamic religious activities merged with traditional Chinese architecture. Construction and design features of the mosques and mausoleums produced a new nationalised mosque, most developed by the Hui nationality The Ox Street mosque of Beijing and the mosque at Hua Jue Xiang in Xi'an are good examples of this type. More recent mosques have followed this pattern

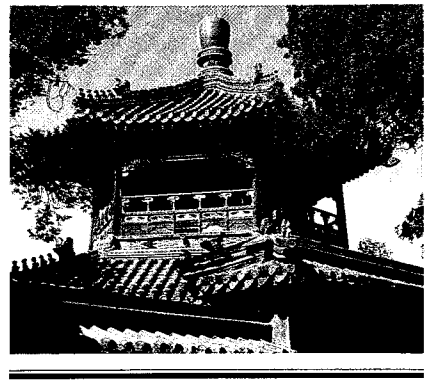
Xinjiang Regional Type

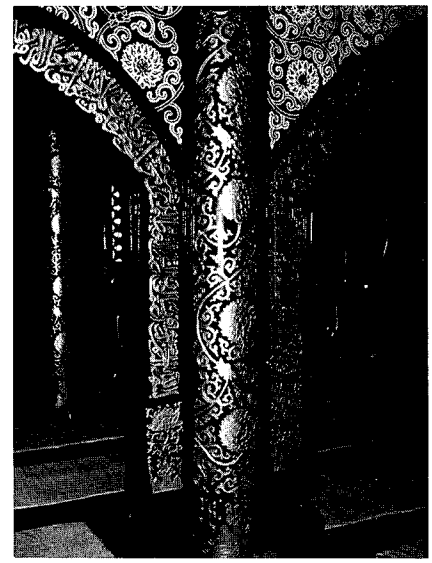
Prior to the introduction of Islam to the Xinjiang region in the 10th century, a local architectural style using timber and earth was already well developed The distinctive wooden columns supporting closely-spaced beams and flat roofs, adobe vaults and domes, an open plan and rich surface decorations characterise these mosques. In this autonomous region the architecture remains different and is associated more strongly with an Islamic aesthetic than elsewhere The mosques of Kashi and Turfan are good examples of this type

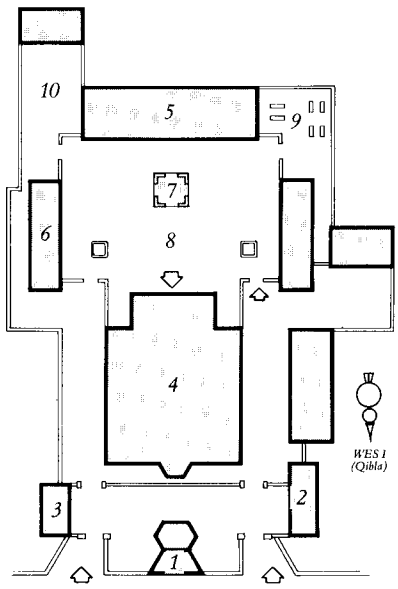
This presentation has been compiled by the editors based mainly on essays by Zhang Jing-qiu.



Niu Jie Mosque Beijing







Layout plan (drawn by Zhang Jing-qiu)

1 Observation tower	*6 Office and library*
2 Keeper's quarters	*7 Minaret*
3 Quarters	*8 Main courtyard*
4 Prayer hall	*9 Graveyard*
5 School rooms	*10 Imam's quarters*

The Niu Jie (Ox Street) mosque is the oldest and largest mosque in Beijing. It was first built during the Northern Song Dynasty in 962 AD and subsequently extended and reconstructed. The entrance to the mosque is from the West, through a long walkway into a central court The prayer hall has its entrance from this courtyard so that those praying can face Mecca

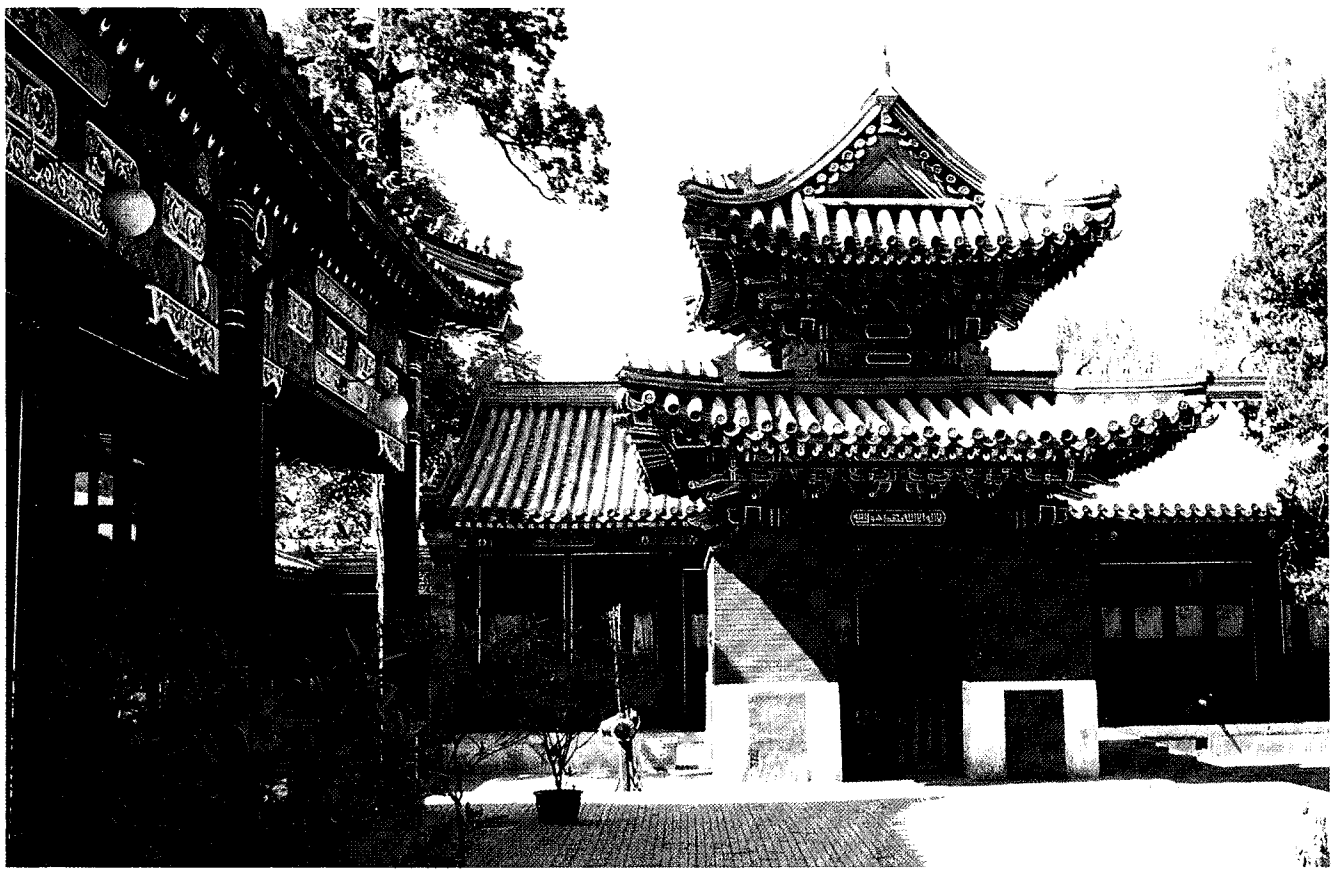
In 1978 the mosque was renovated, and the rich Chinese red and gold colours gleam with a shiny newness. A small patch of the original finish which remains in the mihrab area reveals that the original mix of colours was far more subtle than its present appearance It is used by about four hundred Muslims for the Friday prayers

Above: Multi-foiled wood columns, supporting Central-Asian design arches, form the structure of the prayer hall Arabic calligraphy and designs are used on beams, columns and ceilings as painting in relief with gold accents — a Chinese tradition Photograph C Little

Left, above The roof of the main prayer hall is capped with a dome which lets in light Photograph: C Little

Left: Typical roof edging detail Photograph: C. Little

Below: At the centre of the courtyard is the Chinese pagoda minaret The call to prayer is still made by the muezzin who climbs to the top To the left is the prayer hall and to the rear is the library and office. Photograph: H U Khan



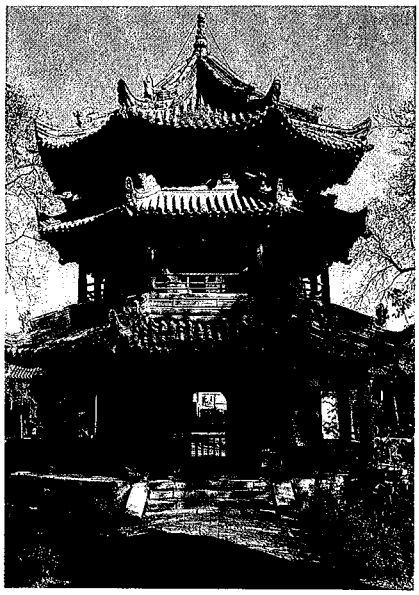
Hua Jue Jiang Great Mosque Xi'an

The Great Mosque is situated at Hua Jue Jiang near the Drum Tower in the city of Xi'an (population two million) It lies in a district chiefly populated by Hui Muslims and serves not only as their religious centre, but also as a centre for their political, cultural, educational and social activities It is the largest of fourteen mosques said to be still in use in Xi'an Architecturally it is one of the most important Muslim buildings in all of China

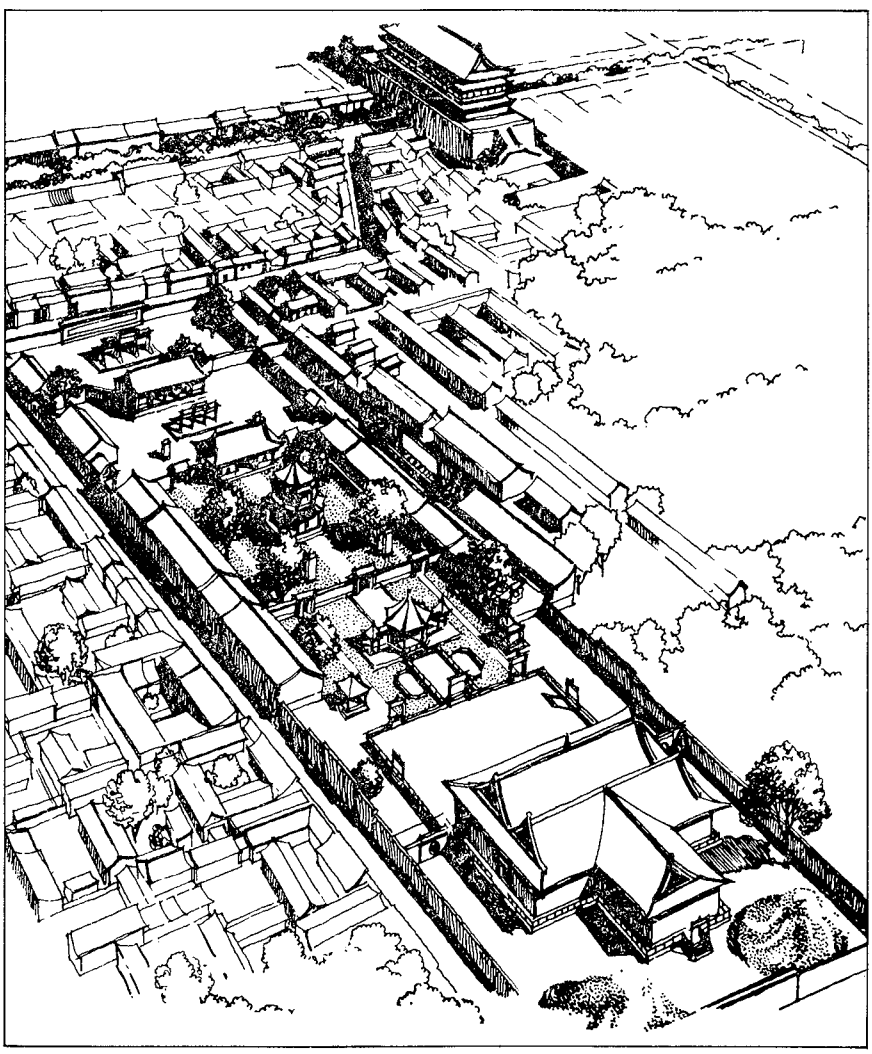
The original mosque on this site (named Qing Xiu Shi) was founded in 742AD, under the Tang dynasty, probably at the instigation of foreign Muslim mercenaries taken on by the Han The present buildings date from 1392 (in the early Ming) and through 1522 The mosque was restored and added to in 1606 (Wan Li) and 1764-8 (Ching dynasty)

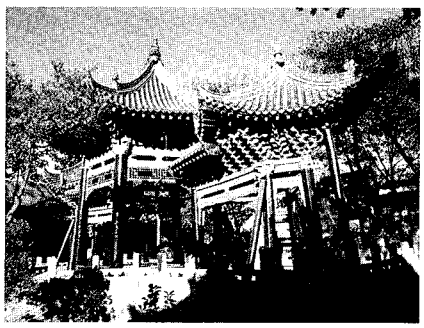
The mosque is built on a main central axis running east to west which is 245 68 metres long and is 47 56 metres wide along its north-south aspect It is the largest recorded central axis of any Chinese Mosque

The complex is planned around five main courtyards, covering an area of 12,000 square metres with a built-up area of 4,000 square metres

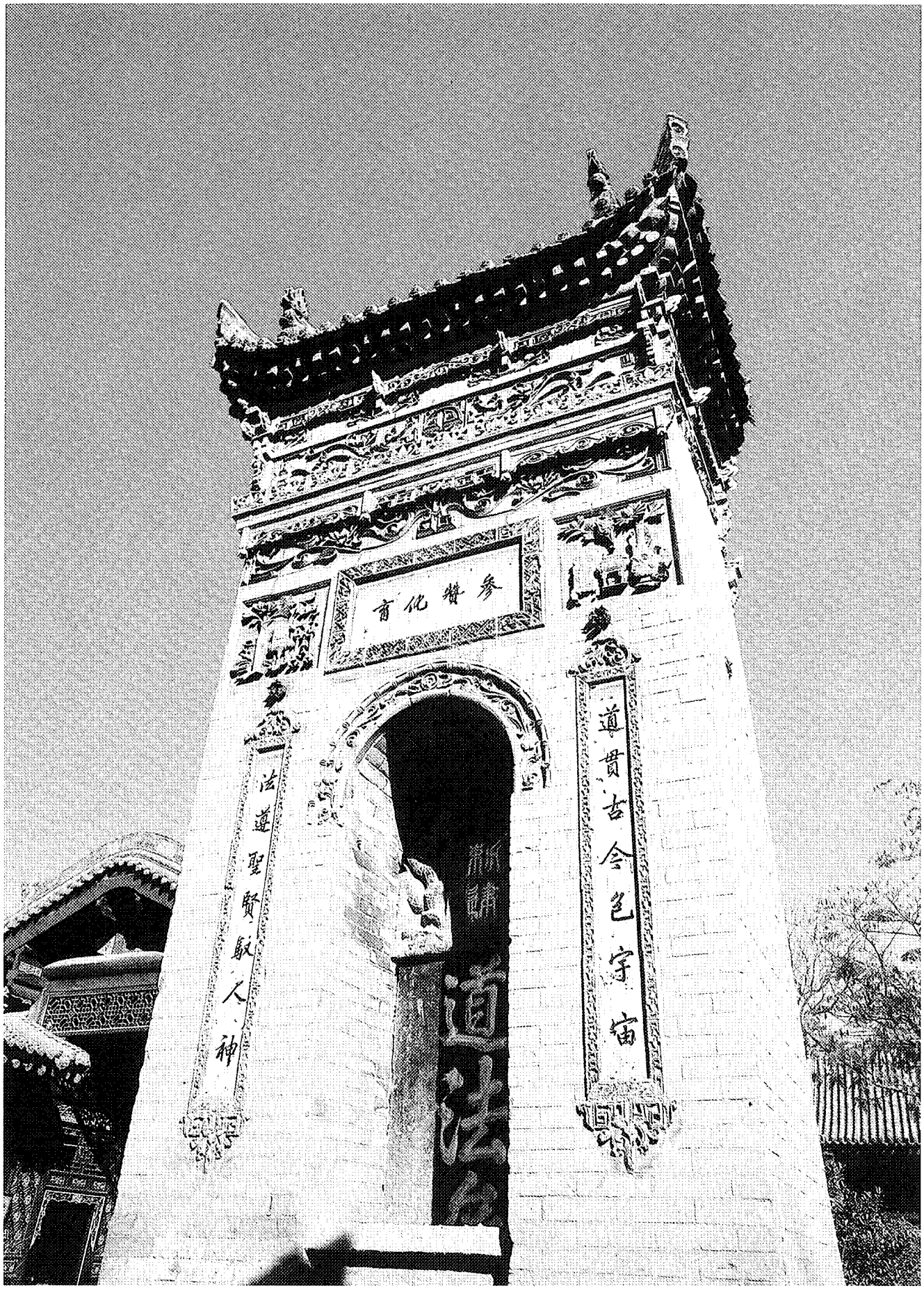


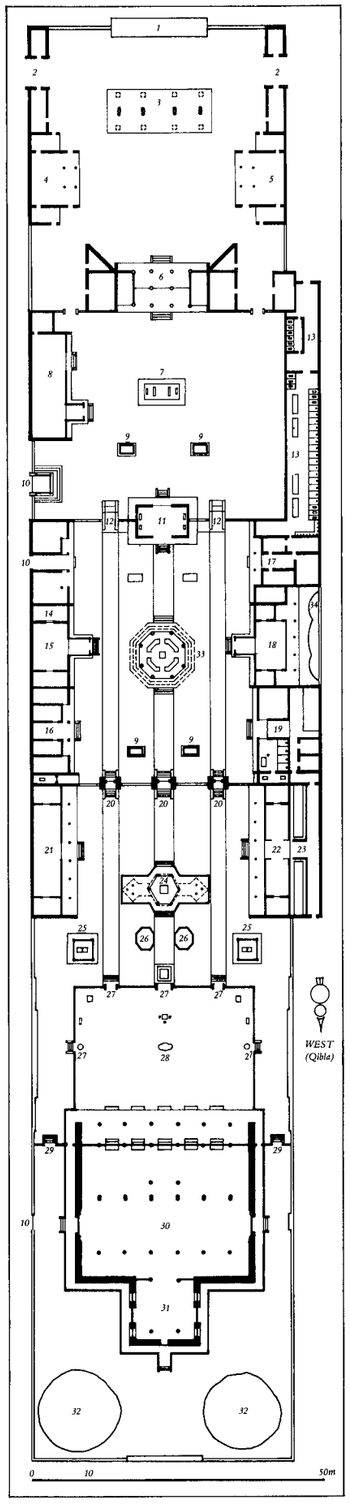
The first courtyard is the entrance forecourt with its main entrance on the north wall, the memorial archway, and rooms where a few visitors may spend a night or two. The space south of the second courtyard was originally designated as the Hui cemetry but was never used for that purpose This courtyard was used as a reception room (now as a shop) and as the ablution room. There are a number of interesting gateways and stone archways which lead to the third court. The third court, known as Qing Xiu Dian (Place of Meditation), is a gathering or meeting area for the community It measures 45 metres along its east-west axis and 32 2 metres north to south. It houses the minaret (Sheng Xin Lou), and other archways. The library in the north annex contains manuscripts in Arabic written in China At least 30 books date from the Qing dynasty There are also a number of stone tablets of Arab and Persian origin In the court's south annex there are a number of visitors' rooms, furnished with some marvellous traditional Chinese screens, vases and furniture There is also an unexpected narrow 5 metre wide landscaped court which is more Buddhist in character than anything else





Above. The wooden memorial archway in the first court has recently been restored Photograph. C Little
Top: The minaret (Sheng Xin Lou) is in the third courtyard This three-storey pagoda 10 13 metres high is the tallest building in the mosque It has an octagonal plan, a moveable staircase and three terraces with octagonal roofs covered with glazed tiles Photograph C Little
Left Birds-eye view of the mosque located in the city, near the Drum Tower, surrounded by houses mainly inhabited by the Hui Muslims (Drawing courtesy of The Architectural Journal of China)
Right: One of four stone archways, located in the second and third courts Photograph C Little

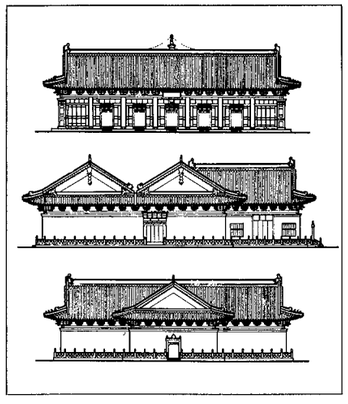

參贊化育
道貫古今包宇宙
法遵聖賢馭天神



Right: Front elevations of prayer hall

Left Plan

1	*Wall of mirrors*	19	*Visitors' washroom*
2	*Main entrance*	20	*Four-bay entrance gates*
3	*Memorial archway*	21	*North Hall*
4	*Visitors' room*	22	*South Hall*
5	*VIP room*	23	*Tablet gallery*
6	*Two-arched gateway*	24	*Phoenix pavilion*
7	*Stone gateway*	25	*Pavilion*
8	*Reception*	26	*Pond*
9	*Stone-archways*	27	*Stone gateways*
10	*Entrances*	28	*Platform*
11	*Three-arched gateway*	29	*Moongate*
12	*Floral gates*	30	*Prayer hall*
13	*Ablution rooms*	31	*Mihrab*
14	*Imam's room*	32	*Moon observation hills*
15	*Library*	33	*Sheng Xin Lou*
16	*Restrooms*		*Minaret*
17	*Washrooms*	34	*Landscaped court*
18	*Visitors' lounge*		



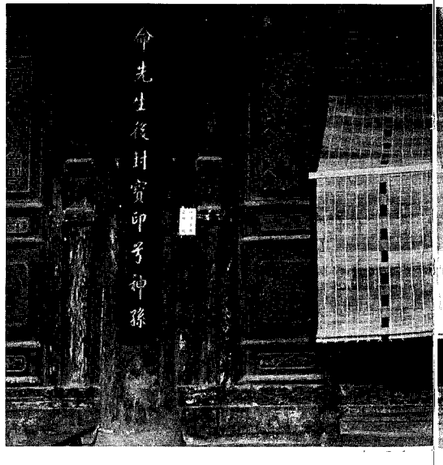
Top: The prayer hall (masjid) has a covered area of 1,278 square metres The seven-bay facade is 33 metres long and 27.6 metres deep The hall accommodates over a thousand people for prayer.

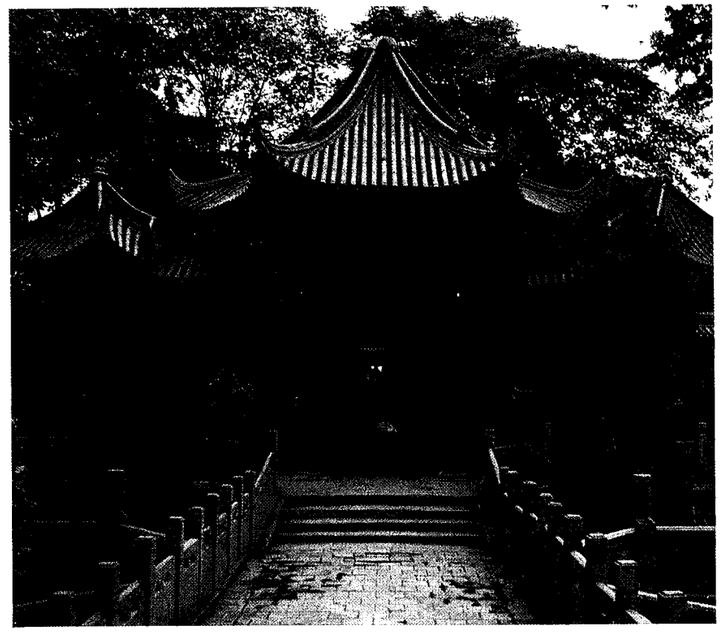
The double-interlocking roof is supported by a system of diminishing beams and has become stylistically associated with Hui prayer halls The height of the roof is proportional to the depth of the building (the deeper the structure the higher the roof). Photograph: C Little

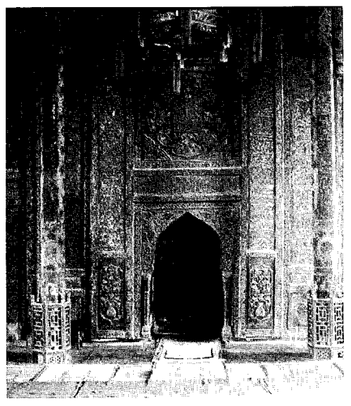
Above, right: There are five entrance doors off the front facade and four other side entrances. The hall height is 6 metres. Photograph: H.U Khan

Right: The mihrab wall has been preserved from the Ming era is a superb artistic achievement. It is dimly lit by two skylights on either side giving it a profoundly religious aura The mihrab itself is 1.2 metres wide X 1 9 metres high X 0.83 metres deep. The wall of concentric wood carved and painted motifs, is Central Asian in colour, though the chrysanthamun, lilies and peony floral patterns give the design a Chinese flavour

The coffered ceiling has 600 painted panels, each different and quite beautiful Photograph: C. Little.



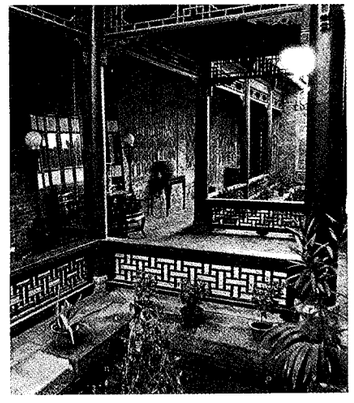


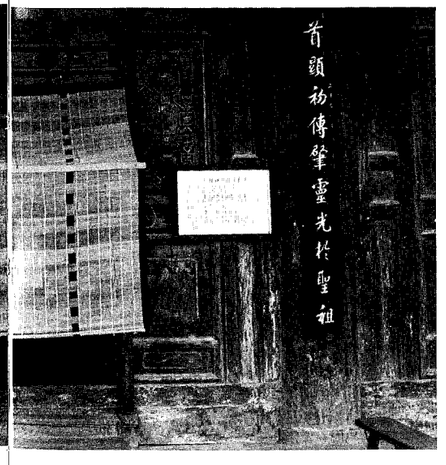


Above: The Phoenix Pavilion (the Feng Hua Ting) is a garden pavilion, 17 5 metres in front of the three-arched gateway to the fourth court This Qing dynasty structure of an hexagonal pavilion, flanked on each side by two smaller, lower triangular pavilions. Photograph: C Little

Right: The 'tablet gallery' in the south hall of the fourth court. Several tablets in Chinese tell the history of Islam in the region. Photograph: C Little

Below: The furniture, screen and vase date from different periods. Photograph: C Little





The fourth is the mosque's main courtyard which houses the sanctuary or prayer hall In it is the Pheonix pavilion, which is the central landscaping element, surrounded by shrubs and ponds with rock fountains There are two halls, one to the north and the other to the south of the court In the south hall there is the famous 'tablet gallery' in which carved stone tablets record the mosque's history in Chinese. The prayer hall is approached in a very traditional Muslim manner by a large raised platform, which also acts as 'spillover space' during Eid prayers. It has a narrow open-to-sky space of 2 2 metres wide decorated with sculptured ceramic tiles.

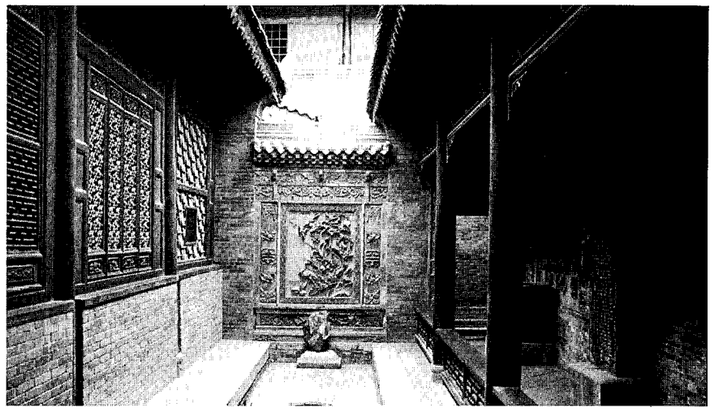
At the western end of the mosque, beyond the prayer hall and entered through the moongates, is the fifth court which has two miniature hillocks which act as platforms for observing the appearance of the new moon in accordance with Islam These hillocks, consisting of rocks and spiralling ramps, divert the visitors' attention to the highest points to signify the termination of the series of spaces and leave a memorable visual experience.

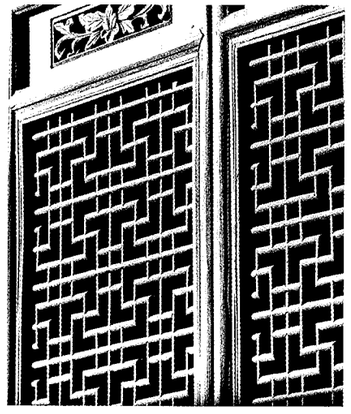
Every courtyard is arranged as an independent and highly ornamental space The transitions from one court to another are differently treated, consciously creating a hierachy of spaces The changes along the central axis provide a build-up to the eventual unfolding of the three-dimensional experiences of the prayer hall, not unlike reaching a climax in a musical movement

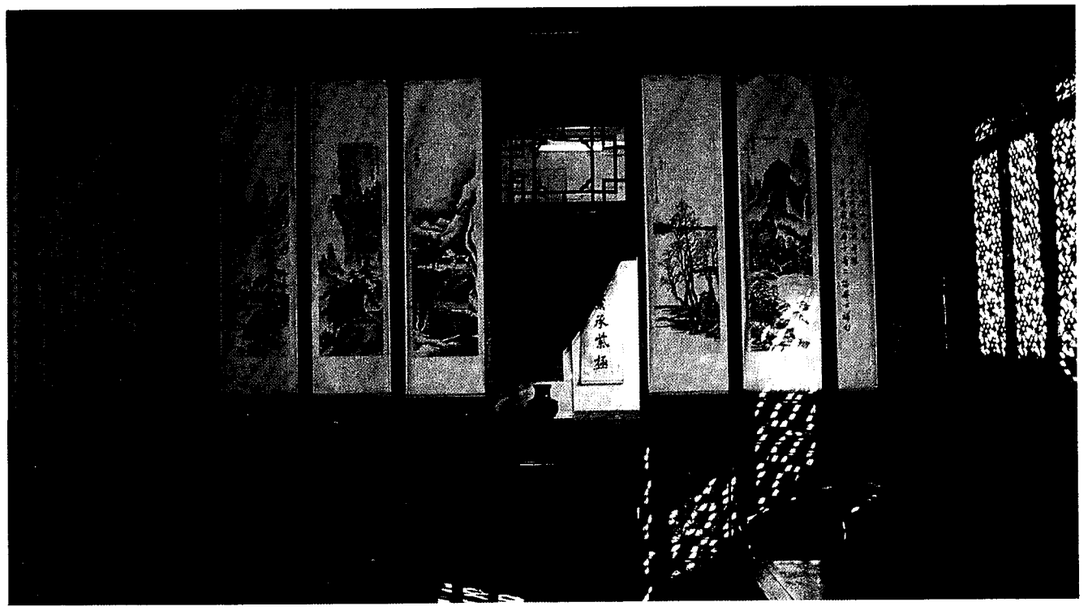
The growth of the mosque is well recorded The Ming dynasty archives recorded this evolution in terms of its size, height and the change from an asymmetrical composition to a balanced symmetry

The ornamentations are exemplary samples of the blending of Islamic and Chinese decorative ideas The key lies in the choice of basic colours for the different structures, the geometric, arabesque and calligraphic motifs The colour scheme has been used consistantly along the main axis; the sky-blue roof tiles and murals reflect this harmonic choice

The Hua Jue Jiang Great Mosque is a mix of Central Asian and Han architectures assimilating successfully traditional Chinese architecture and foreign exposure It is truly an architectural masterpiece

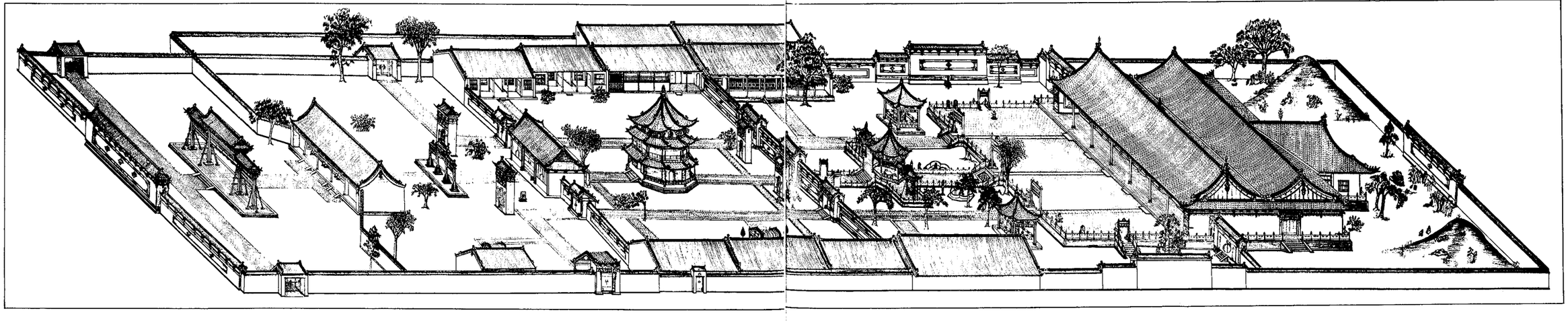




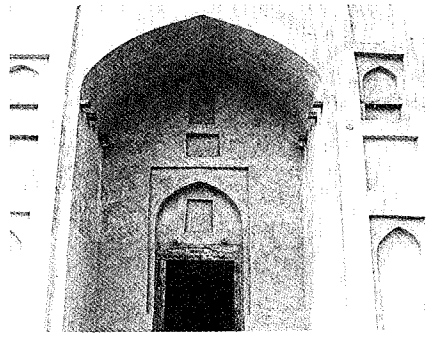


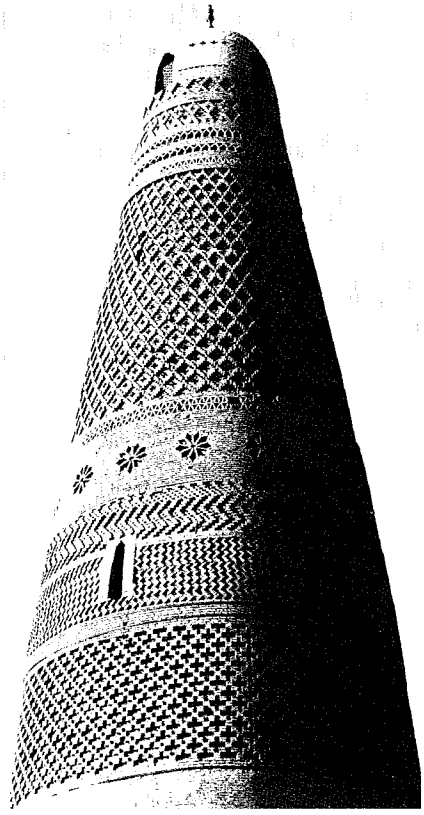
Above: Screens divide the tablet gallery into three manuscript rooms Photograph: H U Khan
Right The narrow rock garden behind the visitors' lounge Photograph: H U Khan

Left, above: Stone tablets in Chinese and Arabic record the history of the mosque and Hui Muslims Photograph: C Little
Extreme left: The stone carved end walls of the 'tablet gallery' and the long pool (no longer filled with water) divides the gallery into two To the left are the manuscript rooms and the open gallery on the right contains the tablets Photograph: H U Khan
Left Typically Chinese wooden screens are used for windows and doors Photograph: C Little
Below Drawing of the mosque from the archives of the mosque (Drawing courtesy of the Imam of the Great Mosque)
Overleaf: The 'moongate doorway' leads into the fifth court Two identical exquisite doorways, in low partitions lead to the hillocks to the west of the site Photograph: C Little



Amin Mosque Turfan



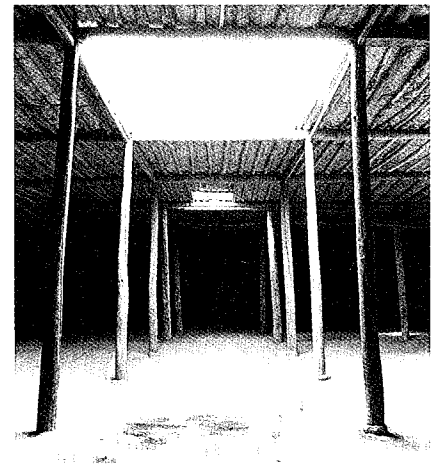


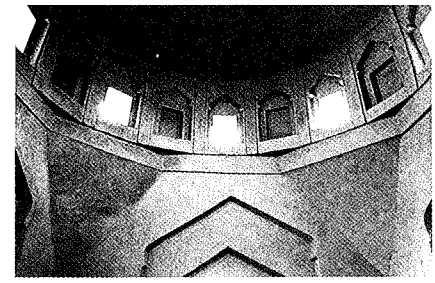
Above: The minaret of decorated brick Photograph: P Clement
Above, right The entrance to the mosque follows the classic Central Asian pattern Photograph: C Little
Extreme right, from top to bottom: The prayer hall with open skylight; interior of the main dome; the roof comprising a number of domes of varying sizes — the flat-roof is a timber-framed structure Photographs: C Little (top and centre) and P Clement
Below Entrance view Photograph C Little

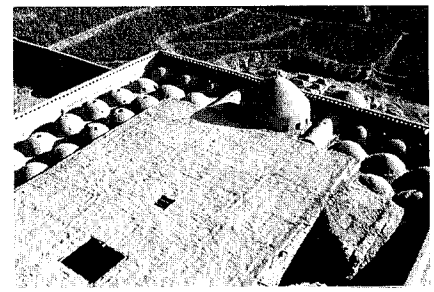
The Amin Mosque, two kilometres east of Turfan, was built in 1778 It is famous for its 44 metre tall minaret

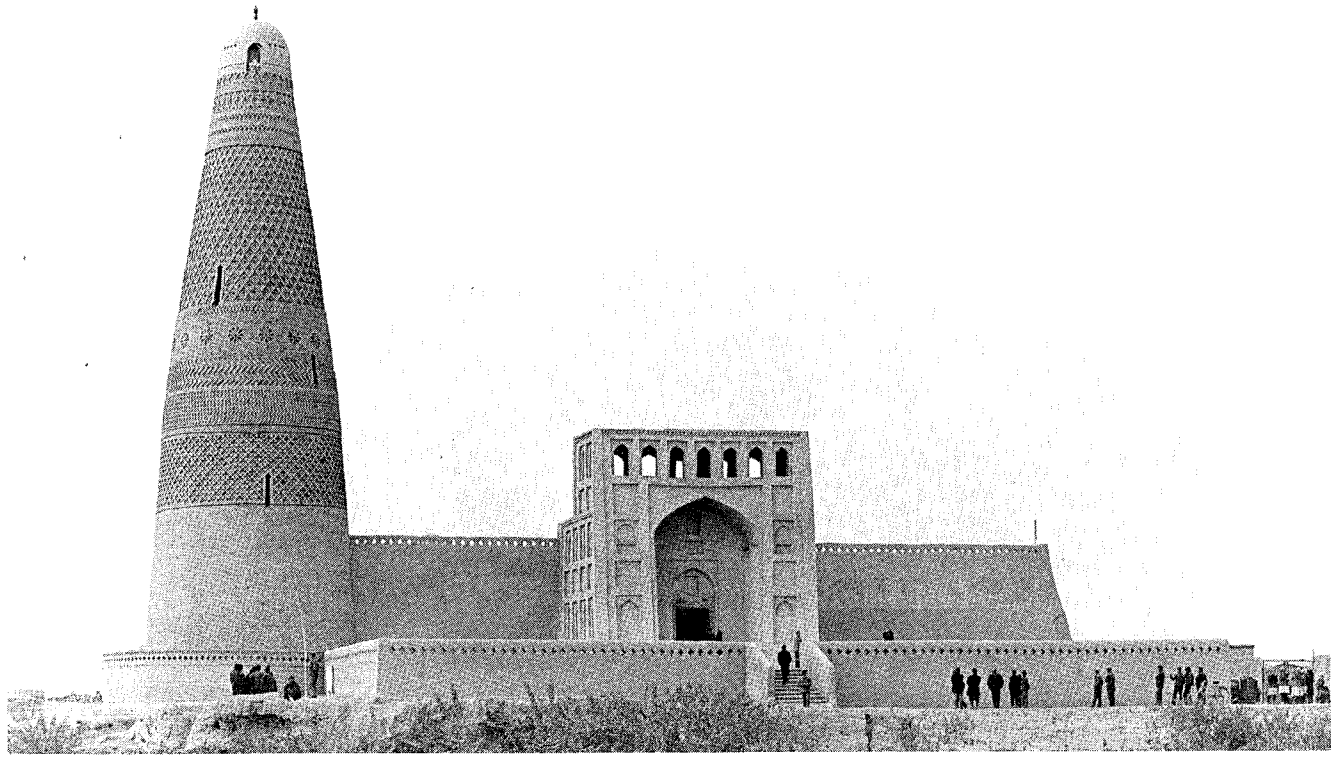
During the reign of the emperors Yong Zheng and Qian Long, Amin Khoja, the Uygur hereditary head Imam of Turfan, contributed to the unification of China by quelling a major rebellion in the area He was rewarded with several titles. In his commitment to the region and piety to Islam, he started to build the mosque He died in 1777, and the work was completed a year later by his son Sulaiman

The mosque is in mud-brick and was whitewashed throughout its interior There are no traces of any exterior decorations, though there probably were some in the niches and panels on the walls. The striking minaret is in a patterned load-bearing brick A spiral staircase which leads to the top commands an overall view of the town

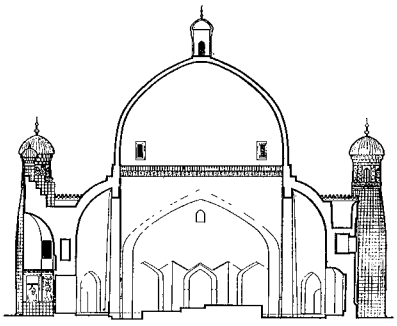




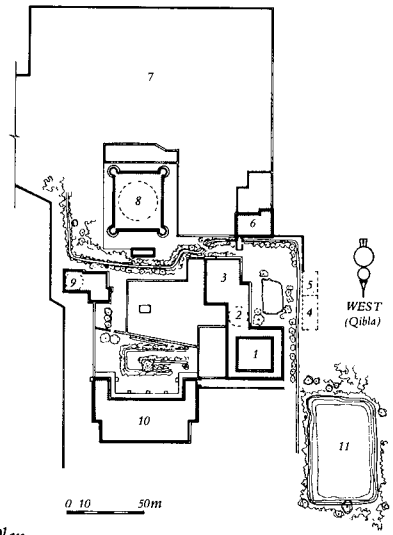




Aba Khoja Mosque & Mausoleum Kashi

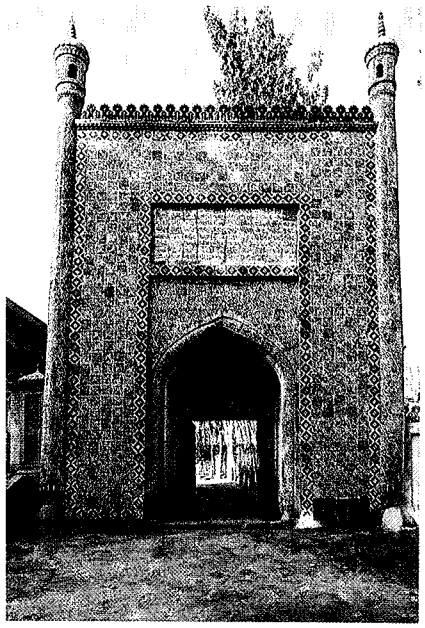


Section, mausoleum



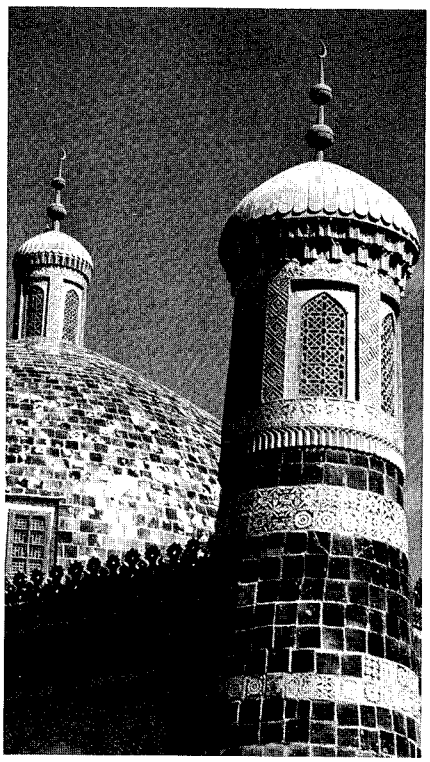
Plan

1 *Madrasah*
2 *Lower prayer hall*
3 *Upper prayer hall*
4 *Bath*
5 *Canteen*
6 *Living quarters*
7. *Graveyard (City of the dead)*
8. *Mausoleum*
9 *Green domed mosque*
10 *Main mosque*
11 *Pond*



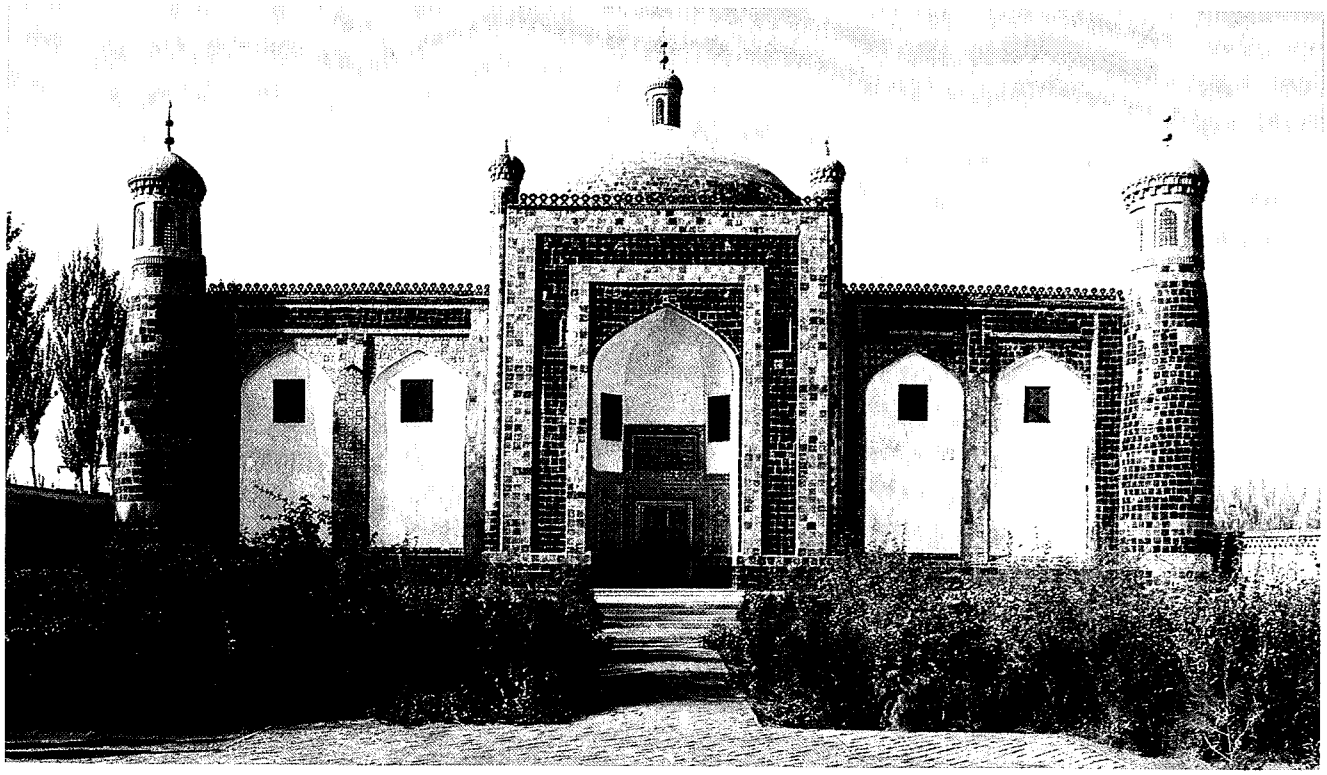
The Aba Khoja Complex is a large architectural ensemble consisting of a mausoleum, a large mosque and three other places for prayer, a lecture hall and madrasah (religious school) and an adjacent graveyard, known as 'the city of the dead'.

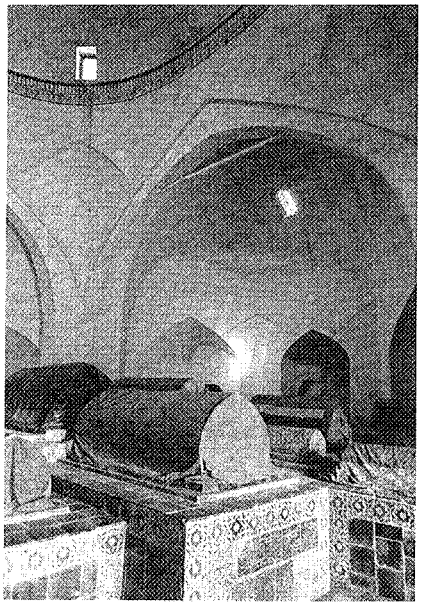
Construction commenced in the early 18th century, with later extensions made in groups

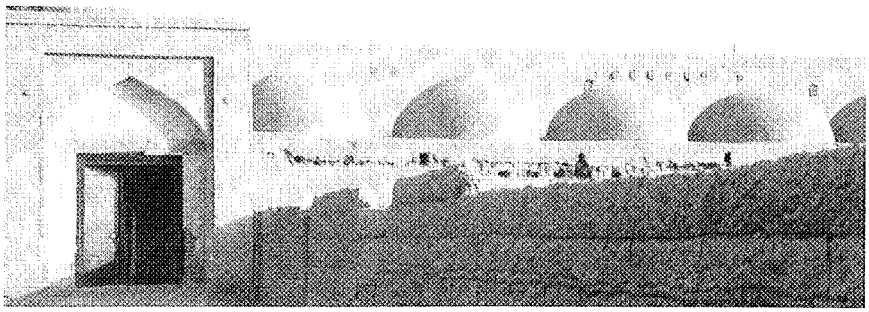


Above: The dome and minaret The tiles on the minaret, as all over the mausoleum, have been replaced at various intervals and do not match, creating a rather lively effect Photograph: J Oubo
Above, left: The arched gateway to the complex has a light airy feel with its light blue and white tiles Photograph C Little
Right: The doors to the mausoleum are beautifully painted but the paint is peeling. Photograph H U Khan

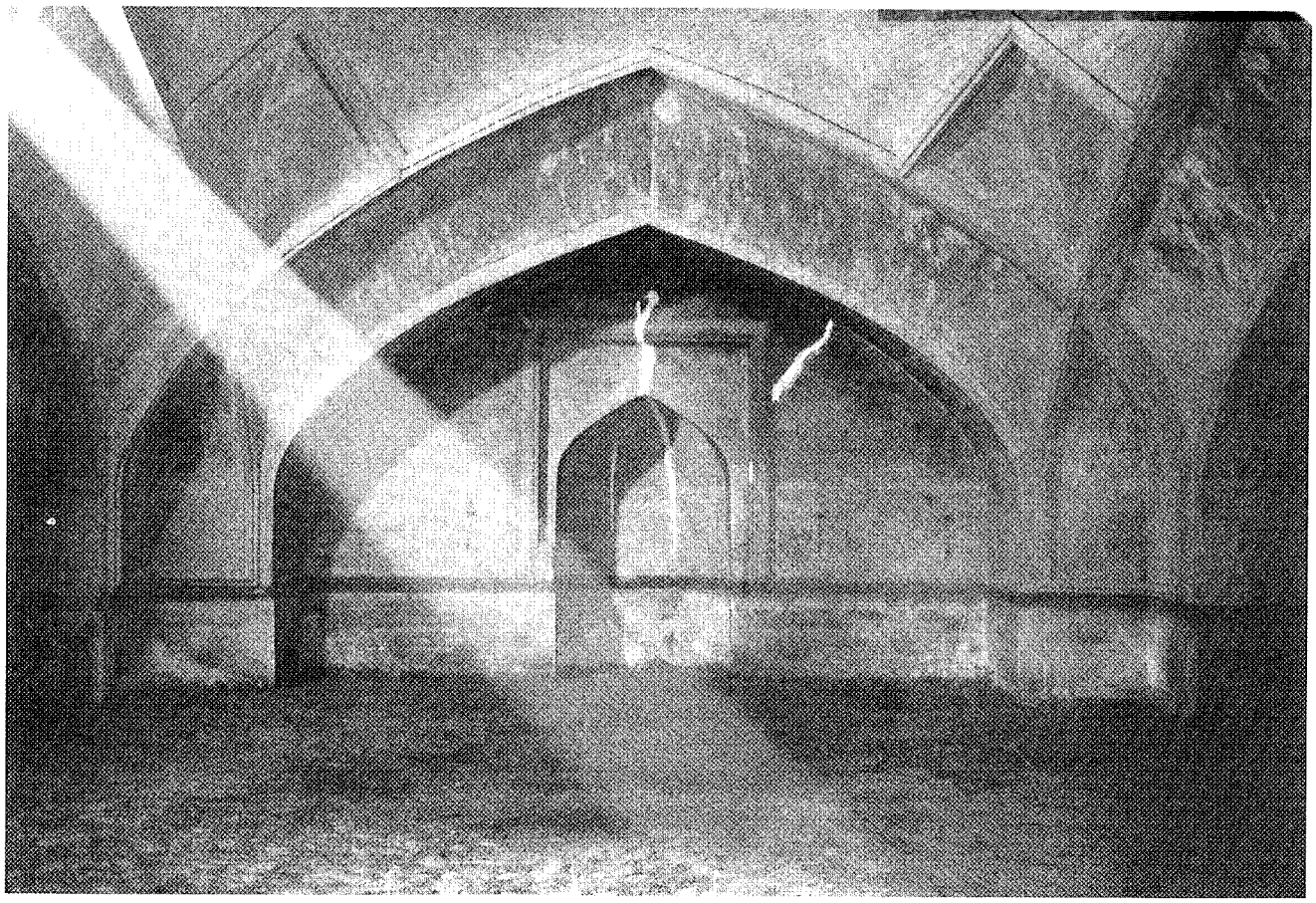
Below: The mausoleum seen from the front Photograph: C. Little

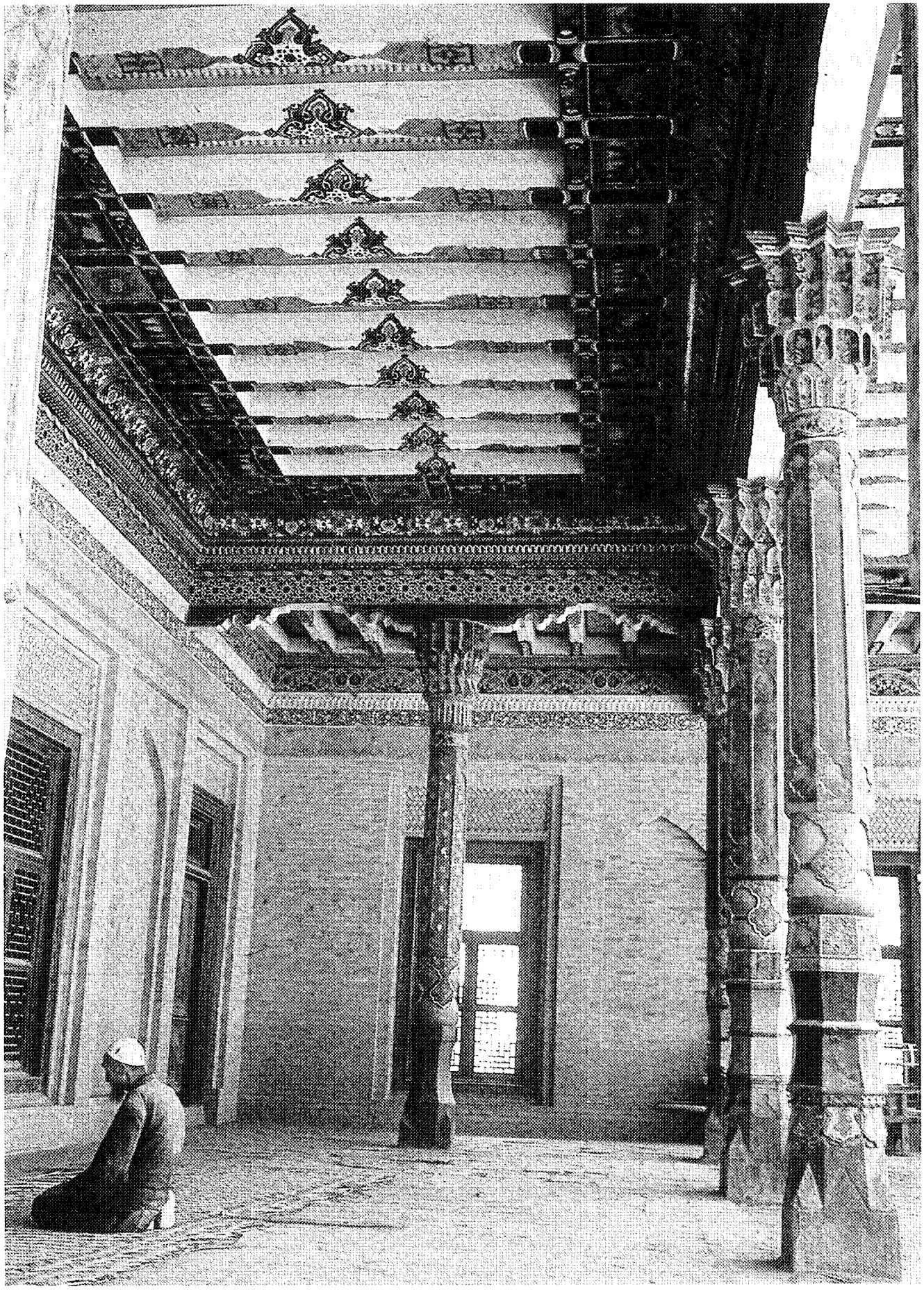




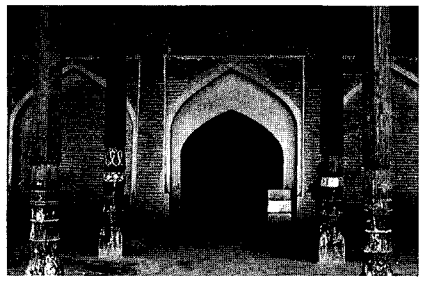


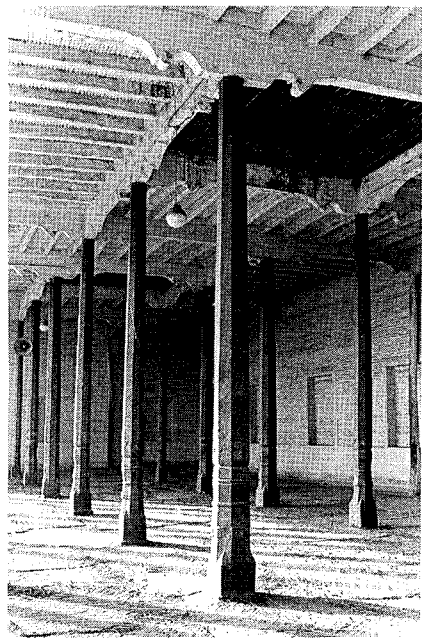
Above: The tombs are still well tended and covered in brightly covered cloths Photograph C Little
Above, left: The 'city of the dead' — the Muslim graveyard adjacent to the mausoleum has not been used in recent times Photograph: H U Khan
Left: The side entrance leads directly from the street into the mosque courtyard Photograph: H U Khan
Below The interior of the mausoleum is lit by shafts of light from windows above a mezzanine level Photograph: C Little
Right: A section of the prayer hall has been restored Parts of the hall are in very bad shape Photograph: J Oubo

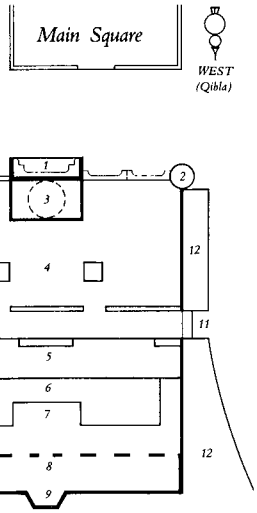




Aitika Mosque Kashi







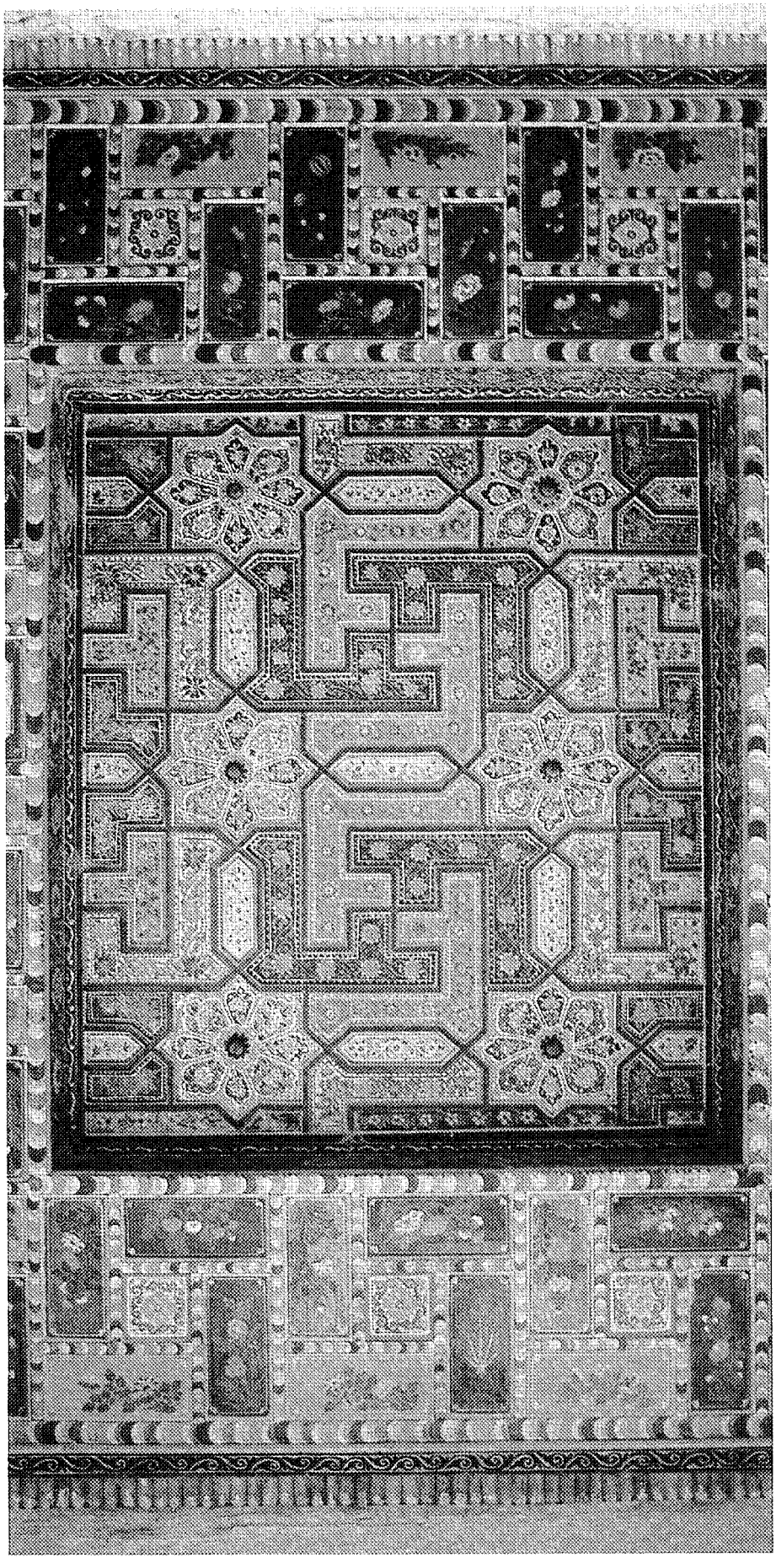
Schematic layout

1 Gateway	*7 Prayer area*
2 Minaret	*8 Inside prayer hall*
3 Ablution hall	*9 Mihrab*
4 Courtyard	*10 Imam's quarters*
5 Raised platform	*11 Side entrance*
6 Colonnade	*12 Shops*

Kashi has been the crossroads of the Silk Route into China and the entry point for Muslims from the West The Aitika Mosque, built in the 17th century, is the centre of the town It is located at one end of a large square and is surrounded by shops and houses. As with many urban Asian mosques, the building is enclosed by shops, the rent from which pays for the maintenance of the mosque.

The prayer hall faces the courtyard. The area is divided into two sections, one covered but open on the side, and the other enclosed for use during the cold winters. The structure is of timber with the exception of the gateway and the *mihrab* wall which are of brick The roof is flat, with joists forming a pattern. Parts of the ceiling are decorated, but on the whole the wood has been painted white

Above: The masjid is 38 bays long and 8 bays deep and has an open colonnade in front
Left, above: View of the prayer hall (masjid) from the open prayer area looking at the interior prayer hall
Left Small, individually owned shops enclose the mosque on three sides
Below: The entrance to the mosque is from the town's main square The two minarets are unusually asymmetrically positioned
Right The square bays having traditional Islamic patterns are painted in bright colours The one shown here has been recently repainted
Photographs: C Little, H U Khan



Anatomy of a Mosque

Mosque or Masjid: Literally "the place of prostration", in which Muslims perform their prayers.
Minaret: The turret or high point from which the muezzin calls people to prayer.
Minbar: A raised structure in a mosque from which the *khutbah* (Friday sermon) is recited It is sometimes a movable wooden structure and is located to the right of the *mihrab*.
Mihrab A niche in the centre of a mosque wall that marks the direction in which Mecca lies The *Imam* (leader of the prayer) positions himself before the *mihrab* during prayer
Qibla The direction toward the *ka'ba* in Mecca in which all Muslims pray
Wudu. The ablution made before saying prayers The purpose of *wudu* is to remove impurity

Back to Table of contents

Chronology of Islam in China

Old China

Xia	*2205-1766 B.C.*
Shang	*1766-1122*
Zhou	*1122-770*
Spring and Autumn Annals	*770-476*
Warring States	*476-221*
Qin	*221-206*
Han	*206 B C -220 A.D.*
Three Kingdoms	*220-265 A D*
Tsin	*265-420*
Southern and Northern	*420-589*
Sui	*589-618*
Tang	*618-907 A.D.*
	Islam comes to China
Five Dynasties and Ten Kingdoms	*907-960*
Song	*960-1280*
Yuan	*1280-1368*
Ming	*1368-1644*
Qing	*1644-1911*

New China

Chinese Revolution	*1911-*
Long March	*1934-1935*
Liberation	*1949 (Oct 1)*
Cultural Revolution	*1966-1976*

(Islam is known in China as Ching Zhen Jiao — the pure religion)

587AD	According to the historian Lui Chih[1], four people, including Abi Waqqas, the Holy Prophet's maternal uncle, arrive in China
c 610AD	They build the first known mosque (Mosque of Holy Remembrance) at Guangzhou (Canton)
c 620AD	Arab trade to China from Iran via Oman, South India, Sri Lanka, South Malaysia and Thailand, comes to Guangzhou and Zhangchow.
651AD	The Chinese Emperor receives an emissary from the Caliph to establish the first Muslim embassy at Xi'an, Shaanxi province
719AD	Battles between Kutaiba bin Muslim and emperor Hsuan Tsung near Kashi (Kashgar) The Muslim advance in China is halted
742AD	Mosque of Xi'an founded (later to become the Great Mosque)
755-757AD	In the reign of the third Caliph, there is a rebellion in China led by a Turk, An Lu-Shan Emperor Su Tsung appeals to the Arab, Abu Jaffar, for assistance Arabs send troops and recapture Xi'an and Honanfu The soldiers settle in Western China to form the nucleus of Muslims in China today
c 763AD	Tai Tsung seeks Mulsim help to quell Tibetan attack Attack repelled and more Muslims settle in Yunnan province in South China where they become known as the *Panthays* (named after the Burmese for Muslim). The *Hui* people become Muslims.
c 900AD	The people of North-West China (Kansu, Ningsha and Xinjiang) convert to Islam and are called *Tungans* (word in Turki for 'convert' — a general term used to describe North-west Chinese Muslims)
996AD	Beijing's Niu Chieh mosque built. Around this time (during the Sung dynasty) there are some 20 Arab embassies in China
1260-1644AD	Muslims establish themselves and integrate with the indigenous population; join the army and hold high posts in government during the *Yuan* and *Ming* dynastys
c1270AD onwards	Islam introduced in Yunnan by soldiers of Kublai Khan During Manchu rule Muslim *Panthays* battle central government, in which millions are said to have perished.
1310AD	Chuan Chou Mosque built (probably the oldest extant mosque in China)
1371AD	Zheng Ho, (also known as Sao Pau Kung — 'our master of the three jewels'), a Muslim joins the military. His distinguished service in the frontier provinces obtains concessions for Chinese Muslims (recorded on a stone tablet in Xi'an mosque)
1392AD	Great Mosque of Xi'an rebuilt in present form
1403AD	Zheng Ho leads seven maritime expeditions to the west Pacific and Indian Ocean (Dies in 1434AD)
1620'SAD	The Great Mosque of Hang-Chou built
1778AD	The Amin Minaret of Turfan built by Amin Khoja, the hereditary Imam, and his son Sulaiman
1785AD	Battles between the Muslims of North-west China and the Manchus
1855AD	The *Panthay* Imam of Talifu, Ma Teh-hsing, his lieutenant Ma Hsien (Mohamed Hassan) and Tu Wen-Siu (Sultan Suleiman), declare their independence.
1864AD	Yaqub Khan in North-west China sets up an independent kingdom in Xinjiang
1873AD	Chinese defeat the *Panthays* (Since then their population in Yunnan has been on the decrease)
1877AD	General Tso Chung-Tang re-establishes Chinese suzerainty in Xinjiang region and sets up a local Muslim chieftan figurehead in Turfan
1911	Dr Sun Yatsen's revolution Muslims play an active role in the Nationalist government
1934-1949	In the long march and afterwards, most Chinese Muslims joined Mao Zedong and the Hup Xinjiang secured without a fight, due to Burham Shahidi (now president of the Islam association of China) and Aziz Saifuddin (now alternate member of the Politbureau).
1950	The Agrarian Reforms nationalise lands Muslim *waqf* (endowment) property attached to mosques exempt from confiscation
1966-1976	During the Cultural Revolution, Muslims (and other religions) persecuted. Red Guards attack religious institutions as being "bourgeois" and "reactionary" Mosques defaced and Islam not practised openly.
1978	First Muslims permitted to go on Haj to Mecca. The present policy of "national equality and regional autonomy" has permitted the faith to be re-practised. Mosques re-open and renovations of damaged structures are taking place. The environment for Muslims in China is becoming more congenial day by day.

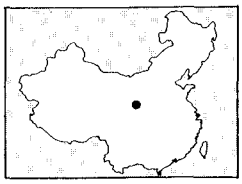
The above chronology is based on a paper, *The Brief History of Muslims in China,* by Iqbal Shafi; 1981

[1]*Lui Chih, Life of the Prophet (in twelve volumes), 1721*

Brigadier Iqbal Shafi, a former diplomat, was the Pakistani military attaché to Beijing for seven years. He returned to Pakistan to work in government protocol and is presently with a private foundation in Pakistan

Back to
Table of contents

Lanzhou Park



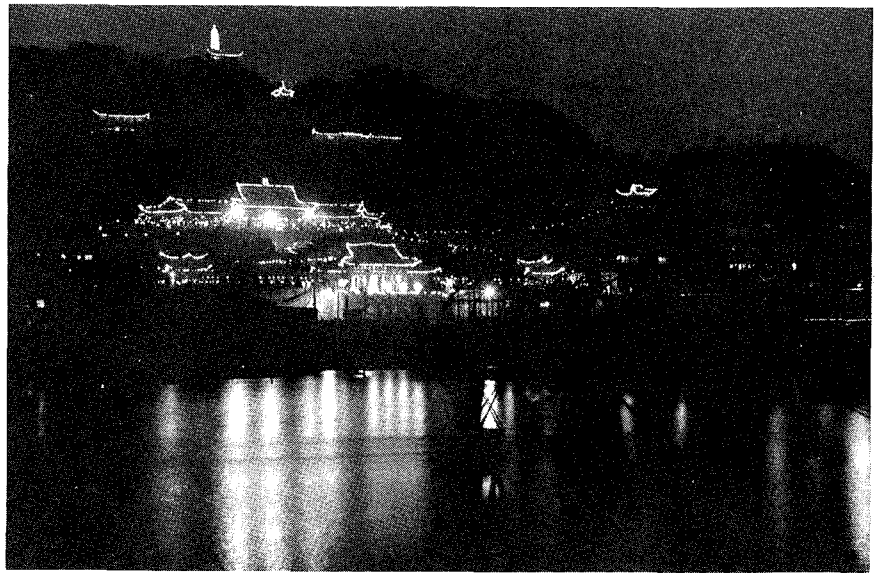
Lanzhou Peoples Park was created on an island which lies within the city's municipal limits The buildings were assembled by rebuilding older structures which had, for various reasons, been torn down all over the city during the 1960's We collected the old columns, tiles, carvings, etc that we could find and decided to re-use them to create a new recreational centre on the island I saw this as an opportunity to create a "historic scene" which would provide familics an environment they could enjoy It was also a useful exercise in learning building techniques of the past, and by using existing structural elements, reduce the actual building costs

A number of us came together; including architects, craftsmen and builders We discussed the planning and layout and began work on site. We lived on site for over eight months, in temporary shelters, learning and building the new facilities.

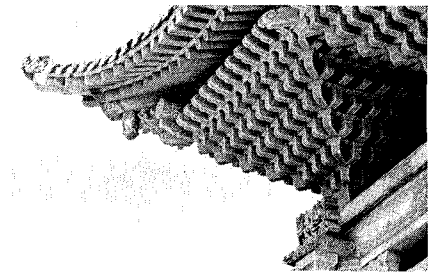
When the buildings were reconstructed using the old components, they were transformed into a kind of fantasy land by changing the proportions of traditional architecture and creating new forms which never existed in the past In many instances the craftsmen had to repair the damaged components or build new ones to match the old

The park was opened to the public in the 1970's and is well used by the city's inhabitants From time to time new buildings are added to the complex The mix of unreality combined with tradition has produced a number of pavillions which reflect the old and added to it a dimension of the new China

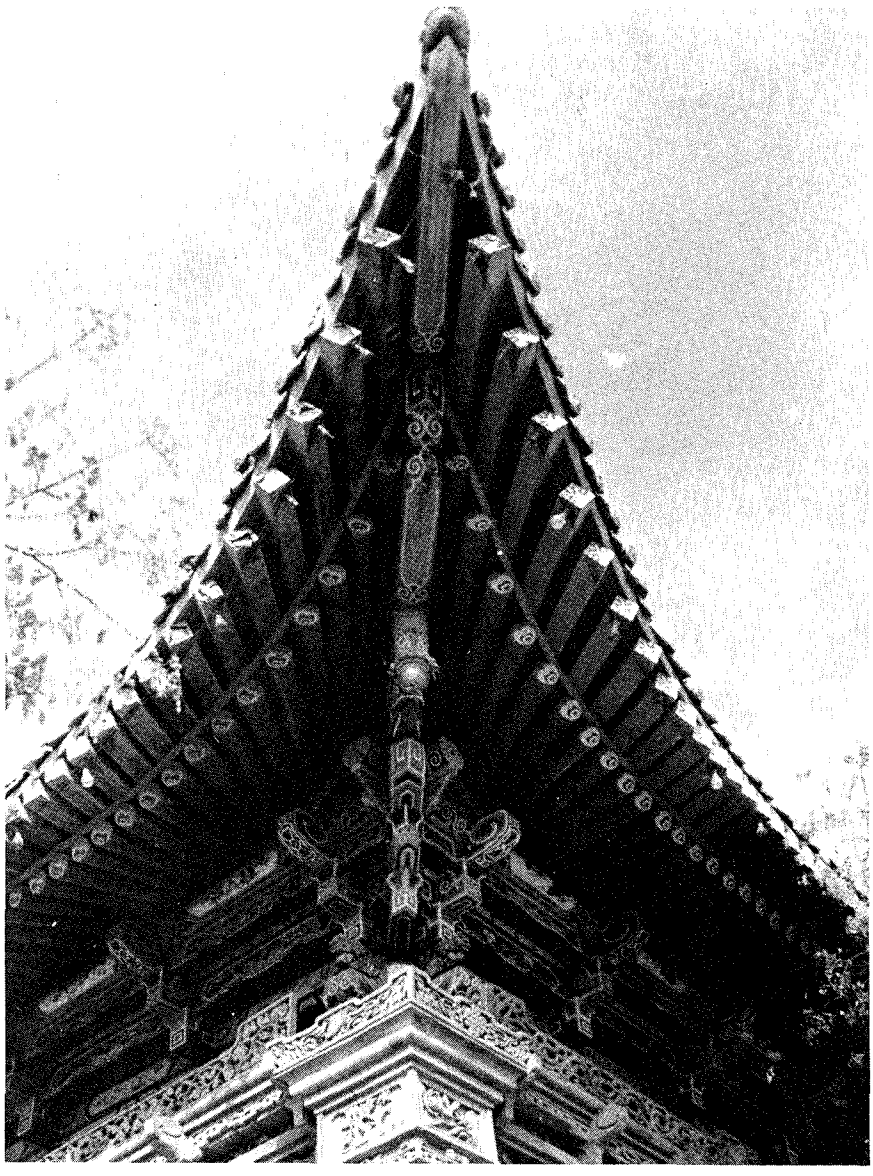
Below Lanzhou Park at night from across the water The park is made up of a number of gardens
Bottom: Triangular viewing pavilion in the Pei-Ta garden overlooking the Yellow River and the town behind Built in 1959

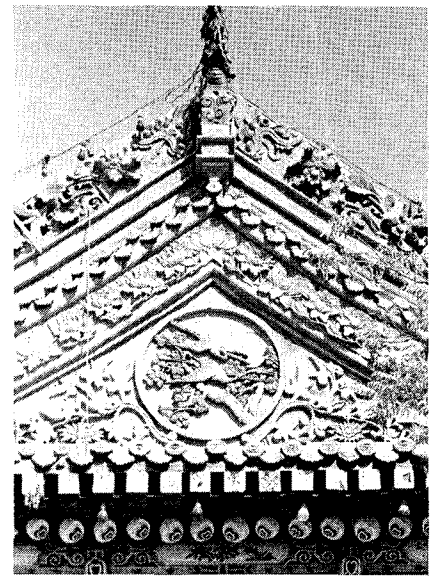


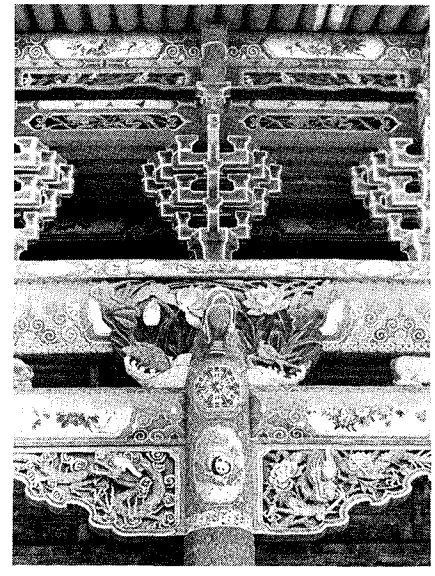
Text and photographs by Ren Zhnying

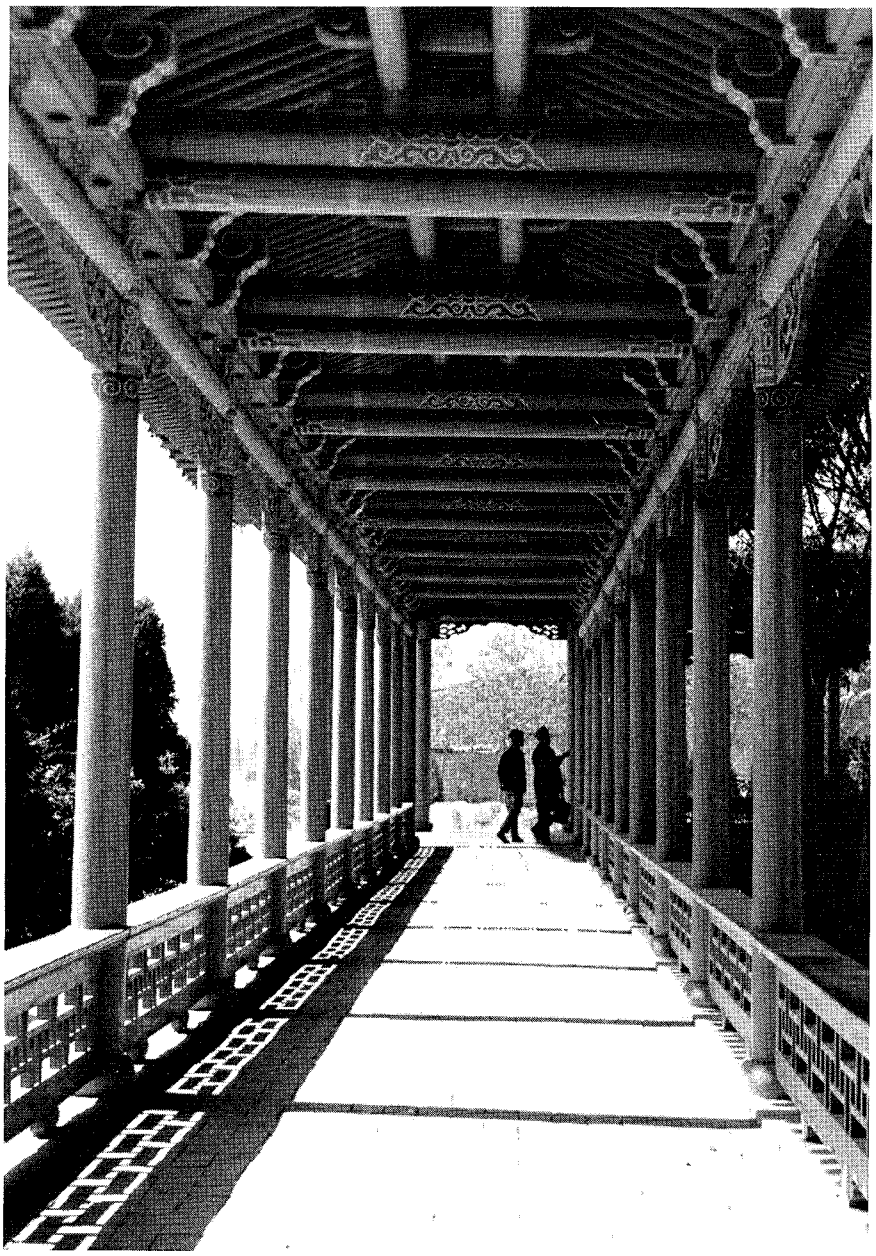


Above: Detail of the seven-tiered timber bracket, set in a cloud pattern
Left: A courtyard in the North Pagoda garden (Pei-Ta) built iin 1959 is surrounded by covered walkways with a pavilion (Pei Lou) at one end.
Left, below: Roof edge detail.
Below: Carved stone panels form the gable end of the roof, supported by wooden beams Parts of the stone panels are old, but they have been 'completed' and restored by present-day craftsmen.
Bottom: The timber structure has been repainted in traditional colours

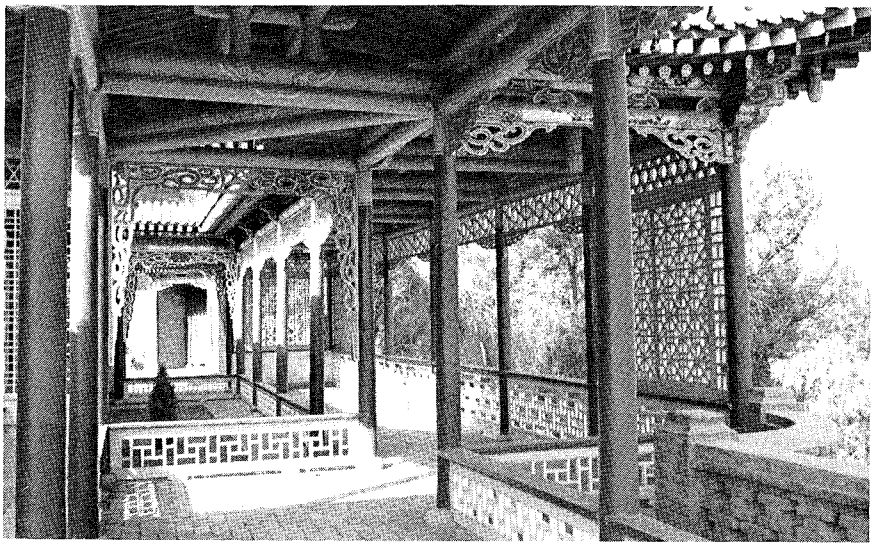








Left Reconstructed covered walkway; the proportions of width to height are very unusual and non-traditional
Below: The 'five-stream garden' (Wu Cheun)



Mr Ren Zhnying is the Deputy Mayor of Lanzhou city He is also the Chief Architect and Planner, and Director of Lanzhou Municipal Administration Bureau of City Planning; and holds the title of a Vice-president of the Architectural Society of China

Back to
Table of contents

Soil Technology

In soil building construction, the technology for walls ranges from rammed earth to mud brick and fired brick. For roofs, combinations of soil and timber flat roofs, thatch and mud pitched roofs, and brick vaults are common Earth has been used for both domestic and monumental structures We start with an introduction to soil building in China and then present three technologies in order of increasing cost and sophistication from rammed earth to kiln-fired brick

Soil Building in China

Soil building technology is of very ancient origin and is still widely used in the vast Loess regions of North-west China Here, the unbaked clay adopted as building material, is as ancient as paleolithic tools Archeological finds in China have clearly shown how after thousands of years our ancestors emerged from living in natural rock caves to soil-carved cave dwellings and in the process acquired knowledge of soil characteristics, so much so, that about four thousand years ago, they developed the technique of rammed-earth construction for building defense ramparts. The best manifestation of this is probably the famous Great Wall, first built of rammed earth Stone masonry and kiln-burnt bricks were added during later dynasties for further strength

From the architectural remains of the Chin and Han dynastics, about two thousand years ago, rammed earth and adobe construction were extensively used in building platforms, podiums, adobe vaulting and walling, for important structures such as pagodas and temples Along the Silk Route, sites of ancient monuments and cities, still bear witness to the achievements of the glorious past, as with the sites of the Western Han (208 BC) in Guangzhou

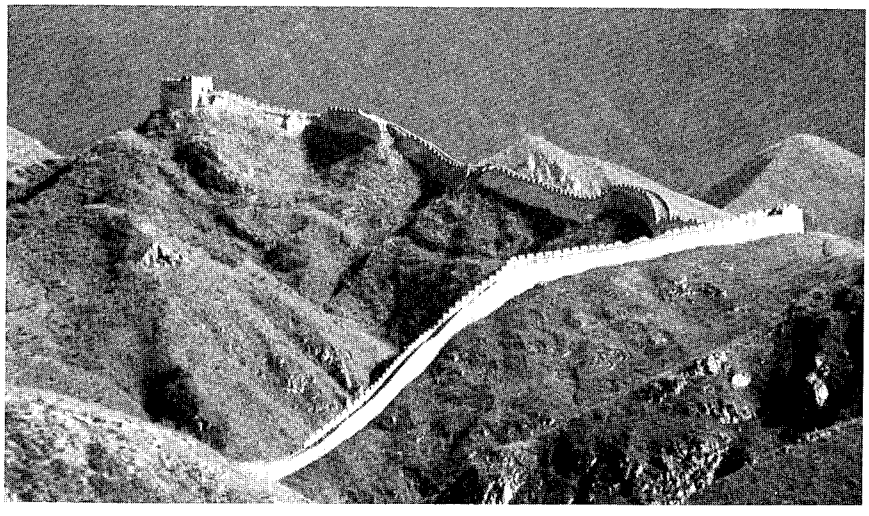
The change of dwelling from the natural rock cave to soil-carved cave marks a step in the development of soil building technology — Man now learnt to build his own dwelling With experience, he discovered that by ramming in form-work and by compacting, the bearing strength of the material could be increased And the material could be rendered into different forms Trivial as that sounds it was important, as for the first time man knew how to improve the performance of a natural material by artificial means During the next stage Man made houses of sun-dried bricks which enabled him to build on sites best suited to his purpose and in the way he most desired.

In the light of modern technology it is easy to undermine such an ancient technology. However, even today, in the Loess belt, roughly 630,000 square kilometers in extent having nearly 200 million people, probably *half* of them live in cave-dwellings and adobe houses This alone validates this technology in the present day context

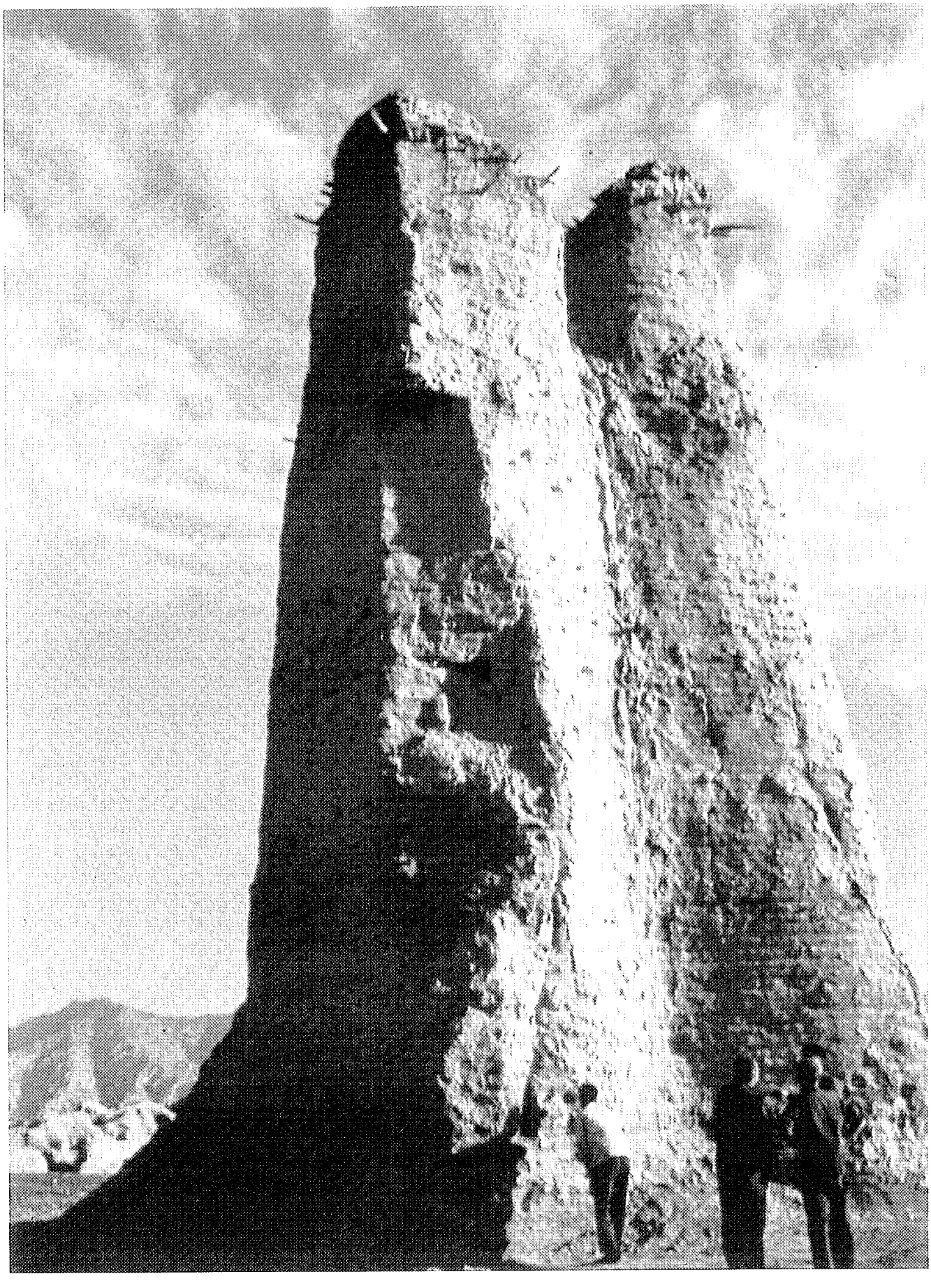
With the emphasis today on energy conservation and environmental design, subterranean architecture has drawn much attention from architects and planners alike Architects from several countries have already visited our country to study our traditional soil-building technology

Perhaps the raison d'etre is not technology The architecture we experience, in this part of the country, is anonymous — the environment is the creation of the people without outside assistance Here we may find clues in the search for a development theory As amply demonstrated by the past, by adapting traditional technologies and the use of local materials, mass housing could be solved without government involvement An "architecture without architects" has much merit A number of improvements can be introduced to improve techniques and methods of construction by architects — only if they will forget themselves as arbiters of 'taste'

Right: Ancient earth signalling tower Photograph J Oubo
Below The Great Wall of China much of which is made of earth Photograph: P Clement



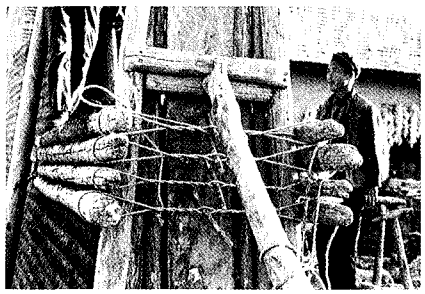
Text by Jin Oubo and Farokh Afshar

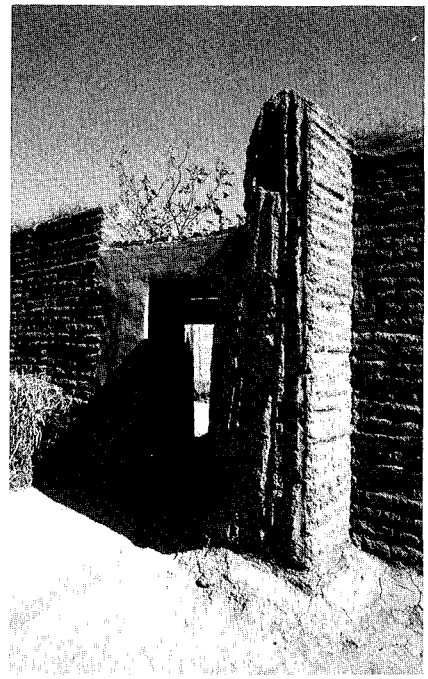


Rammed Earth

The technique of building formwork into which earth is placed and then compacted is used in many parts of the world, but nowhere does it attain the sophistication of Chinese construction This technology is most commonly used for boundary walls — either for fields or houses

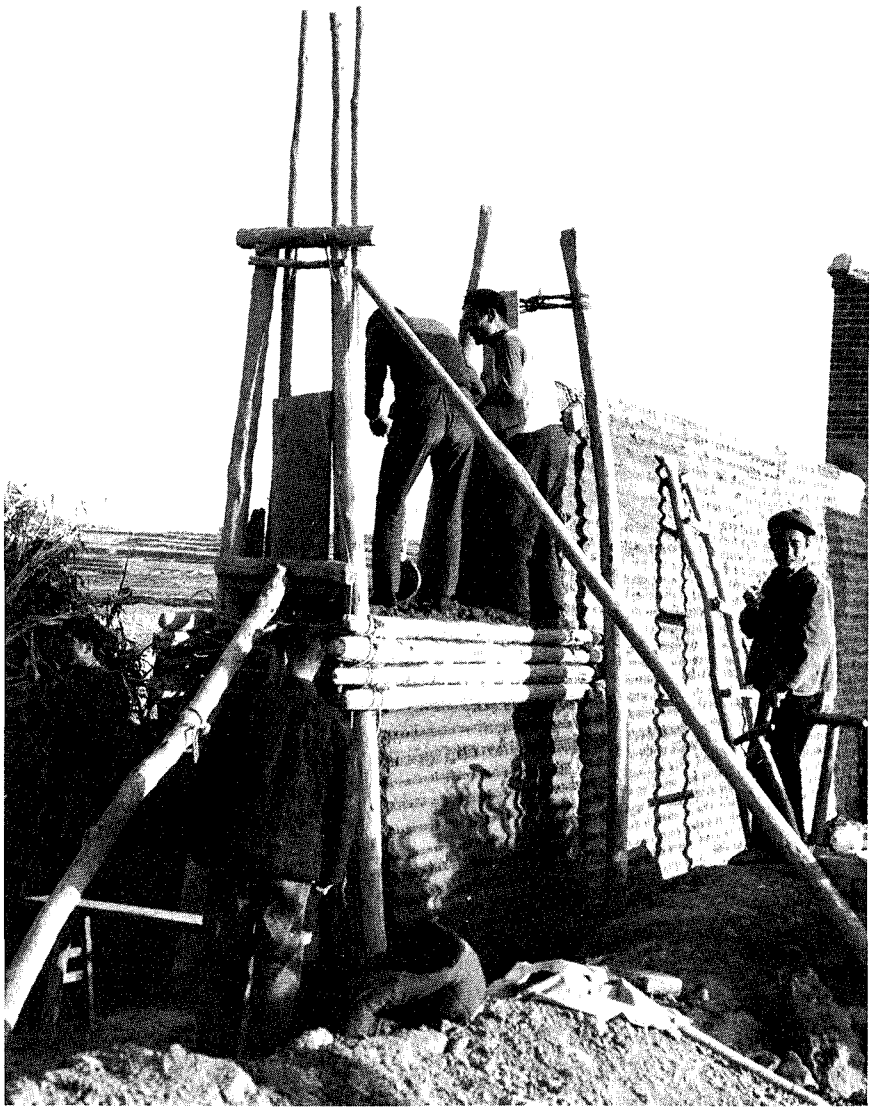
This construction is an example of the mutual aid system based on reciprocal assistance between the owner and his helpers. The formal grouping, e.g. the brigade, plays no role in organising this activity

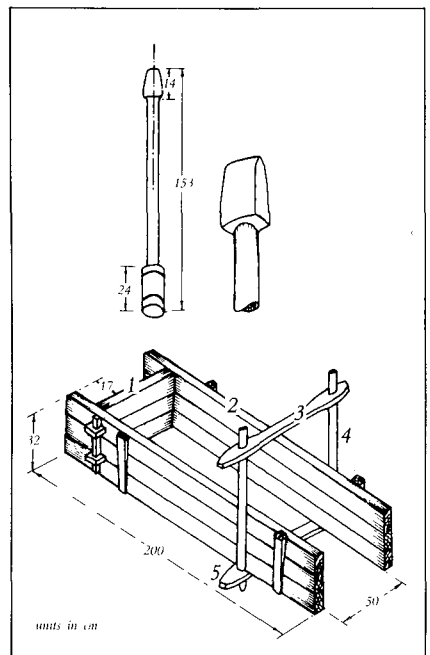




Far left and below The photographs illustrate the building of a typical rammed earth wall The formwork consists of two V shaped supports, approximately four metres high, two metres apart and tapering 80 cm to 30 cm from base to tip. On either side of these supports, poles are tied together to form the sides of the formwork (Sometimes boards are used — as illustrated in the drawing) The earth is shovelled into this space and then compacted using a pestle The process is repeated until a whole section of the wall, usually in two metres horizontal sections, is complete Photograph: P Clement

Left A rammed earth boundary wall





Wall pestle and wall board (formwork) for earth ramming

1 Lion's head
2 Wall board (Formwork)
3 Head band
4 Frog's leg
5 Earth bull

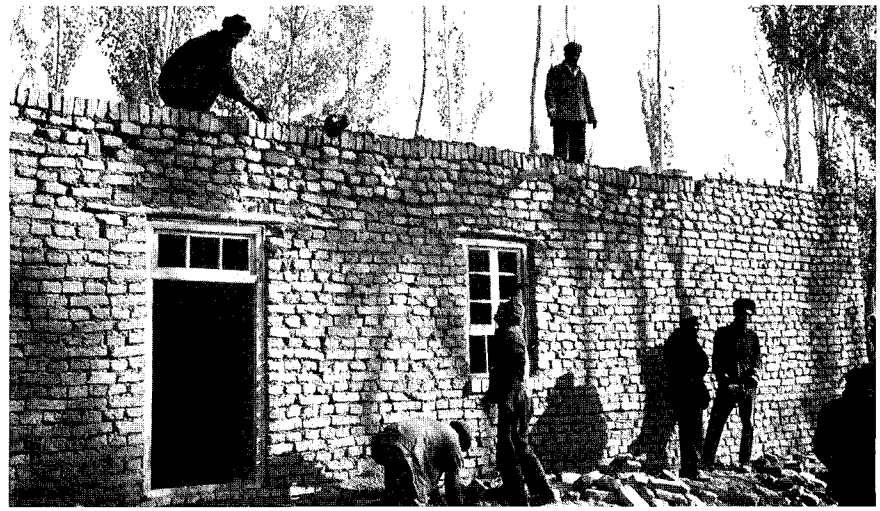
The formwork has formal nomenclature which indicates relationships and attitudes toward building For example the Lion's Head indicates the strongest governing slat of wood which ties the formwork together Instructions for the construction have been recorded and handed down from generation to generation For instance in describing the compaction pestle, the following description comes for one such book: "The wall pestle shall be of suitable weight It is inconvenient to use if it is too heavy By putting weights on both sides of the pestle, higher accuracy of use is achieved as the ramming force is along a constant axis "

Mud-brick Construction

Mud-brick technology in northern China is typical of mud-brick construction the world over: the sun dried brick is made of a clay and straw mix and is held together with a mud mortar The bricks are made using a two-brick hand mould.

The example illustrated here is from Ximen Commune outside Kashi. The house under construction has between nine to fifteen persons working, depending on the stage of construction In this instance, the group included four skilled labourers The 30 square metre house takes the team about eight days to build.

The skilled workers are paid 5 Yuan (US$3) a day and unskilled labourers earn 2 5 Yuan Thus the labour costs for such a unit come to 320 Yuan (US$188). The cost of materials is hard to determine, as the earth, straw and water are freely available The timber for doors, windows and roof beams are purchased from the brigade shops. At this commune, a relatively distinctive and local touch, is the use of mud-bricks whose mix includes coal powder and peat The coal powder apparently increases the bricks' moisture resistance Such bricks are used at the base of walls as a vapour barrier to protect the upper portions of the wall from rising damp. Peat and coal clods are also used for internal floors

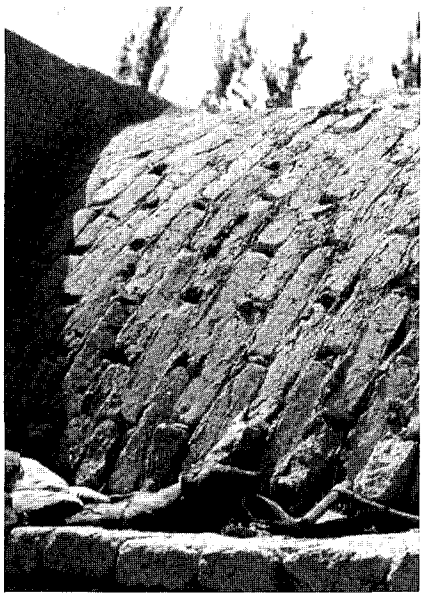


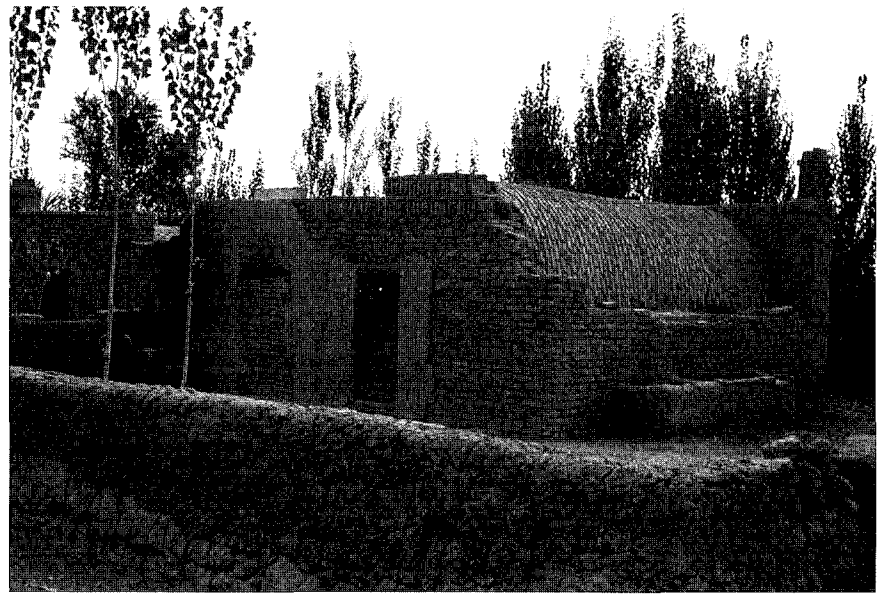
Right, top: The clay is dug on site, mixed with straw, water and coal dust and moulded into bricks which are then sun-dried

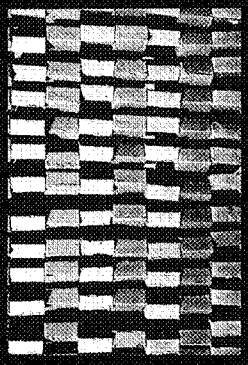
Right: The house under construction uses skilled brick layers who are regular members of the brigade's construction gang but working here on a direct private contract for the house owner.

Below and below right: The mud brick vaulted buildings use the same construction processes as those of the Middle-East.

The vaults illustrated here are in Turfan Photograph P Collard.



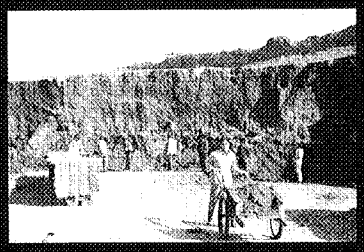




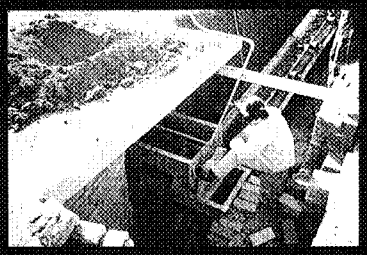
Manufacturing Bricks near Xi'an in Shaanxi province.

Photographs: H.U. Khan and R. Keshavjee.

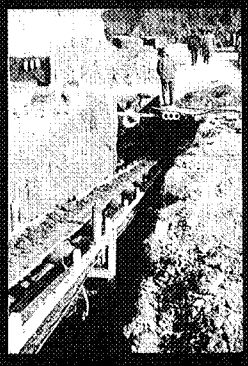
The earth is dislodged from the hillside by hammering in a spike, until large sections of the soil fall.



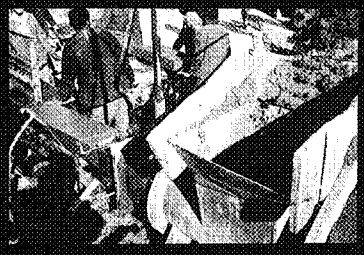
The earth is collected and carried in hand-pulled carts to be 'processed' ...



... and is shovelled into a sifter which seives out rocks and other matter.

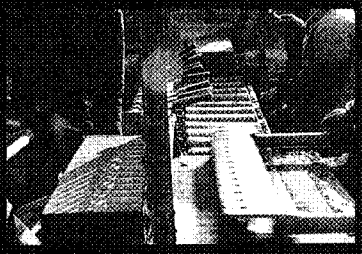


The earth is then transported by a conveyor belt ...



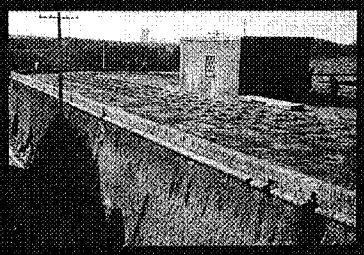
... through an extension machine which wets the soil for cohesion and forms it into long rectangular blocks.

The long block is placed in a tray ready for cutting ...

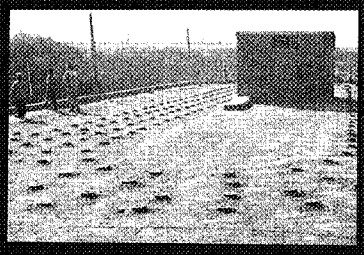


... and is divided into fourteen bricks.

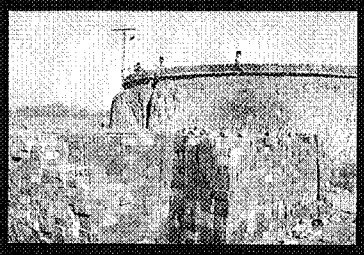
The bricks are taken into the yard to dry and stored until there are enough to fill the kiln.



The kiln is a large earth and baked brick structure. The soil blocks are placed inside through openings in the sides. The kiln is fired by easily available coal.



Its roof is covered with a number of steel pressure-valves to prevent the kiln from bursting whilst the bricks are being baked.



The baked bricks are then removed from the kiln and stored until ready for use.

Fired Brick Production

The Pa Chao Peoples Production Brigade is located outside Xi'an. The brigade has a population of 2,000 persons divided into five roughly equal production units. This brigade is relatively poor, with a per-capita income of 80 Yuan (US$47). Its agricultural lands are limited and it has only two small industries to supplement its income: the brick kiln and a noodle factory

The kiln employs around thirty persons at a wage of 1.7 Yuan (US$1) per day, and annually grosses 60,000 Yuan (US$35,300). The total income of the brigade is 160,000 Yuan (US$94,000), so the income from the kiln makes a substantial contribution to the community.

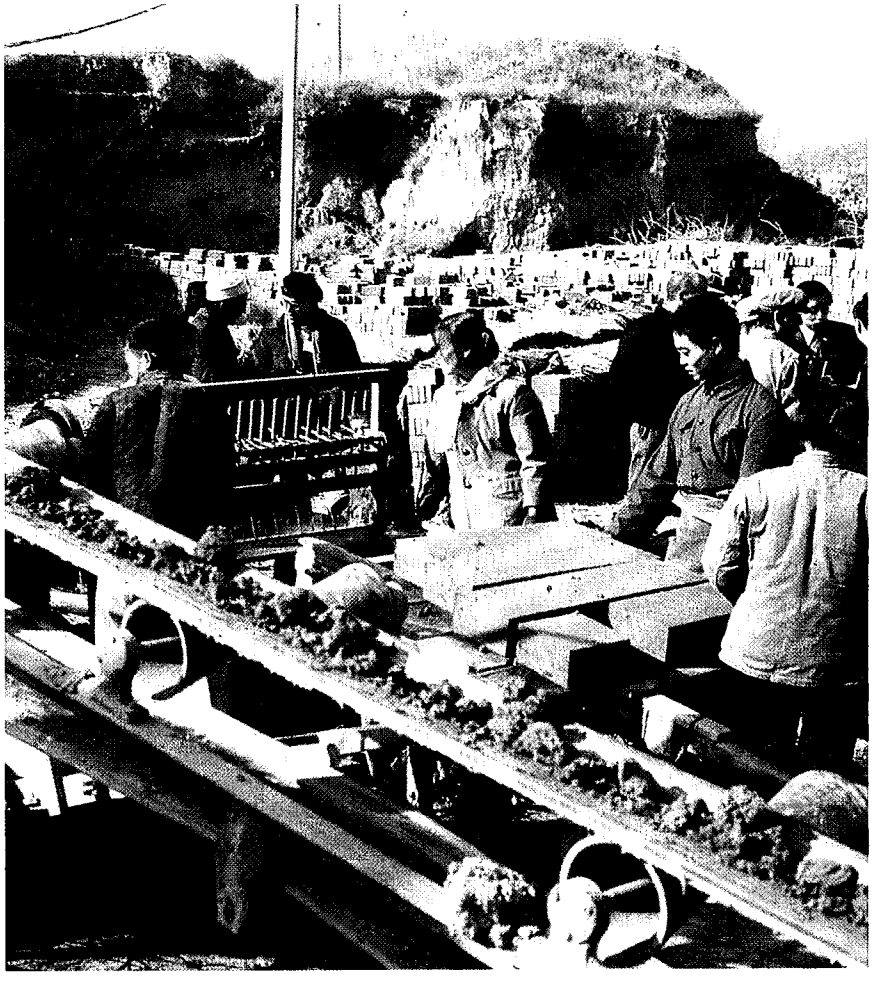
Although the kiln's economic viability depends on external demand for its product, its proximity, pricing and rationing policy ensures availability for brigade members. Brick prices are fixed at county level at 30 Yuan (US$17.60) per 1000 bricks and brigade members are charged 1 Yuan less The kiln management first meets members' needs (25 per cent of total production) before selling to others In a free market situation the price of bricks would have been higher, as the present demand is great, and brigade members would not have been able to afford bricks.

The brick making and firing operations impart on-the-job training and also creates jobs for the villagers. Particularly striking at Pao Chao is the large number of women running the kiln. Workers are paid twice a year — after the two accounting periods in spring and autumn, which mark the end of the harvest seasons Wage rates vary according to the level of skill and discomfort of the job. The bi-annual payments are based on the number of work points earned: an aggregate of the job and the number of hours worked. The wages fluctuate according to the brigade's total income.

Unlike the hand moulded sun dried brick, the kiln uses a motorised conveyor belt system. Nevertheless, the production process (illustrated opposite) is labour intensive.

The 30 people working 8 hours a day, on brick production, produce approximately 23,000 bricks a day Each firing produces 160,000 bricks and lasts a week. After firing the bricks are cooled and then removed for a new batch to be stacked This process runs continuously for about seven months during the dry period The kiln produces some 2 million bricks a year.

A mobile conveyor belt is used for transporting earth

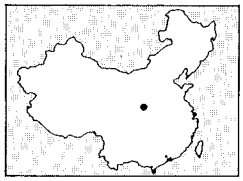


Mr Jin Oubo (left), an architect and planner, is the vice-president of the Architectural Society of China and Deputy Director of the Beijing Municipal Bureau of Urban Planning.

Farokh Afshar is an Iranian architect who is presently in the middle of his doctorate at M I T, U S A

Back to
Table of contents

Underground Houses

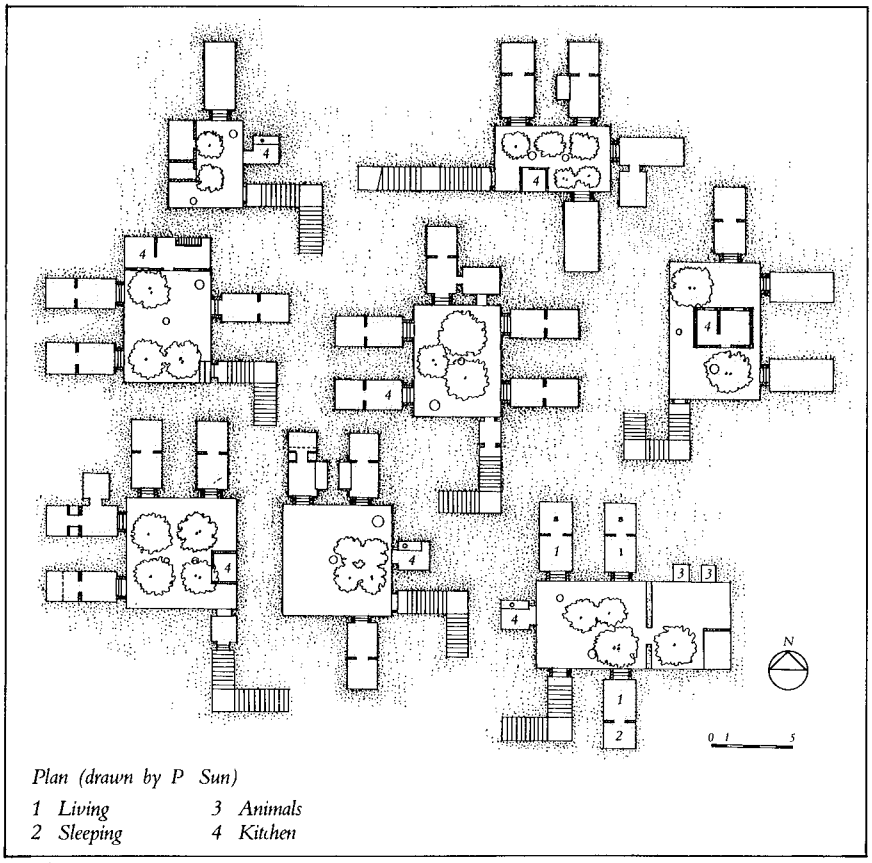


The 'Loess Region' of China contains firm hard-packed soil out of which the inhabitants have carved their courtyard homes

They are generally located along the southern bank of the Yellow River and on the Northwest Plateau Loess, also known as *Huangtu* (Yellow Earth), is a fine loamy silt or clay blown and packed by wind Loess began to be deposited sometime during the last Ice Age Strong winds from the steppes of Asia brought fine dust southwards and spread it out, mainly in the provinces of Shaanxi, Henan, Gansu, and southern Hingxia, and covered an area of 631,000 square kilometres, or approximately 6.6 per cent of the whole territory of China The deposits can be as much as 80 metres in thickness The land form in this region appears mainly as a high table-like plain with abruptly descending edges, with gorges and gullies at various locations As a consequence, the cave or pit dwelling is a distinctive form in this region, where the Loess is thick and timber is scarce These dwellings require little timber, for wherever a steep expanse of thick Loess is exposed, such as alongside a gully, it is easy to dig into the surface and construct living quarters

The existence of these cave dwellings is recorded in the writings of the Western Zhou Dynasty (11th century to 771 B C) and the Eastern Han Dynasty (25 — 220 A.D) Frequently mentioned are sunken courtyards, an excellent winter shelter, as the Loess formation provides exceptionally efficient natural insulation from the cold At the same time, the thick walls and ceilings provide an "air conditioned" coolness during the hot summer months

The utilisation of this Loess soil for



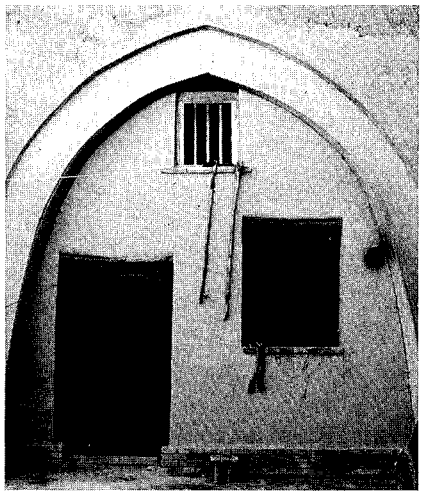
Plan (drawn by P Sun)

1 Living
2 Sleeping
3 Animals
4 Kitchen

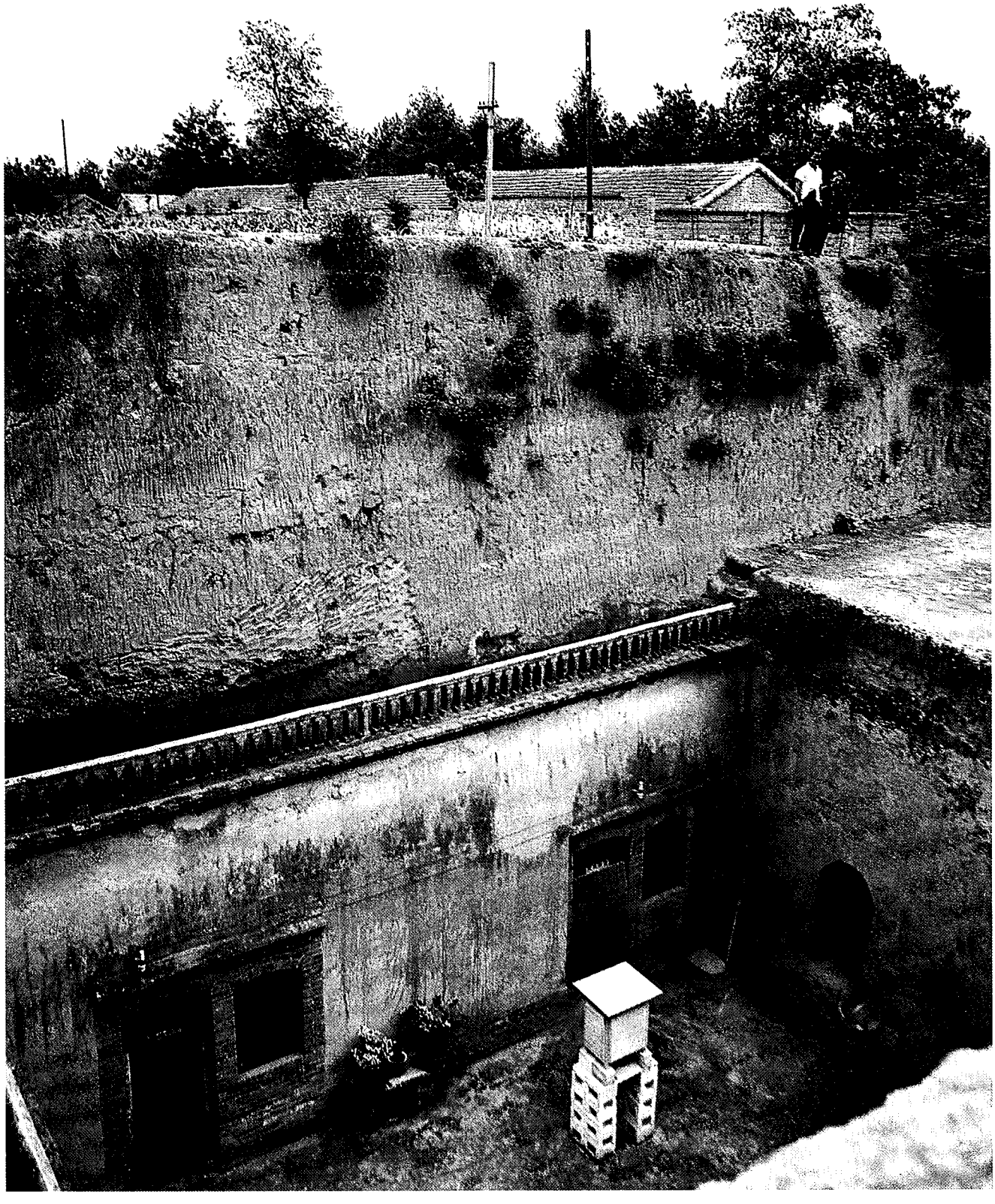
Above: Family units in the West Village near Kunghsin, Henan

Right: Vaulted and strongly defined entrance to an underground room Photograph C Little

Far right: A typical pit dwelling in Shaanxi province Photograph: J Oubo



Text and drawings by Paul Sun



construction has also resulted in surprisingly pleasant courtyards as well as cleverly arranged subterranean villages, such as the West Village near Kunghsien, Henan, a village of approximately 5,000 people that dates back to the Sui Dynasty (561 — 618 A.D) The village is surrounded by a wall approximately 6 to 8 metres high of Loess soil on three sides and is bounded by a Loess gully on one side The majority of the dwellings are subterranean, with sunken courtyards.

On entering the typical village gate, one first sees only treetops protruding from the courtyards The typical sunken courtyard is about 15 by 15 metres, and is approximately 10 metres below the natural grade An L-shaped or U-shaped stairway leads down to the courtyard through a simple entry gateway at the courtyard level The living and sleeping chambers are excavated on all sides. The basic layout is traditional, with all major living spaces facing south for exposure to the sun and organised in an inward and axial plan The courtyard, like all typical courtyard houses throughout China, allows sunlight into the inner spaces and provides an outdoor activity space: a place for the unity of the family. For the majority of the Chinese population, the extended family still survives. The ideal has been for the family to live together in a large house with many generations under one roof. The actual physical limitations including the confinement of these sunken courtyards have continued to hold the family together, even during the Cultural Revolution's de-emphasis of family clans

The interiors of the underground cave chambers are vaulted, 3 metres in height, 3 metres in width, and generally 6 to 8 metres deep. The chambers are often divided into two parts by a masonry storage bin The outer portion serves as living space and is usually lined with brick and sometimes has a recessed niche for sitting or sleeping and there are large windows and doorways which provide natural light The inner area is primarily for sleeping or storage Sometimes the chambers are two stories high, with a loft for sleeping

Located in the semi-arid region of China, where the temperature in the winter months is usually below freezing, annual precipitation averages 250-500 millimetres, and evaporation is over 1,000 millimetres per year: the subterranean dwelling is ideally suited for this climate Earth is an excellent insulation because it has the capacity for moderating temperature. There is no need for central heating for the caves except for the traditional *Kang* (heated masonry bed) and certainly no need for cooling during the summer The living chamber and the courtyard areas are ventilated by suction: negative air pressure in the courtyard is created by a strong wind sweeping over the plateaux circulating the air by literally sucking it out of the ground. A well dug in the courtyard can drain surface water, and because of generally light rainfall, prevents the danger of Loess landslide or collapse

Historically, these subterranean dwellings have served as more than homes During World War II they were used as shelters for soldiers and storage places for both food and ammunition Those villages with underground tunnels connecting the sunken courtyards played a significant part in the successful guerilla war against the Japanese invaders

There are also sunken courtyards with partial cave dwellings and partial houses in the courts The houses are well protected from winter winds and provide a choice of living areas for the family.

In certain regions, there are cuts through the hillsides that form streets with cave dwellings on either side A small, walled front court with an entrance gateway leads to the courtyards beyond. The courtyards are shaded by fruit trees and broad-leafed trees. The trees lining the street also give the impression of an above-ground dwelling rather than one that is in the ground This form of architecture does not apply only to residential areas There are also office spaces, schools and hotels which occupy a series of sunken courtyards or are dug into the hillsides

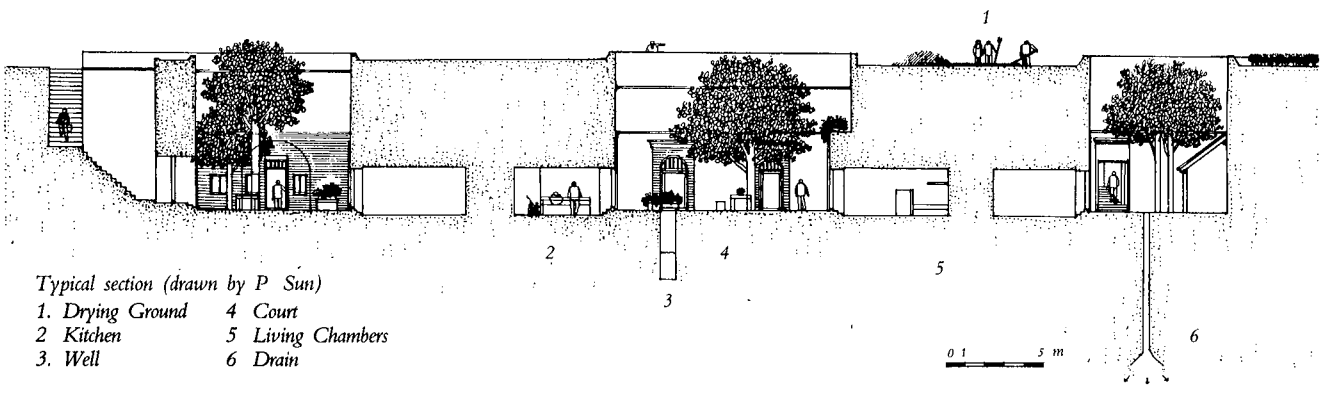
For centuries, the Chinese have learned to live with the land The Great Wall was built on top of the highest ridges of mountains to provide vantage points The tiered rice fields of Sichnan ensure that all cultivatable land is utilised The natural landscape along the Yangtze River has remained unspoiled, exemplifying the traditional Chinese understanding that man should harmonise with nature rather than dominate it Dwellings in the Loess plateau, though conforming to a basic floor plan, climate and available resources, require regional variations They utilise natural resources to provide shelter that is hardly in need of any "utilities" as we know them

As we become increasingly energy conscious, we can learn from the earth sheltered architecture conceived by those ancient anonymous builders whose concepts indicate imaginative solutions to our present-day environmental problems Though modern technology contributes to the changing rural scene in China, at the same time it threatens local traditions of architectural landscaping The Chinese are struggling with the temptation of standardising architectural design and adapting western design concepts while maintaining their traditional values. Dwellings in the Loess plateau provide the best case for maintaining traditional values

As we face resource depletion, it appears to be time to reconsider what the earth itself has to offer This is not to say we should build cave dwellings, but rather utilise the earth's natural thermal qualities in conjunction with the application of modern technology — electricity, materials for interior finishes, proper water supply and sewage systems, etc. The subterranean courtyard houses could be ideal for new communities of the future

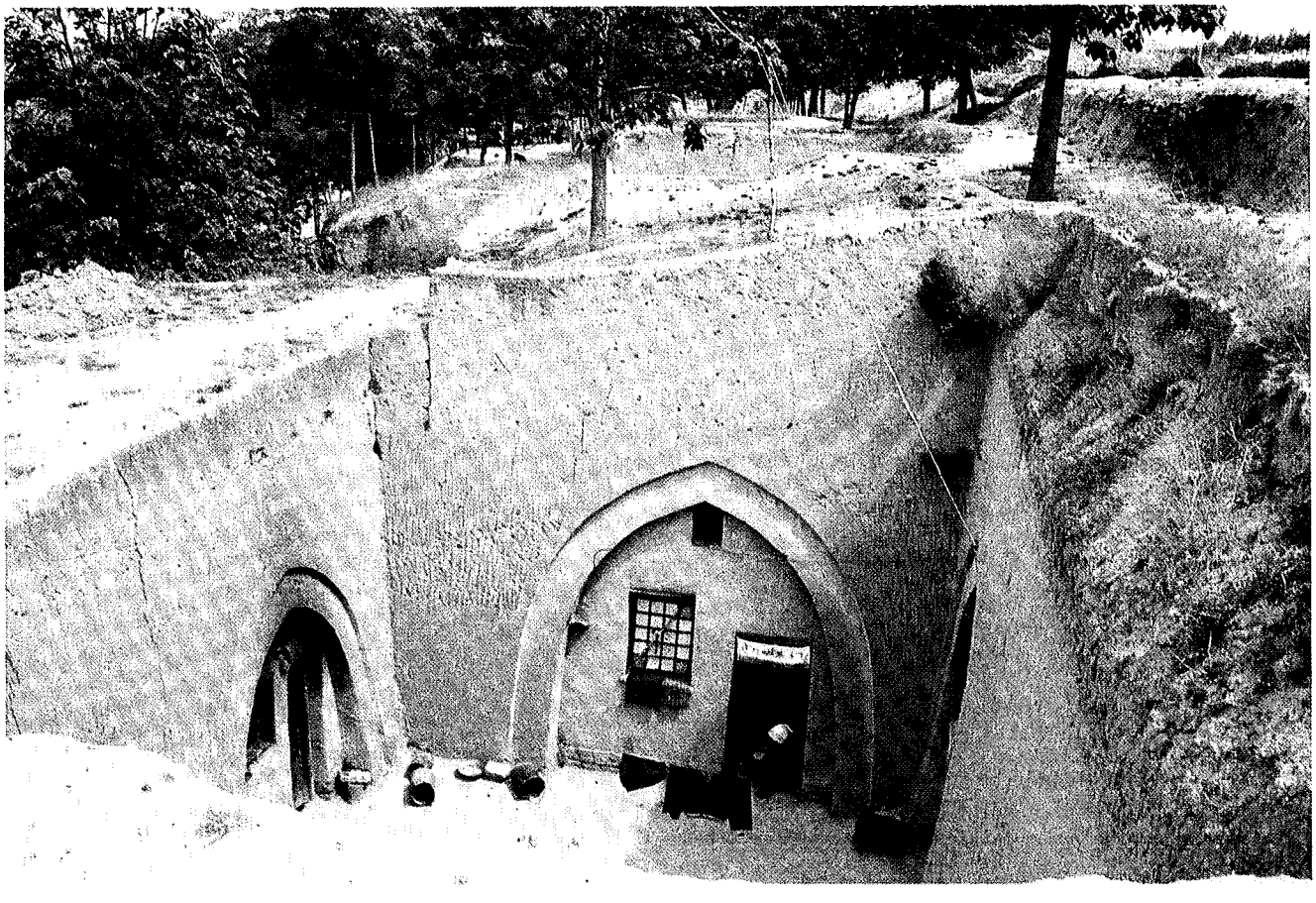
Right, top: The cave dwellings are serviced by a road bevelled on the hillside near Xi'an Photograph: H U Khan

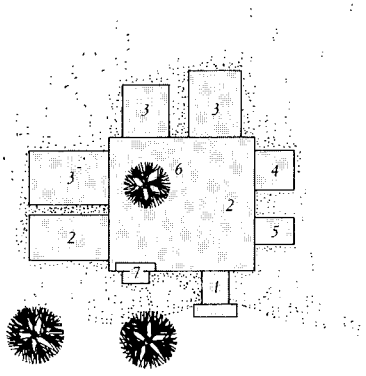
Right, below: The interior court of a typical dwelling is surrounded by rooms (caves) on three sides whilst a wall screening the house from the road forms the fourth side Photograph. H U Khan



Typical section (drawn by P Sun)

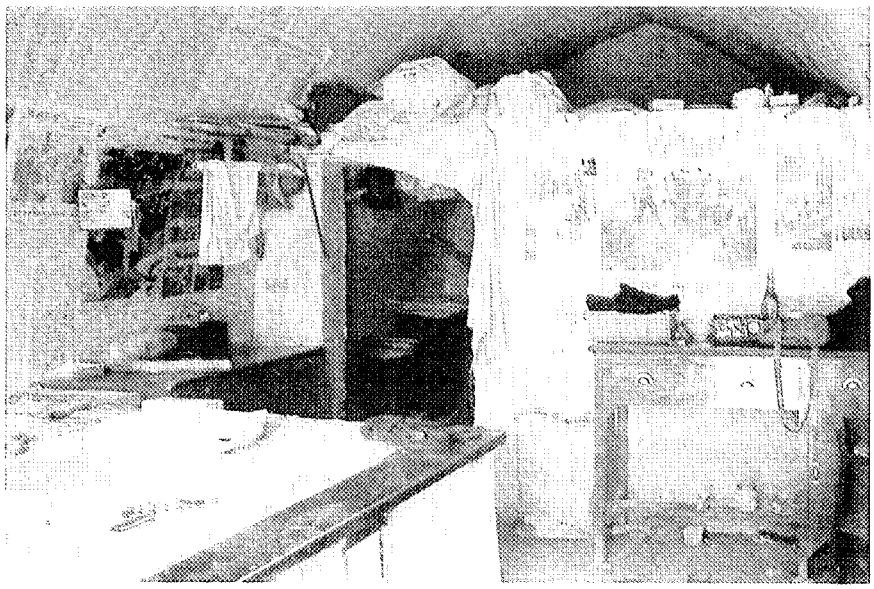
1. Drying Ground
2 Kitchen
3. Well
4 Court
5 Living Chambers
6 Drain

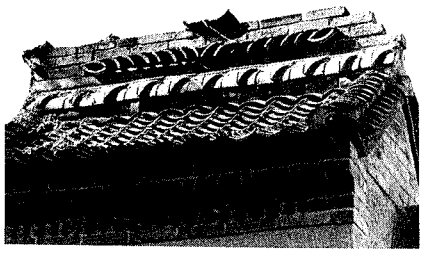


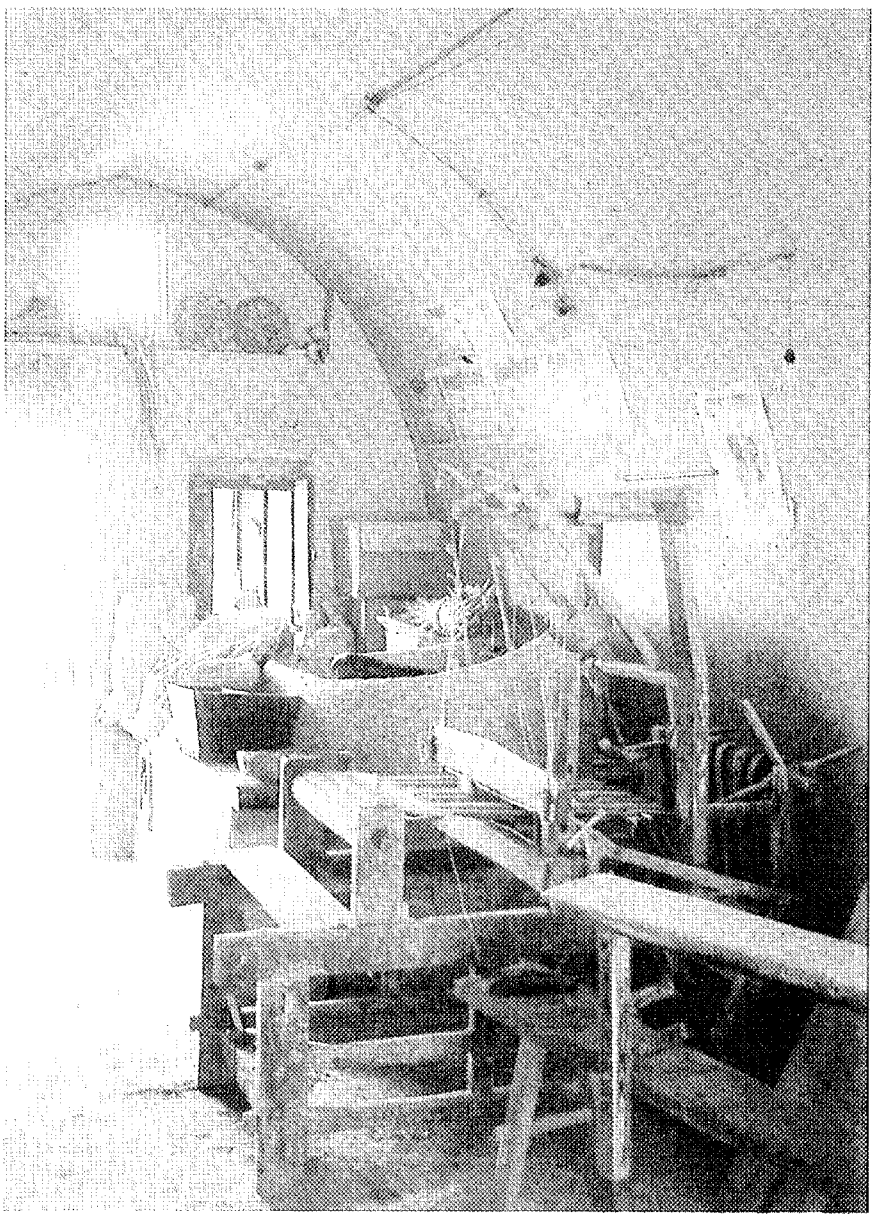


Plan (drawn by H.U. Khan)
1 Entrance space
2 Open-to-sky courtyard
3 Living/sleeping
4. Kitchen
5 Storage
6. Animal pen
7 Storage shelf/drying

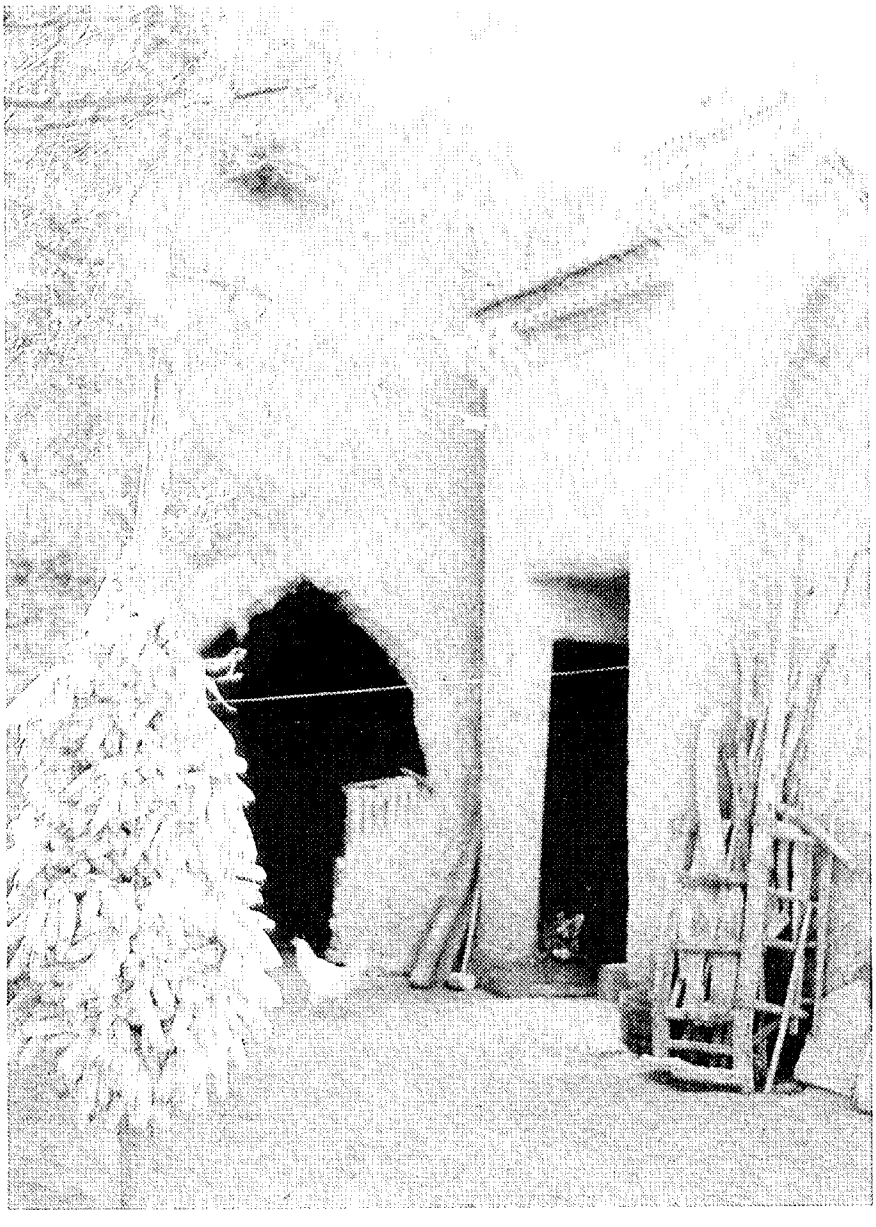
0 1 5 m







Top: Plan of a typical dwelling near Xi'an Drawing: H.U Khan
Above: The entrance capped with tiles is usually the most elaborate element in the dwelling. Photograph: C Little
Top, right: Bedroom interior—showing the 'Kang' or heated bed Photograph: C Little
Right: A loom in one of the multi-use caves Photograph: B Taylor
Extreme right, top: Kitchen interior Photograph: J Oubo
Extreme right, below: The entrance to the house from the inside courtyard The corn is being hung up to dry and will be stored for the winter Photograph: B Taylor



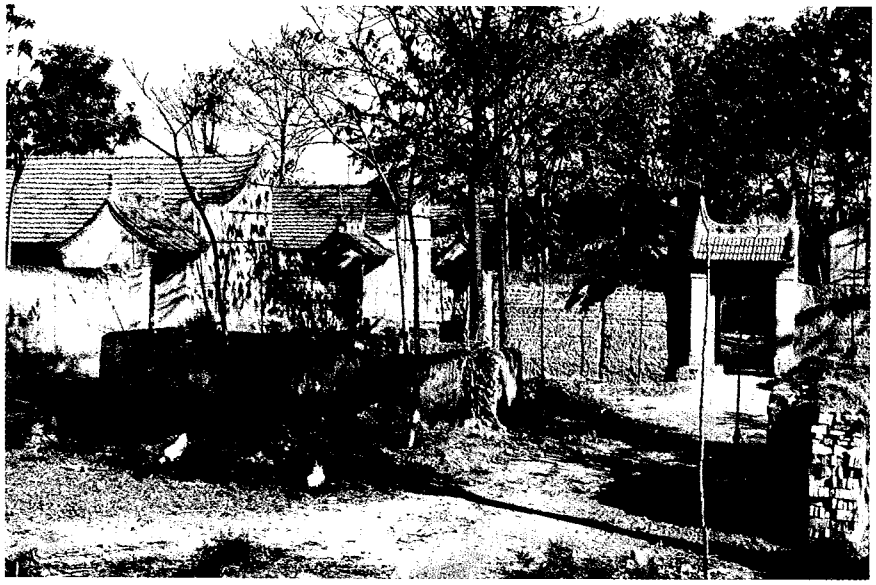
Paul Sun is a Chinese-American architect, partner in the firm Shepley, Bullfinch, Richardson and Abbot in Boston, U S A He is also a visiting lecturer in Chinese universities

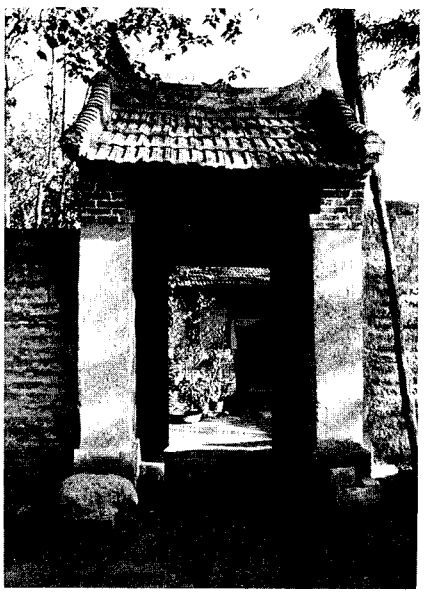
Back to
Table of contents

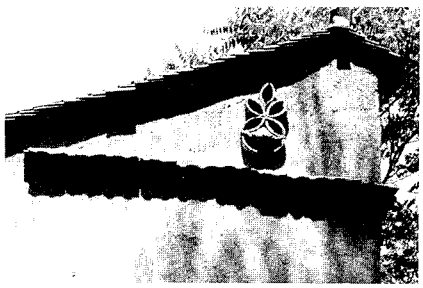
Courtyard Houses

There was a double motivation which led us across China from East to West: from Beijing to Kashi; we were in search of the rural habitat on one hand, and of the traces of Islam on the other It was fascinating to visit the urban communes in Beijing, then to observe the size and the life of the neighbourhood around the Great Mosque in Xi'an, and ultimately to plunge into Central Asia along the Silk Route to the towns of Urümqi, Turfan, and Kashi where the Uygur populations of Xinjiang reside, more than three and a half thousand kilometres from Beijing, among very different ethnic groups who spoke a form of Turkish, in a landscape of desert steppes. We could have easily forgotten that we were still in China. From Beijing to Turfan, from temperate areas across the loess plateaux to arid deserts, northern China shares a number of similarities: hot summers, harsh winters, minimal precipitation and violent winds The average temperatures in Beijing range from 4°C in January to 26°C in July, and in Turfan, from 10°C to 32°C; as for rainfall, it amounts to 630 mm a year in Beijing, and drops to less than 250 mm in Xinjiang

At the risk of generalising, one can nonetheless venture to state several characteristic traits of dwelling architecture: the enclosure of spaces behind imposing protective walls; the presence of spaces for outdoor activities inseparable from the dwelling itself; finally, the nearly constant use of earth as a material for construction This latter point is not at all surprising, since the word *jianzhu* (architecture) incorporates the word *zhu* which is also employed for pisé (or rammed earth). Another observation which applies to all of the regions visited is that rural construction in general is of the highest quality, be it in the organisation of







Above: The detailing is elegant The decorative opening at the top allows hot air to escape and the two rows of tiles prevent the rain from eroding the wall Photograph: H U Khan
Top: In a typical village (the one shown here is some forty kilometres from Xi'an), the houses are grouped in rows, creating pleasing rythmns of easily identifiable entrances Photograph: P Clement
Left: The entrance to the house at the boundary wall still retains its traditional character — with "curled-up" edges which now have dragon symbols instead of representational sculptures Photograph: H U. Khan

Text written especially for MIMAR by Pierre Clement

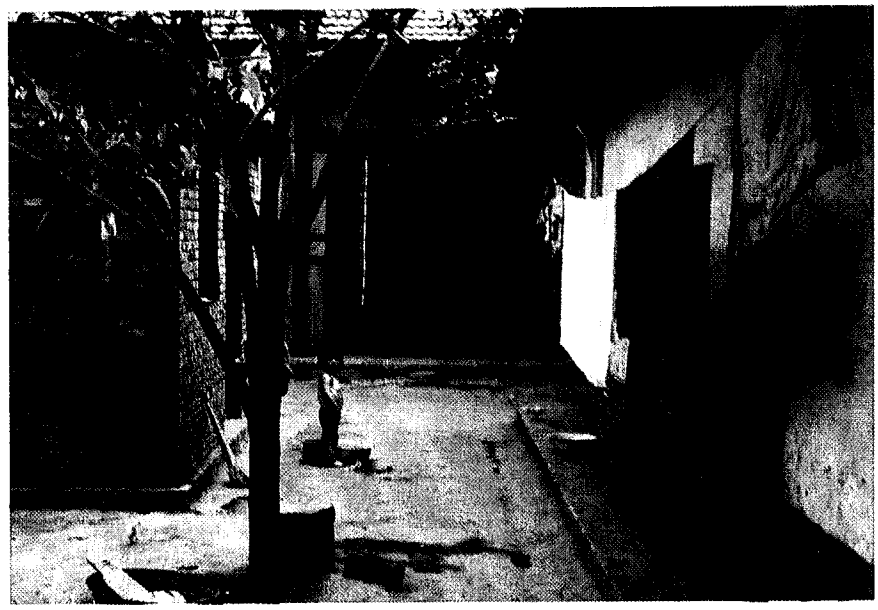
Commune House near Xi'an

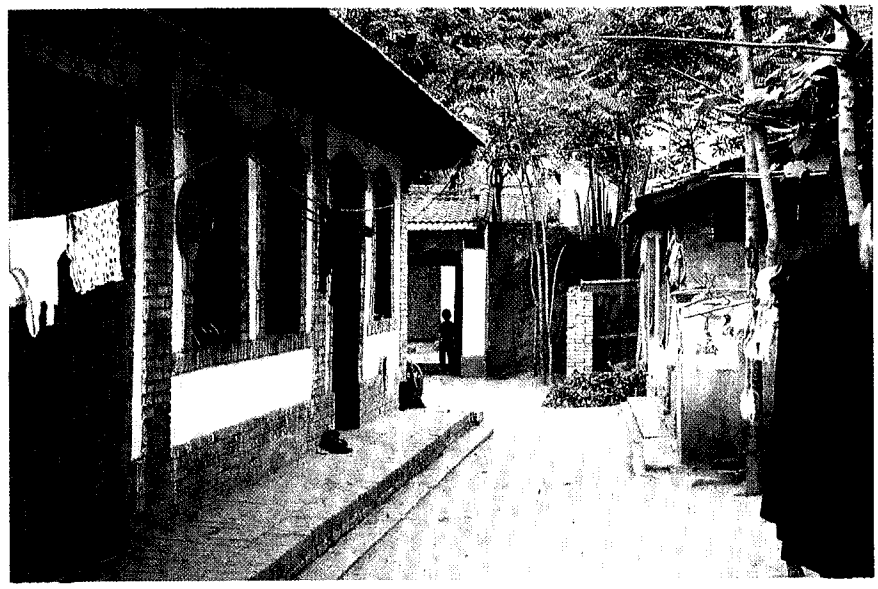
This commune on the outskirt of the city is quite rich as evidenced by the house of a communist party factory worker and his extended family

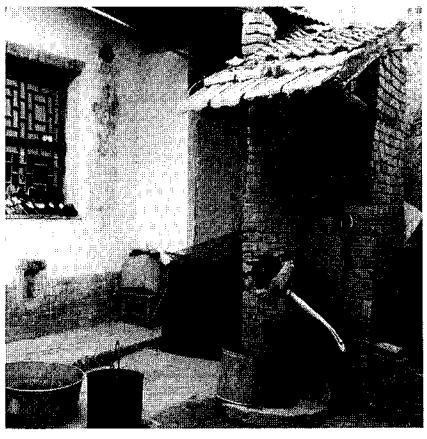
Right: The house viewed from the entrance — the main living area is to the rear (painted blue), to the right are two bedrooms for the extended family The structure under construction, on the left, is for additional bedrooms Photograph: H U Khan

Below, right: View of the courtyard looking towards the entrance The bedrooms are to the left The structure to the right of the entrance is an animal pen Photograph: H U Khan

Below: The entrance to the house is whitewashed while the walls remain untreated Photograph: H U Khan

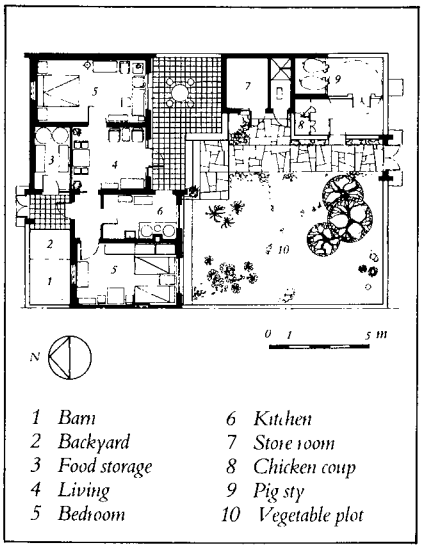


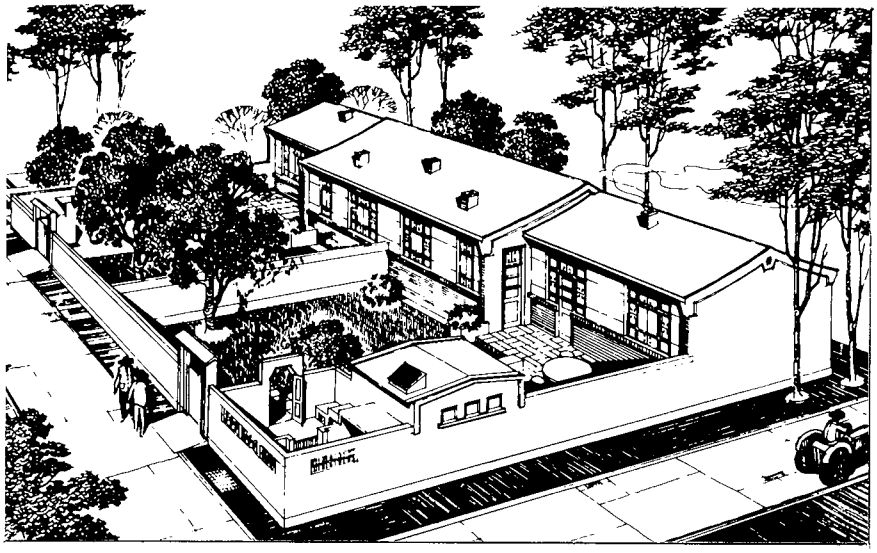




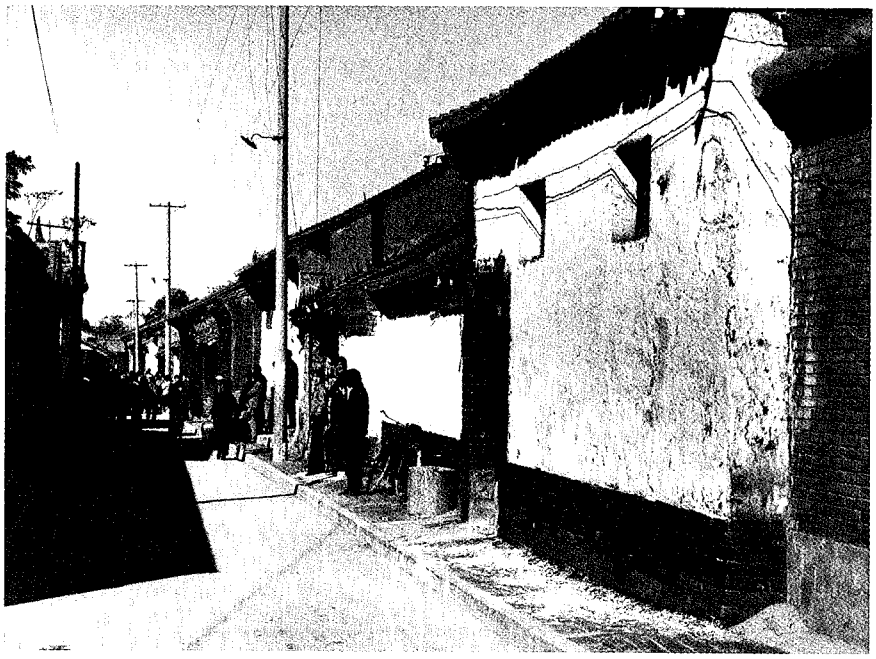
Above Every house has its own well and somelike the one shown here, have hand-pumps to bring the water up to the surface Photograph: H U Khan

Right: A typical street in the commune — the streets are collectively kept clean and neat Photograph: H U Khan



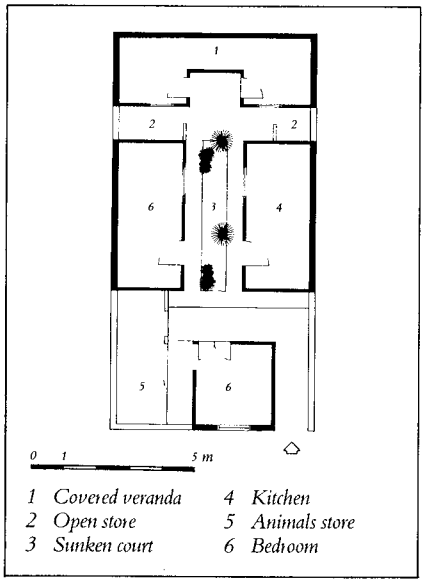


Above and above right: Plan and sketch of winning entry, 1981 Rural Housing Competition in China, by Chu Pi Cheng and Liu Song Tow, Tian Jin Courtesy of Architectural Journal No 10 1981
Right: In the Muslim quarter around the Xi'an Great Mosque, the street is bounded by inward-looking houses Photograph: P Clement
Right below: Plan of a typical urban courtyard house, near the Xi'an Great Mosque Drawing H U Khan
Far below: The highrise flats lining the city streets have been nicknamed "the wall of shame" by local inhabitants Photograph: B Taylor



spaces, grouping of volumes or in actual execution Villages are the norm, and the dwelling is an integral part of a complex Thus, the observer's eye is attracted by the alignment of walls, the groups of houses, the repetition of doorways following a certain rythmn, the quality of detailling on doors, the form and elegance of roof lines In these rural areas, such characteristics have nothing to do with a nostalgic yearning for the past; on the contrary, they represent traditions that are very much alive They illustrate the permanence of a certain traditional expertise concerning formal typologies and constructive techniques perfected over centuries

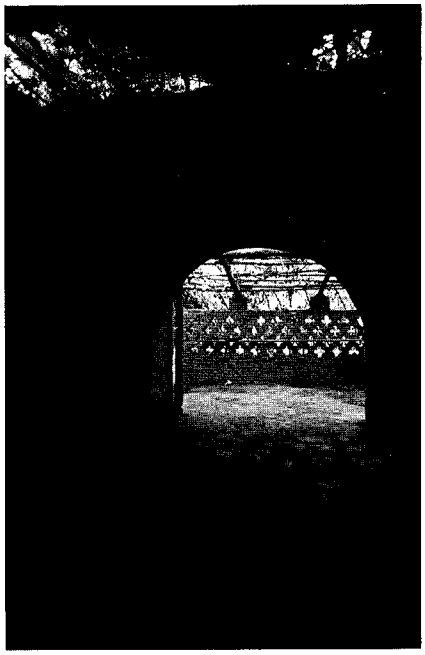
This fact seems extremely positive, and one which the public authorities ought to meditate upon at a time when they have just sponsored for the first time a vast competition dealing with the rural habitat The results of this national competition for rural housing were published[1] in October, 1981: out of 6500 projects entered, 142 were given recognition and will be widely disseminated throughout the whole country Let us hope that those who are taking up the problem, the architects, the building contractors and regional planning groups, will consider and respect the good qualities of existing housing and traditional know-how, particularly the simplest techniques and uses of material

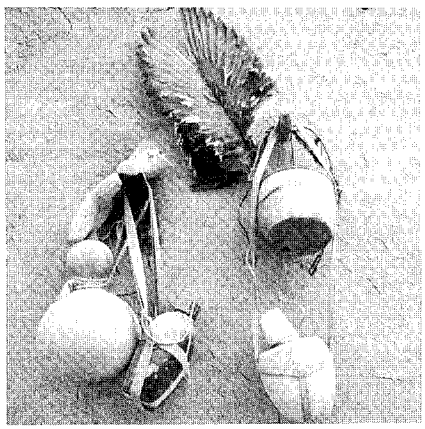


[1]*Jianzhu Xuebao, Architectural Journal, China No 10, 1981*

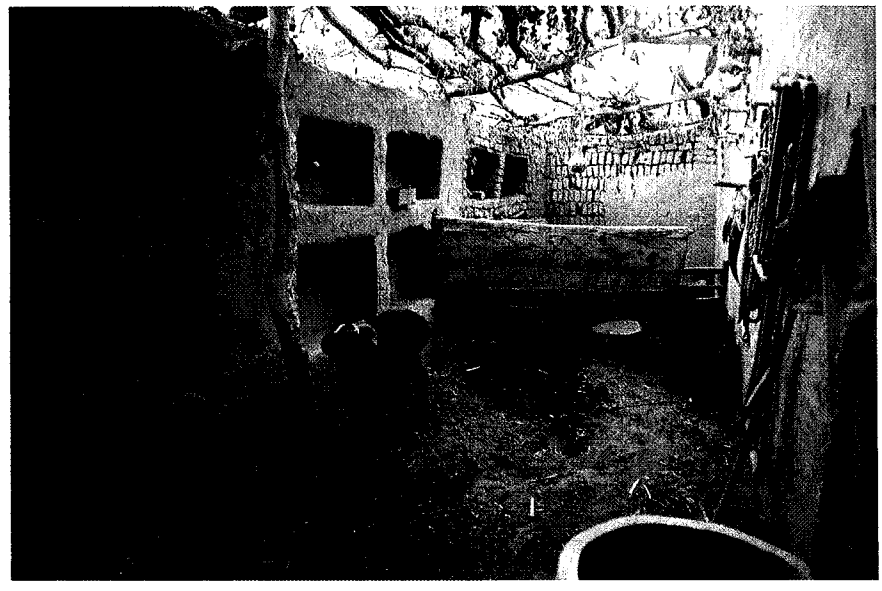
Rural House near Turfan
In the village, this is the house of a middle income family The mud house is designed on three levels with the lowest as entrance and store; the middle level for animals and the family living spaces on the top

Right The main family living area on the top floor is shaded by vines This open space is used for sleeping, meeting guests and cooking In winter the family members sleep indoors Photograph H U Khan
Below The ground floor entrance to the house, viewed from the inside — the approach to the dwelling is also covered with vines Photograph: C Little
Below right: Detail of the balcony and cooking area showing the pot storage areas and earth chimney Photograph: P Clement





Above: Hung up for decoration or occasional use is a pumpkin gourd (for good luck), several plastic bottles and the wings of a bird. Photograph: H U Khan
Right: On the side of the house, at a mezzanine level is the animal pen which is entered from a back gate leading to the fields Photograph C Little



In Kashi, the bright colours of people's clothes contrast strikingly with the earth houses and green fields Photograph: C Little

which rural people still handle so well. This was the basic message of Professor Liu Dunzhen in his book on the Chinese house.[1]

The organisation of living spaces merits our special attention. As we noted earlier, the essential aspect of a Chinese dwelling is that of an enclosure delineated by walls, an interior space, and a centre. These three elements are found at different scales, according to the natural environment of the surrounding area: the five sacred mountains, four in each of the directions of the compass and one in the centre; or in a political framework of space: a region and its centre, the capital.[2] The same concern for enclosure is to be found in the city: "Walls, walls, and yet walls, form the framework of every Chinese city", says Siren, and "the Chinese used the same word *Cheng* for a city and a city wall ... there is no real city in China without a surrounding wall [1] But today the walls which encircled Beijing have been torn down and replaced by large avenues, where armies of bicyclists confront a few automobiles, and the same avenues are lined with huge complexes of apartment buildings so disliked by the population that they have been nicknamed "the wall of shame"!

Walls are found not only around each community, small city, village or neighbourhood inhabited by Han Chinese, but also in Central Asia where the nomads encircle their camps with earth ramparts Walls and ramparts of earth occur everywhere from Beijing to Kashi, giving dwellings the look of fortresses.

It is necessary to note this Chinese way of thinking about space in order to analyse the plan of the house and its development towards an ideal model that is closed on four sides around an inner courtyard Once the ideal has been attained, extension is carried out by multiplication of the elements, whether it is a large residence or grouping in a neighbourhood

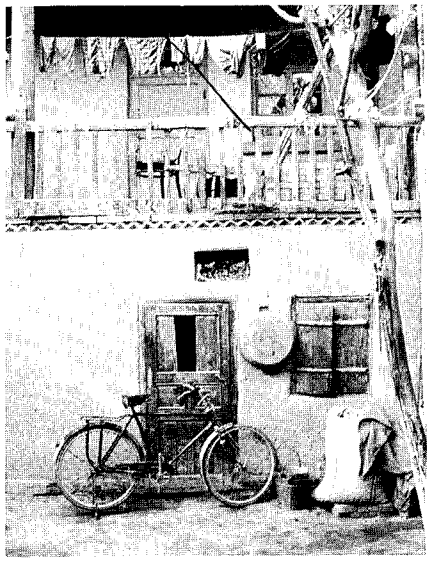
The enclosing wall is penetrated by a single door to the exterior, usually oriented to the south, while the other walls remain free for other blocks to be attached This doorway, which is truly a filter, is usually decorated, even if it was once linked to a need for protection against evil influences or energies.

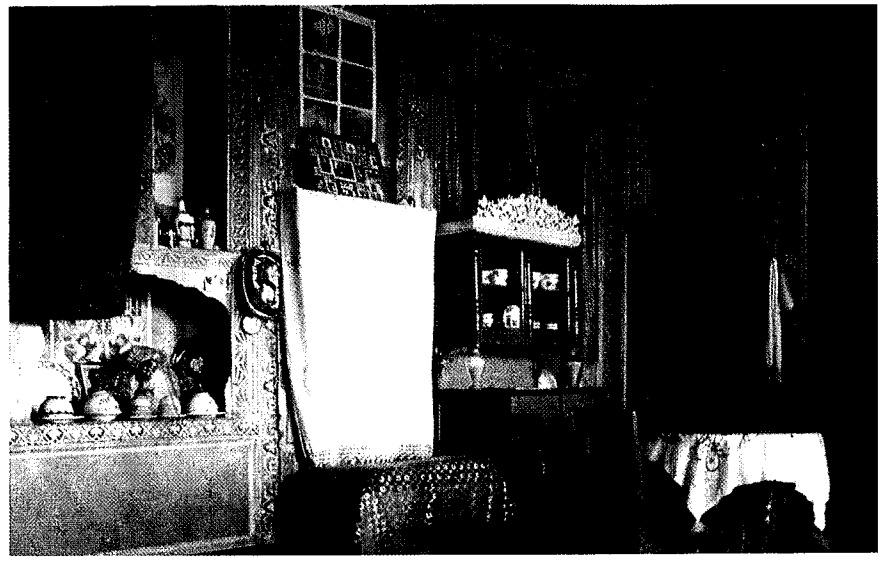
The central courtyard of dwellings, expanded in size in rural areas to allow for agricultural activities and livestock, can also be found in cities extremely reduced in size because of the narrowness of lots bordered by party walls on either side This is the case for houses in Xi'an, where one enters by a lateral corridor; the space for circulation is narrow at the front of the house and becomes larger towards the rear, as one moves from the street towards the principal living quarters at the far end of the courtyard The corridor leads us into a narrow first courtyard where there are two rooms; the passage way then becomes narrower

[1] *LIU Dunzhen, Zhongguo Zhuzhai Gaishuo, translated into French as La maison chinoise — Paris: 1980, Ed. Berger Levrault (Reviewed in this issue — editors).*

[2] *Le pays lui-même ne s'appelle déjà t-il pas Zhongguo "L'Empire du milieu"; sur cette notion appliquée à la ville voir Paul Wheatley, The Pivot of the Four Quarters, Edinburgh University Press, 1971*

[1] *Cited by J. Needham, Science and Civilisation in China Vol. IV, No. 3 Cambridge University Press, 1971, p 42*

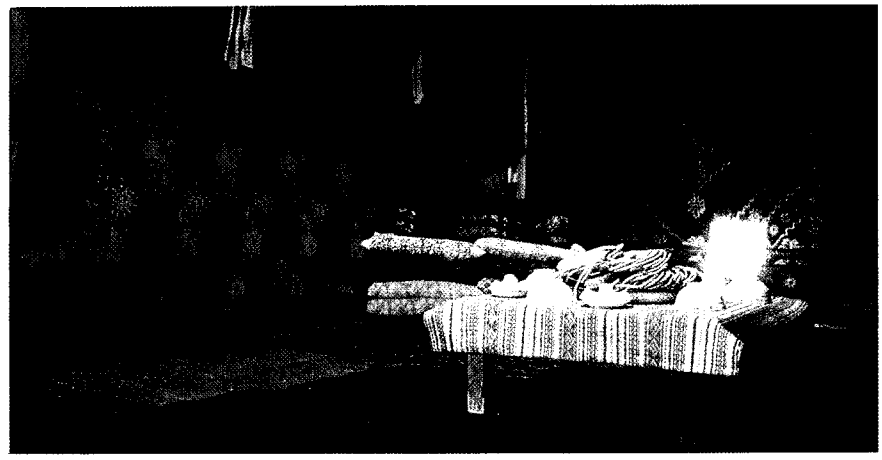


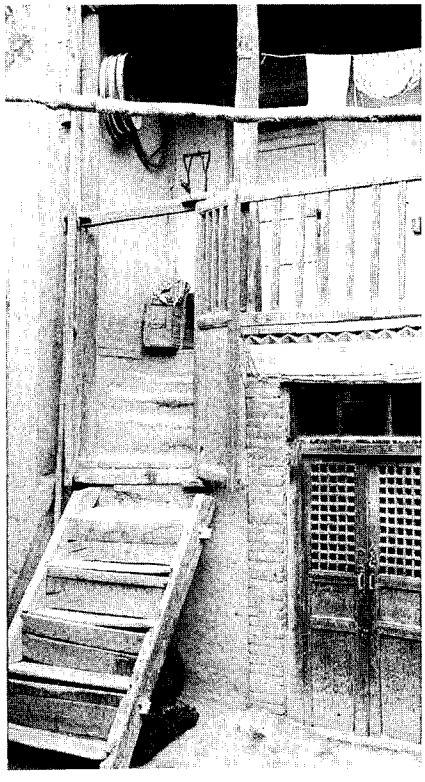


Urban House in Turfan

This village house is not really 'urban' as it is one of the smaller village settlements near the town It does however display the character of an urban dwelling in its two-storey and closely-packed buildings

Top: The house from its internal courtyard. The eldest son and his family live in the rooms above The lower rooms are used for storage Photograph: H U Khan
Below: Stairs leading to the son's quarters Photograph: H U Khan
Top right: The kitchen-dining area Note the calendar on the wall showing Muslim monuments Photograph: B Taylor
Right: The living room-bedroom of the house The food has been prepared for visitors Photograph: B Taylor
Below right: The son's room The bedding is stacked during the day. Photograph: C Little.





between two lateral arrangements of rooms and ultimately comes to the main part of the house. Urban dwellings in Xi'an can be richly decorated with sculpted wood and latticework, as was visible in houses around the Great Mosque in Xi'an

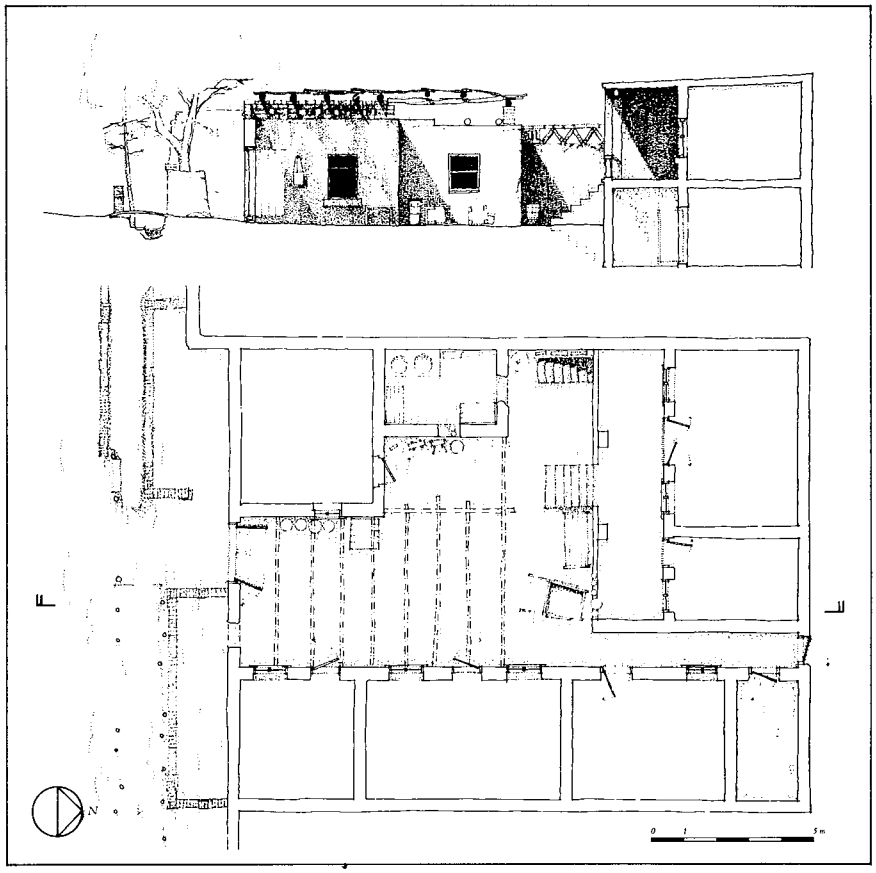
Compared to the classical severity of houses with wings disposed around a courtyard, or with the elegant grayness of brick walls and tiled roofs of Beijing's old quarters, the rural dwellings possess considerable typological variety, characterised by their different relationships with the earth, as a basic support and as a building material. Thus, on the loess plateau alone of Shaanxi we discovered completely subterranean houses in pits or caves, detached houses above ground and totally unexpected intermediary solutions The terracing of these loess canyons, natural or man-made, often allows one to enter either from the level below, or, in other cases, by long sunken ramps that descend into the court

While earth is still the material most frequently used in Xinjiang, it is in the form of sun-dried bricks or adobe. Once the bricks have been laid to form a wall, they are covered with a mud coating in such a way that the house and even the village seems to be a fortress blending into the landscape. The old necessity for defence is still a factor in the choice of sites and Kashi still provides a living example of this

The interior arrangement of the dwelling enclosure has an almost Mediterranean aspect The Uygur house, whose building materials are more malleable, contrasts sharply with the crispness and severity of angles and forms of han structures, whether in cities or the countryside: the former have softer, rounder angles and more flowing, rather than jagged forms. The houses in Shaanxi, like those all across the loess plateau, take into account the extremes of temperature, especially hot summers by digging into the earth, forming courtyards at the bottom of the pit which remain shaded and cool, whereas in Xinjiang, interiors extend outwards onto roof terraces covered with trellises. Flat roofs and terraces made with earth contrast here with the steeply pitched roofs of Shaanxi where, like Roman impluvium, rainwater runs off into the courtyard and is recovered by an underground cistern

Wood is rare in Xinjiang, and apart from small, round tree-trunks set across adobe walls and then covered, one sees practically no wood framing Occasionally, rooms are covered by barrel vaults made of sun-dried bricks Whatever timber is used is grown in the oasis itself, mainly poplars, which line the roadsides and later serve to support the terraces.

From the point of view of building, there is a clear deliniation between the two worlds: on the one hand, the wooden skeletal structure with infill which can generally be found across the Far East and South Asia, and on the other, load-bearing wall construction In Central Asia there are few wooden supports, aside from those sculptured or painted on verandas or prestigious buildings such as mosques: elsewhere thick bearing walls are the rule, carrying vaults, cupolas and terraces In this respect the area reminds one of Afghanistan, Iran, and even certain areas of North Africa.



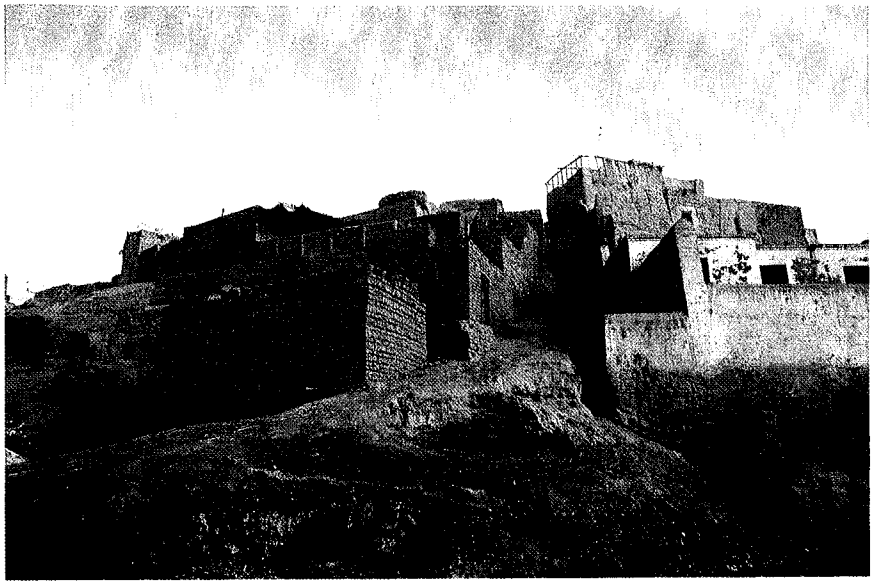
Plan and section of a house in Turfan. Drawings courtesy of T Chastain, R Chow and P Hajiaw, associated with the Aga Khan Programmes for Islamic Architecture at M I T ; from a forthcoming article on settlement and dwelling forms

Regions of Han civilisation possess framed houses that have pitched roofs supported by wood skeletons, while the walls are simply screens This kind of construction, which requires careful preparation and assembling, and the use of metal tools for cutting and shaping elements, distributes the forces onto lightweight structure. Such a system follows laws radically different from those governing mud brick construction based upon forces in compression

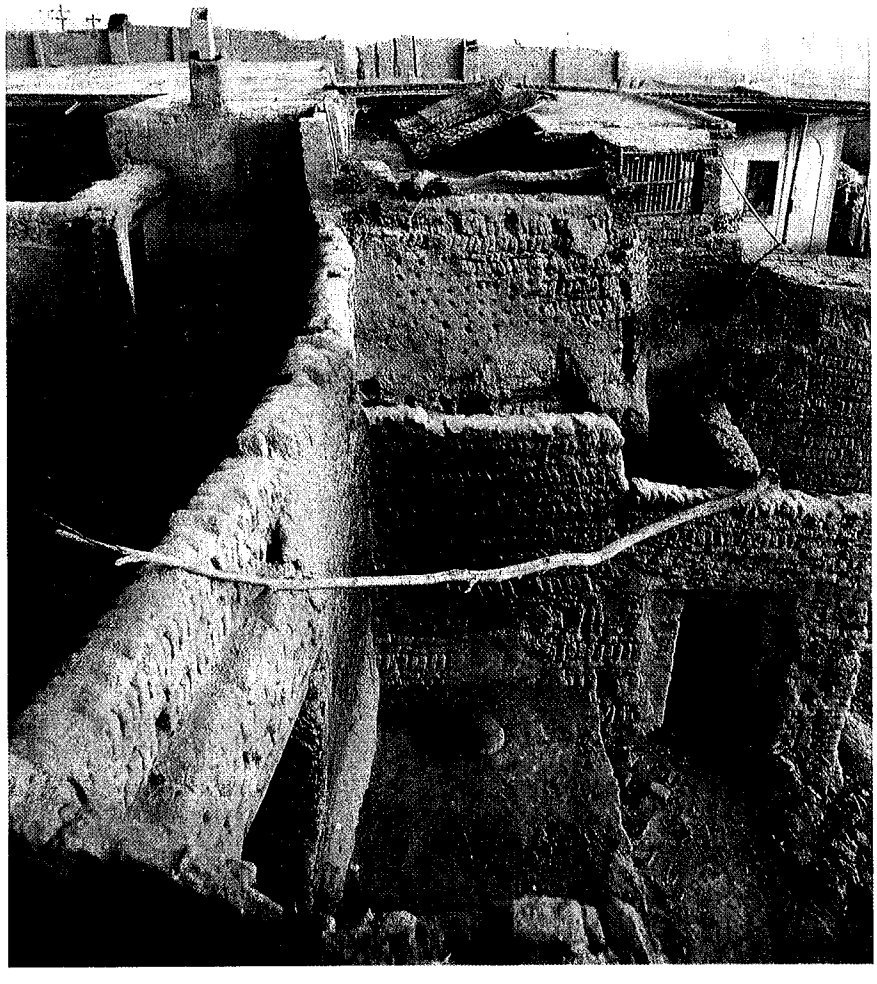
In Xinjiang numerous details catch the eye Doorways are still very often composed of a circle inscribed in a square. Screens of mud brick or timber *mushrabiya* separate interior spaces from the exterior The edges of terraces are decorated, and incorporate benches and outdoor fireplaces Open galleries on an upper floor, trellises in front of houses and gardens behind are all aspects of a seasonal occupation of various dwelling spaces Large earthen walls forming animal pens are located independently of the houses at suitable points in a village

A certain harmony in colour that of the earth of house and landscape, prevails in the environment. This makes all the more remarkable the vivid colours of Uygur dress and ornamentation Such bright colouring is also applied to some architectural elements: columns, shutters, door and window frames, railings; and is found on furniture and on decorative objects such as cupboards, cradles, rugs and fabrics. In the depths of the main living room in a house, above a niche which used to be reserved for religious images, can be found two red stars: one of them in relief, the other flat, mounted on an embroidered curtain and surrounded by other engravings.

The Uygur town also provides an interest which contrasts with the gray tiles and walls of Beijing or Xi'an, with their rigidly orthogonal streets. Kashi has streets whose organic quality stems from their adaptation to a rugged site and supple lines of local architecture Cubical blocks of earth sheltering spaces for habitation and overlooking courtyards and streets, create an urban landscape that calls to mind the distant pueblos of New Mexico



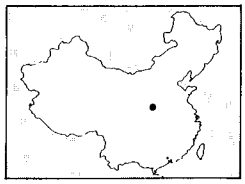
Left: The fortified town of Kashi (just sixty miles from the USSR and Pakistani borders), on the Silk Route is still generally out of bounds to foreigners Photograph: C Little
Left below: Houses in Kashi are on a multitude of levels, connected by an intricate network of pedestrian streets Photograph: C Little



Pierre Clement is a French architect involved in research at the Institut Francais d'Architecture in Paris He edits a series entitled 'Architectures' and his publications include 'La Maison Chinoise' 1979

Back to
Table of contents

Han Jia Bao Production Team



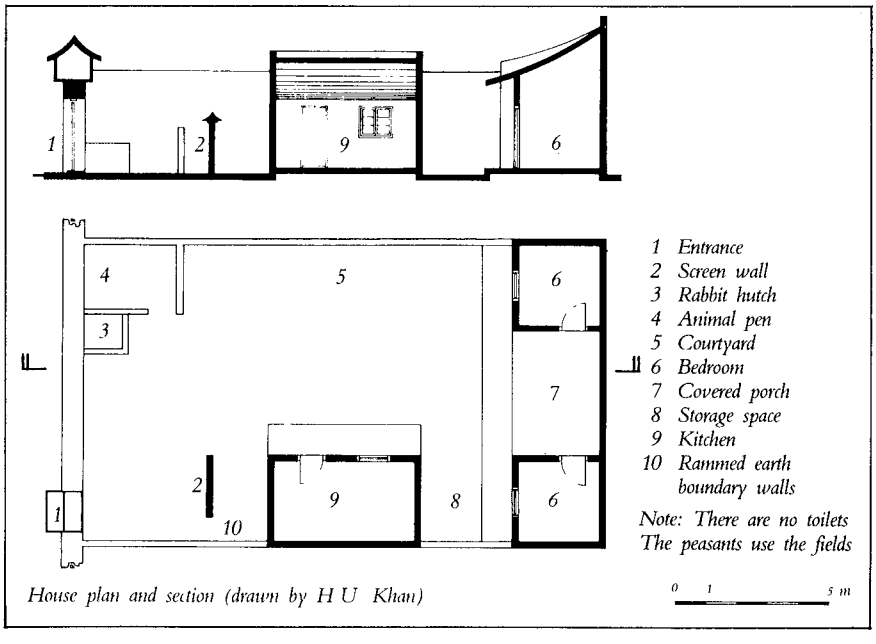
Han Jia Bao is a small village of 164 people It is situated at the foot of the famous Tang tombs of Qian Ling, at the boundary between the Wei River plain and the loess plateau in the Guan Zhong district Han Jia Bao is one of the production teams of the Zhang Jia Bao production brigade of Qian county in Shaanxi Province

This production team cultivates 23 hectares of farmland, growing mainly wheat, corn and soyabean Wheat accounts for two-thirds of the total production with average yields of 2773 kilograms per hectare Each member of the team is entitled to receive about 200 kilograms of grain per year

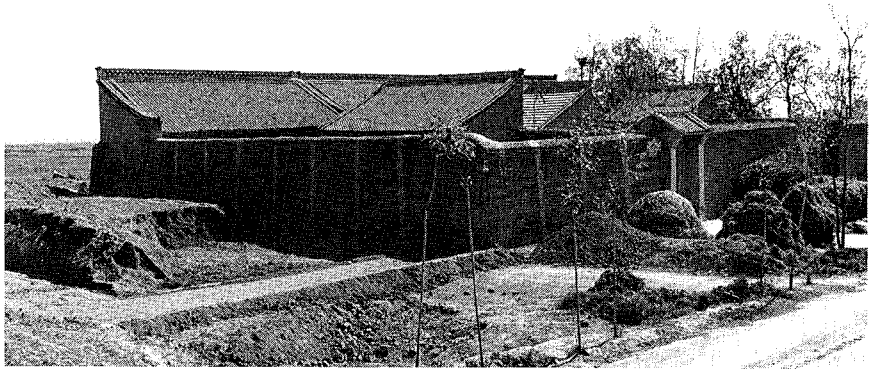
The 164 people are divided into 34 households Of the total, 51 people (of which 26 are women), are engaged in production

Before Liberation all but one family lived in cave dwellings carved out of the loess clay soil Even today, 22 families live in caves, of which 14 are pit dwellings

In the past few years, due to increasing commune benefits, twelve houses have been built These houses embody the 'desirable' elements of housing for the villagers (We were unable to learn how they were allocated or which of the villagers got them) These new houses are built using locally available materials A typical house, built in 1979, is the subject of this presentation, as it represents the trend in rural dwellings.



House plan and section (drawn by H U Khan)



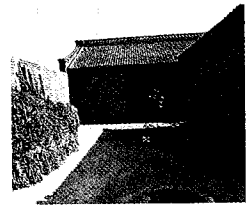
Above: General view of the house from the approach road

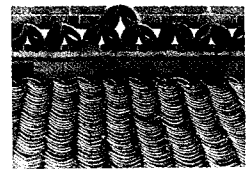
Right, top The entrance to the house is an important element in Chinese architecture The shrine wall (visible through the doorway) forms a barrier to evil spirits who can only walk in straight lines This form of expression would not have been allowed three or four years ago

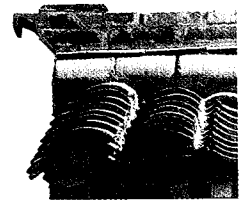
Right: The kitchen

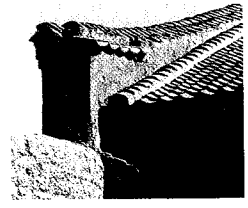
Far right, top to bottom: The courtyard viewed from the entrance — the kitchen is to the right and the bedrooms are to the rear of the house; roof tile and capping detail — the grey tiles are locally manufactured; the entrance roof detail follows tradition with some modification; roof edging detail; view of interior

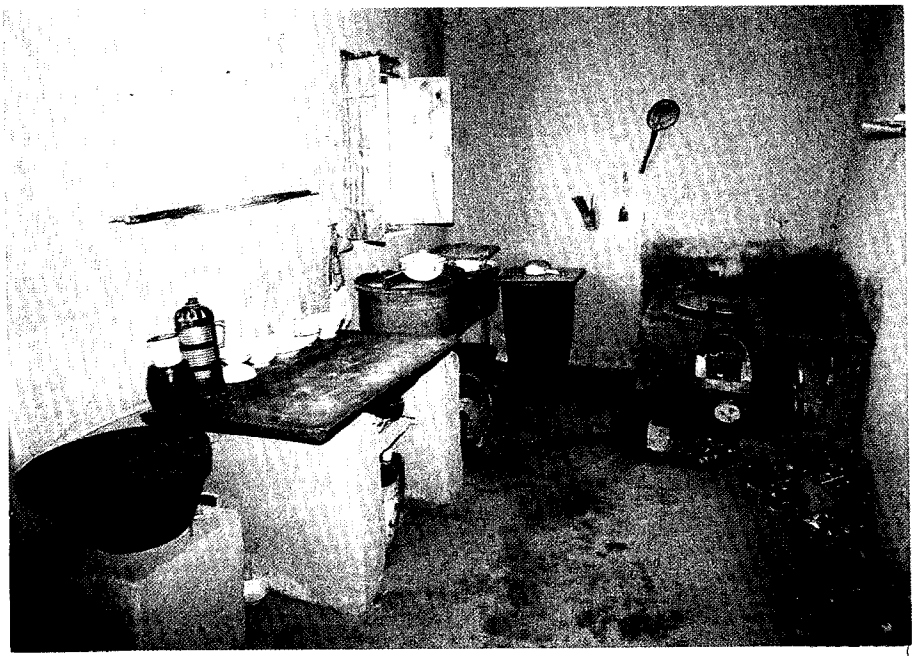
This article is based on a site visit and information supplied by the Architects Society of China All photographs are by Christopher Little





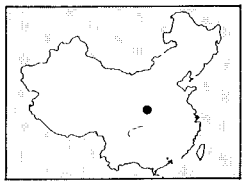






Back to
Table of contents

Fenghuo Production Brigade



The Fenghuo Production of the Fenghuo People's Commune in Lichuan County, Shaanxi Province is located on the plateau north of the Wei River, some 65 kilometres from Xi'an city The Brigade is a self-contained community of a population of over 1400 people in 240 households It has 130 hectares of farmland with wheat, corn and cotton as its main crops The buildings cover a built-up area of 25,250 square metres, with the peasants' living quarters covering 22,100 square metres There are 76 cave dwellings, each, on the average, of 16 square metres

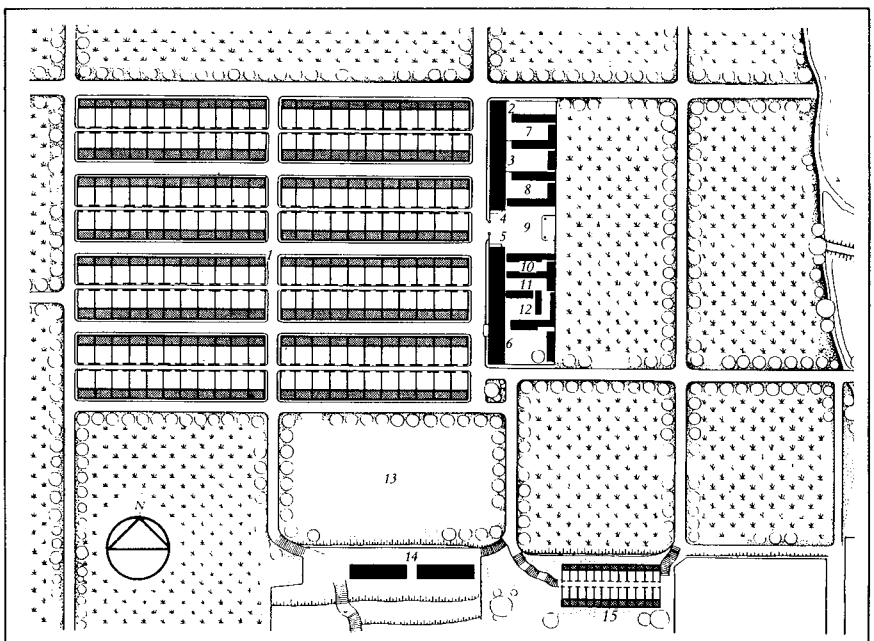
Before Liberation this village was very poor, continuously plagued by floods and droughts At that time, of the 90 households in the village, 70 were farmhands, seasonal workers and boatmen, some 30 so poor that they went begging all year round

In the past thirty years, the peasants have made major efforts in basic farmland construction, water conservancy and scientific farming The valleys, rivers, forests, fields, roads have been brought under comprehensive and integrated control The people have terraced fields which give stable yields The per hectare grain output has been increased from 1,500 kilograms in the 1950's to 8,850 kilograms in 1980 In the same period the cotton output increased from 300 kilograms to 720 kilograms and wheat was 5,325 kilograms in the summer of 1981 The diversification of agricultural production has been given top priority in this brigade In addition, it runs an agricultural products processing shop, a livestock farm, a tool manufacturing and repair shop, a brickyard and a fruit orchard Today, light industry accounts for 52 per cent of the brigade's total income

The living standard of the commune members has been raised, step by step, in keeping with overall rural planning strategies All the families have surplus grain and bank savings, and many of them have bought bicycles and television sets Universal senior-middle schooling has been introduced in addition to a nursery and a kindergarten A few years ago a reference and lending library was set up to encourage both students and farmers to read A small medical care unit operates with the assistance of staff from other brigades in the commune as well as local residents The brigade provides free of charge, education, housing, funeral benefits and electricity to all its members

Right, top: Carved into the hillside to save agricultural land, is the massive four storey school The classrooms are on the lower two floors whilst the other two contain dormitories During the rainy season the soil erosion is substantial and the rooms become damp and are uninhabitable

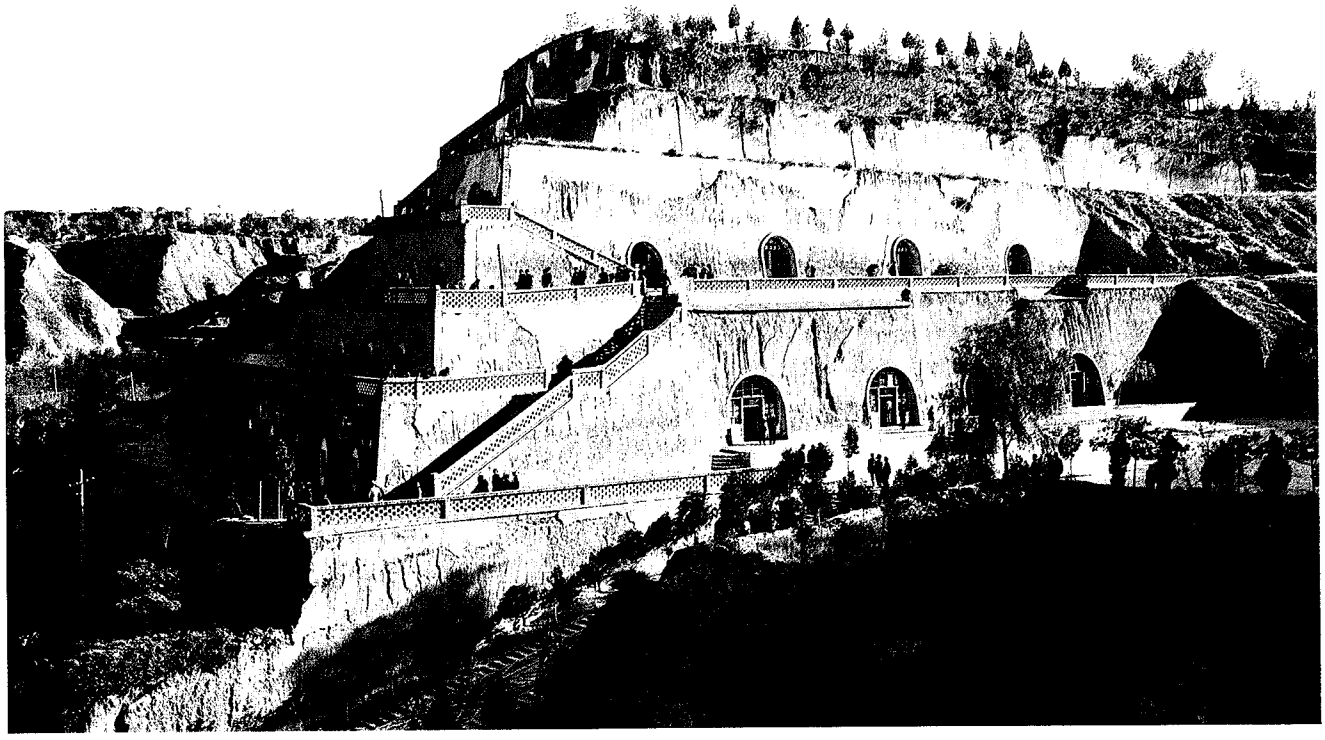
Right, bottom Outlined against the sky, the walkways wrap around the hillside and provide the entrance to the classrooms

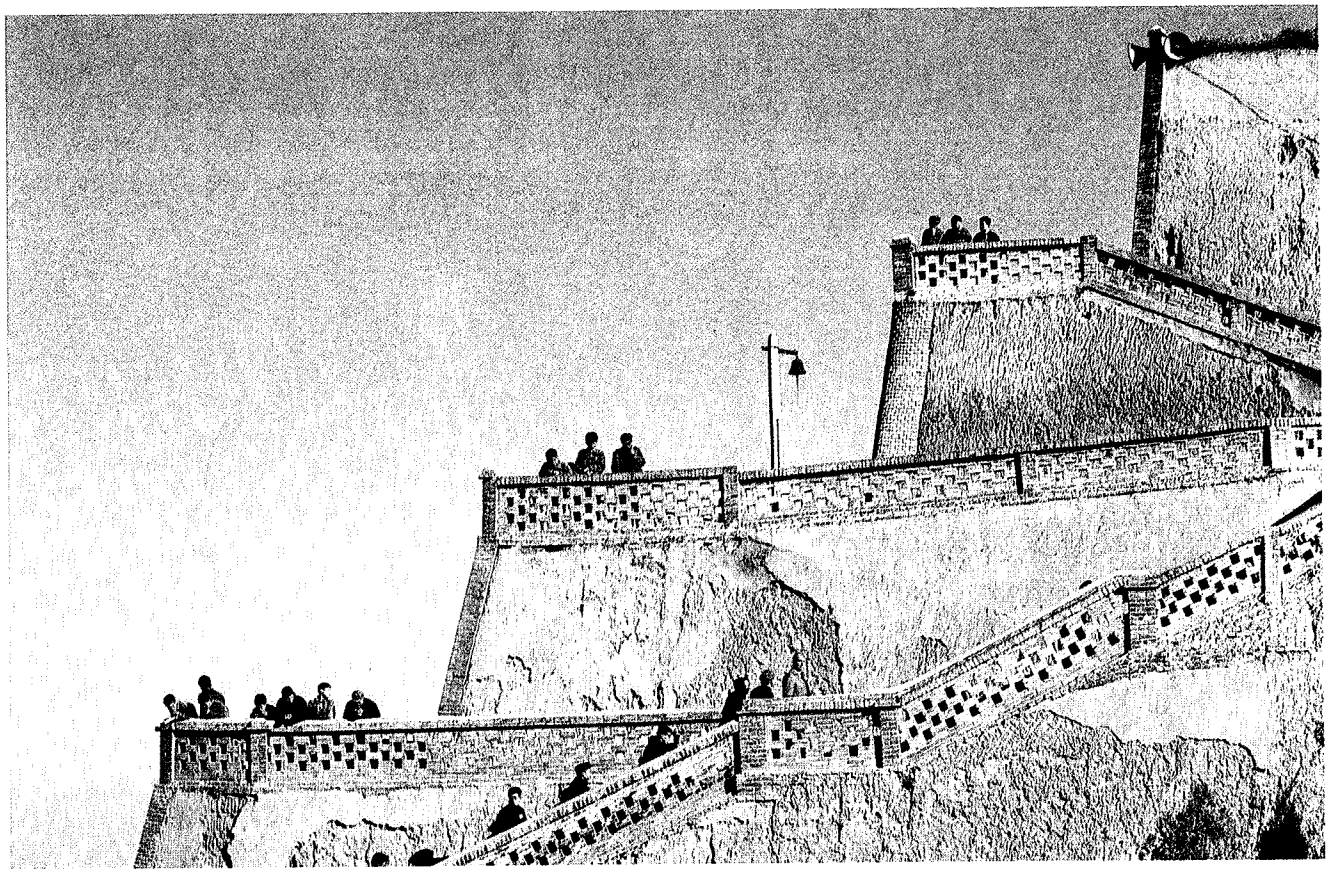


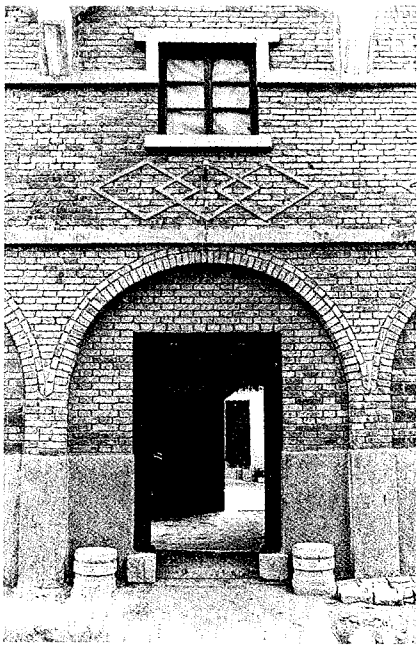
Site plan

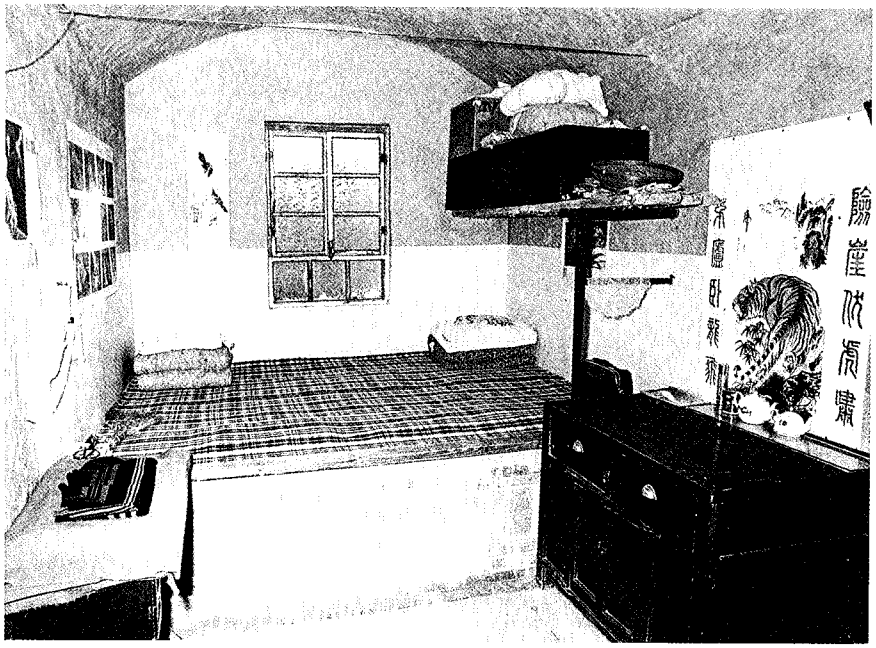
1 Residential	*6 Reception*	*11 Conference room*
2 Agricultural centre	*7 Maintenance and repair department*	*12 Canteen*
3 Recreation room	*8 Noodle factory*	*13 Drying area*
4 Hall	*9 Courtyard*	*14 School*
5 Offices and shops	*10 Medical centre*	*15 Pig sty*

Text by members of the Fenghuo Brigade Photographs by Christopher Little

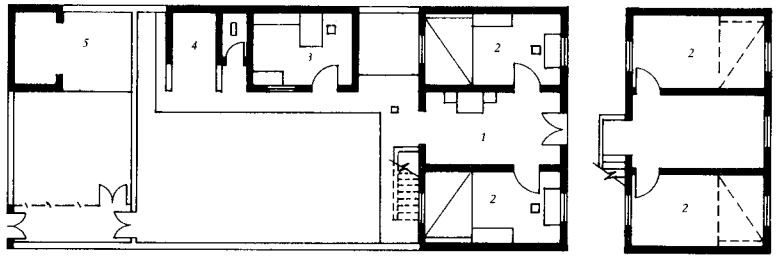








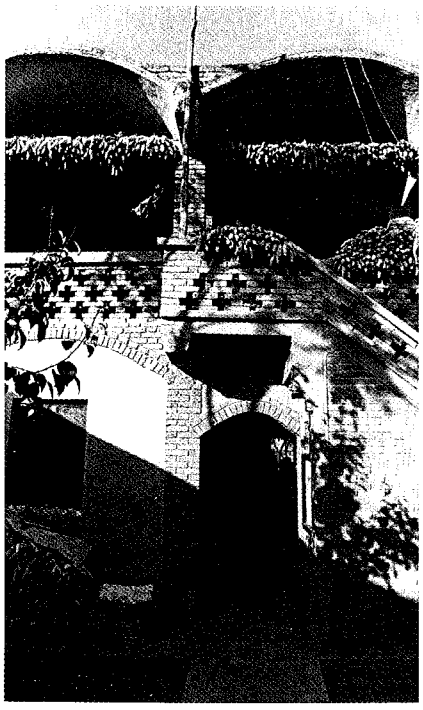
Above: Typical entrance to a courtyard house
Above, right: The bedroom with its traditional brick built-up bed Everything has its own place and the houses are kept spotlessly clean.
Below: The back courtyard of a house The stairs lead to rooms which are usually used for storage or as children's rooms
Below, right: Stairs to School

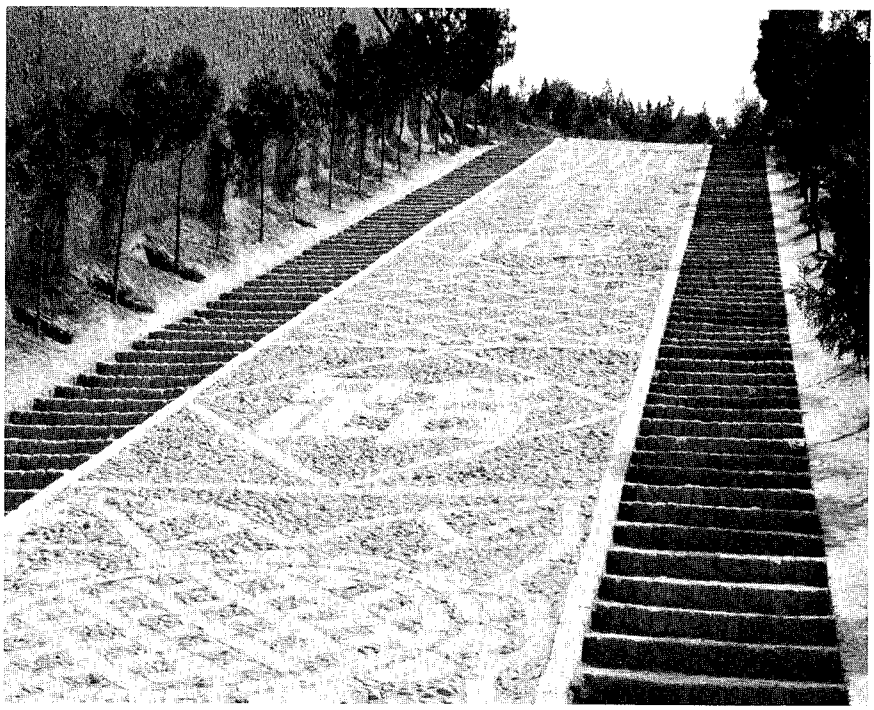


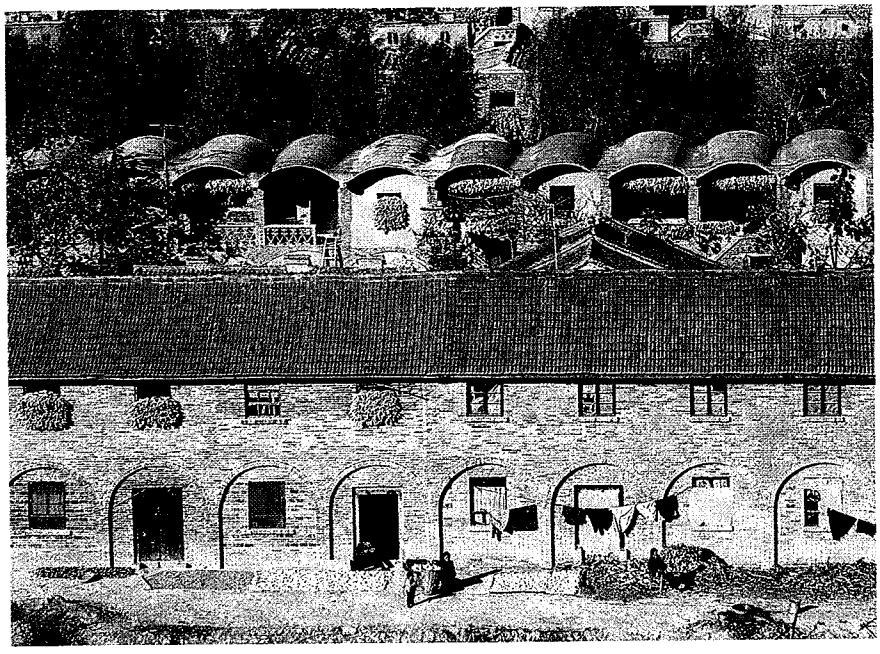
Typical floor plan

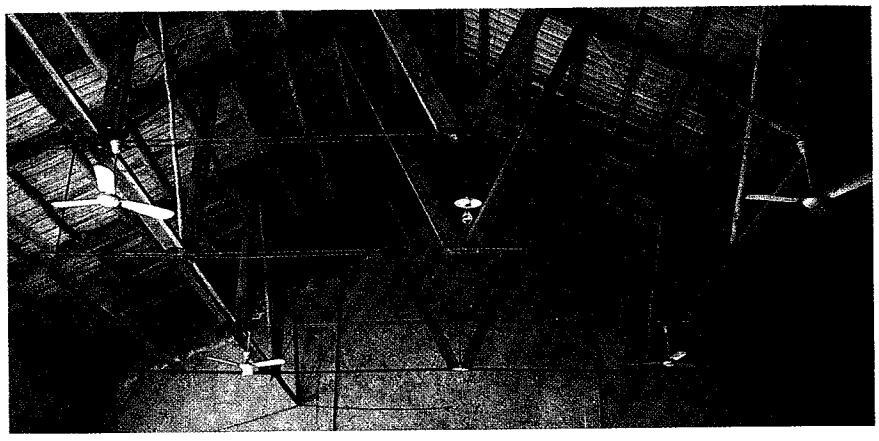
1 Living room
2 Bedrooms
3 Kitchen
4 Storeroom
5. Pig sty

0 2 4 6 m









Left, top: The locally manufactured brick and tiles are used for every building The newer houses (in the rear) use a concrete vault which is cheaper but is climatically less efficient
Left, middle: Inside the main meeting hall of the brigade, an interesting wood and steel truss was designed to allow for the recessary large span
Left, bottom: Poster opposite the main meeting hall calls for "Concrete effort with prime concern to upgrade the production of food" Such signboards are common in communes all over China

Back to
Table of contents

Tunney Lee

The Changing Countryside

China is a country of peasants: 80% of the population lives in rural areas The people live in small, basically self-sufficient villages that are self-governing and collectively owned and managed Most villages receive no aid from the central government and are examples of conservation — wasting nothing, recycling practically everything and working as partners with the environment They have begun to industrialise using local raw materials and are exploiting local sources of energy

Briefly, the strategy for spatial organisation consists of capping the growth of the largest cities (such as Shanghai and Tientsin); shifting of growth to middle and small cities; making each region self-sufficient and heavier investment in underdeveloped regions; development of small self-sufficient rural units with its own industry It is the last item that will be the emphasis of this essay

Changes have been carried out through the interaction of 1 People as the motive force; 2 Step by step process of collectivisation; 3 Leadership and ideology; 4 Policies

People as motive force

In practice, this means that people must actively participate in every phase of change It also means that the benefits of increased production must be equitably distributed and that everyone must feel real improvements in their life

Step by step process of collectivisation

Despite appearances, collective life beyond the family is not "natural" or "traditional" for the Chinese land and means of production were owned by families and was therefore divided into small units After land reform, the process proceeded from mutual aid teams of four or five families through several intermediate steps to the commune Each step had to prove its efficacy before proceeding to the next

Leadership and ideology

In a step by step process there must be a leadership which can summarise the experiences of the people and organise those experiences into a coordinated set of policies. That leadership must be guided by a collective ideology which is Marxist-Leninist and extended by Mao Zedong on the basis of practice For spatial organisation, the important aspects of this ideology include: the abolition of private ownership of land and means of production; the abolition of classes and the elimination of differences between town and countryside

Policies

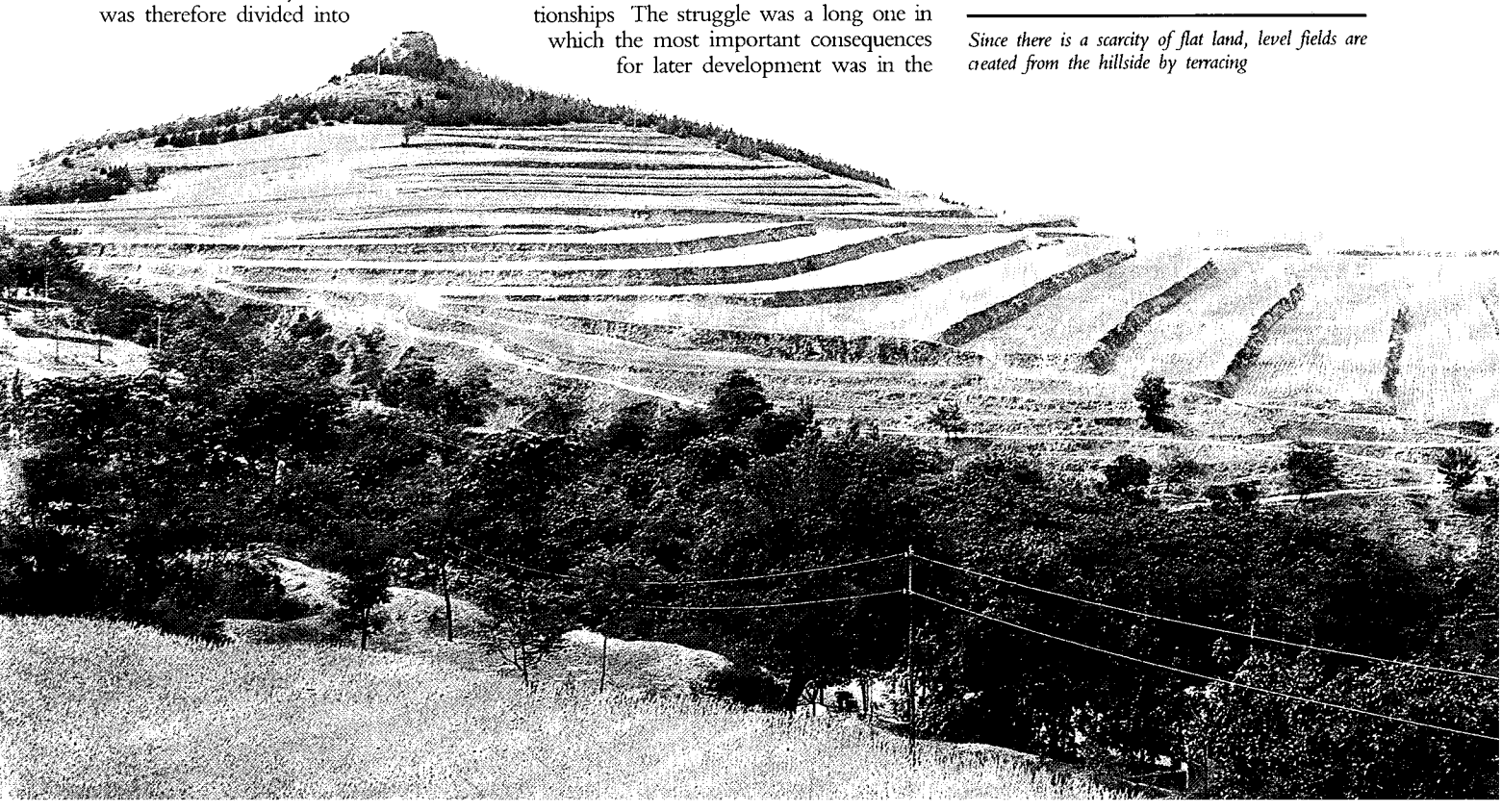
Policies emerged from practice in the step by step process The central theories of the organisation of space embodied the principles of agriculture as the base, industry as the leading sector; industry in the service of agriculture and light industry; major investment in underdeveloped regions; decentralisation of decision making; and self-sufficiency at every level

At liberation in 1949, the mass of the peasantry were landless or had very little land Most of the land was owned by a small class of landlords that extracted exorbitant rents from the farmers Famines were a frequent occurence Peasant rebellions had been occurring for centuries but it was the Communist-led struggle that finally succeeded in the abolition of feudal relationships The struggle was a long one in which the most important consequences for later development was in the Border Regions during World War II There developed the experience of self-reliance and improvisation, local initiative, beginning of collectivisation, and of labour-intensive low-cost production

Land reform

The first step was to appropriate the land of the landlords and distribute it to the landless peasants However, due to the limited amount of land and low productivity, the problems of feeding the population (let alone having a surplus for industrial development) could not be solved There was a need for collectivisation and modernisation at the same time.

The theory behind the policies was the *spiral process of development* This theory was developed from long experience, drawing both on Marxist theory and the lessons of production during the guerilla war in the Border Regions Jack Gray in *'The two Roads Alternative Strategies of Social Change and Economic Growth in China'* describes the spiral as: " ... an essential constituent of the collectivisation process, beginning with the mutual aid team. The community (or that part of it willing to participate) pledged itself to a specific plan of development; this was usually concerned with agricultural construction and used the available surplus labour co-operatively The reclamation of land, its irrigation, or other improvements would, if successful, pay off and would result in an increased demand for routine labour the following year, and this would begin to press very soon on the supply of labour at the busy seasons of agriculture This new labour scarcity would create a demand for simple labour-saving devices, while the profits of the construction already completed would provide the means to purchase these In the next year with better



Since there is a scarcity of flat land, level fields are created from the hillside by terracing

equipment, enlarged construction could be undertaken, resulting an increased further demand for better tools and, at the same time, new means to pay for them

Cultural change was expected to proceed in a dialectic with economic development and institutional change The institutional changes themselves would be one expression of cultural change, made possible by increasingly rational views of the possibilities of larger-scale social organisation " The analogy of the spiral can be extended into spatial organisation where the combining and rationalising of the use of land can lead to greater productivity and increasingly more efficient use Similarly, the building of collective housing with social services can lead to the fuller development of collective life and standard of living which in turn will affect the economic base

The emergence of a new policy

In the meantime, industrial growth was following the Soviet model of: investment in heavy industry; extracting the capital from agriculture; centralised economic planning; and material incentives for stimulating production However, these policies soon ran into difficulties and regional inequalities were exacerbated by continued emphasis on the coastal cities.

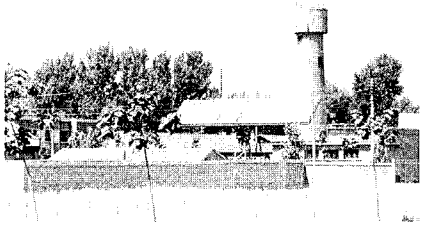
A new policy was evolved: its points were:

- Agriculture must be recognised as the foundation of the economy.
- Although heavy industry must be the leading factor in long-term modernisation, the best way to get there was by emphasising light industry and agriculture
- New investment for heavy industry must be changed to emphasise the underdeveloped interior regions.
- Decentralisation of power from Beijing to provinces and municipalities so that decisions can be made on the basis of knowledge of local conditions and local initiative can be tapped
- Lower levels and localities must aim for self-suffiency and only those problems requiring overall planning, organisation and coordination should be done centrally.

The Great Leap Forward (1958-1960) was the campaign to apply the new policies Despite problems of organisation, withdrawal of Soviet aid and the worse floods in decades, the Great Leap Forward set the Foundations for the policy today as it continues to evolve Especially important was the creation of the People's Commune as the present stage of development of agricultural collectivisation The form and size of the Commune underwent several modifications during the early years. Between 1961 and 1965, there were retreats from some aspects of collectivisation such as in family production, the size of private plots and the encouragement of free markets Nevertheless, the basic idea has been retained The Cultural Revolution (1966 and after) once again emphasised the continued development of collective forms and self-sufficiency

The People's Commune is the lowest level of governmental organisation in China It is a collective political and economic unit that combines production, living and defence At present, the Commune has the responsibility for overall planning for its constituent units — the production brigade and the production team [1] The Commune itself owns only the commune-wide production facilities such as forests, large scale waterworks, hydroelectric plants, food processing plants, etc The production team, or the production brigade collectively owns its land and means of production and is the unit of accounting This means that each team is responsible for its own financial functioning — i e any profit or loss is borne by the unit itself The team is responsible for agricultural tax, production costs, a reserve fund (generally of grain) for emergencies, a welfare fund for non-productive members (old people, handicapped, etc) cultural and health services The profit or surplus is divided according to work points, the value of which is decided by each production team The present arrangement is seen as a step — not as the end point The long-term goal is towards collective ownership by the entire country Before this can happen, however, the inequities between teams must be eliminated and a much higher level of productivity must be reached

One of the major impetuses for the creation of one People's Commune[1] during the Great Leap Forward was the need to implement the policies of emphasis on agriculture, decentralisation and self-sufficiency The new direction encouraged local authorities to use labour to create capital instead of relying only on a capital investment and



Above: Rural housing is gradually changing in character The foreground shows a community building Beyond this is the row housing of the early 1970's with individual courtyards The latest development, in the background, are flats built to conserve land in a rapidly expanding small town
Right: Following the principle of self-reliance, communes are experimenting with new sources of energy Here, a solar collector provides a group of buildings with heating and emergency electric power

Rural Organisation Units, 1980.

Level	Number of Units
County	2,404
People's Commune	54,183
Production Brigade	709,820
Production Team	5,662,000

- On an average each People's Commune has 1,833 hectares of land and a population of 15,000 people
- On an average, there are 13 Brigades in a Commune, and 8 Teams in a Brigade

Source: Jin Daxin, Academic Committee of Rural Housing of the Architectural Society of China, 1981

[1] *Examples of these are presented in the following features (Editors)*

[1] *The model production brigade is Tachai and everywhere is seen the slogan "In agriculture, learn from Tachai"*

"Backyard" kilns producing pots and bricks can be seen all over the countryside

modern technology as the major factors in economic development

One of the areas in which the spiral theory of using surplus labour in the offseason was especially effective in terracing and especially critical was the maximisation and control of water resources In 1958, the collective units (Agricultural Producer's Cooperatives) were not equipped to initiate, plan, finance and organise new water systems in addition to starting local industries and more intensive cultivation The creation of the commune became the organisational form for mobilising and allocating rural labour Throughout China today, the most prominent elements in the landscape are terraced fields, acqueducts, reservoirs and canals

Although rural housing posed problems of sanitation and shelter, the basic approach was to first increase production through a spiral development of capital construction and mechanisation Following the principles of self-reliance and putting production before housing, new villages have begun to appear in all parts of China with considerable variation according to local climatic and site conditions They are always built by the villagers themselves using locally available materials and traditional techniques They are often decorated with traditional designs in lattice work or ceramics

They generally follow these principles:

- Minimise the use of land and avoid taking up agricultural lands;
- Compact layout to facilitate collective life,
- Take full advantage of the topography of the site and other local conditions,
- Phase the development in stages, undertake the construction through cooperative efforts and produce building materials locally;
- Centrally locate communal facilities to facilitate the participation of the members in political and cultural activities;
- Improve sanitary conditions;
- Recycle building materials as much as possible

It is important to emphasise that each society must make its own process of change The Chinese model cannot be transported whole elsewhere Change in the organisation of space is linked with social change in all its complexity. Some points can be made from this experience

- People are the motive force
  All people have abilities and energies which can be liberated by engaging in continuous, long-term change People will grow by participating and taking initiative in changing their environment and social condition
- Unjust social relations had to be changed
  Land reform was insufficient Private ownership had to be abolished before collectives could emerge in which people governed themselves and engaged in further development Rather than an unimplementable "master plan", there was an ideology and leadership which understood history and guided the process with principles rather than rules.
- Small is beautiful only when big is also beautiful
  The Peoples' communes cannot exist as self-sufficient units if there is not a national policy of guaranteeing adequate prices for farm products while keeping prices for industrial goods low There has to be both centralisation and decentralisation The question is giving the proper role and function to each.
- Changing the whole environment
  In order to have long term, continuous change, the commune is thought of as a complete unit and environment: production as well as consumption The commune solves its production problems first: then, with the surplus skills and collective organisation gained from production, it builds housing and communal facilities for itself.
- Change is a long term process
  It is not just a matter of wishing for a different environment or projecting a development plan The process for China has been long, with failures and successes There are strands of traditional Chinese thought but also the infusion of Western thought: (Rousseau, Ruskin, Marx, Lenin, Stalin) All these have been forged in the crucible of struggle to create the present situation
- This is only a beginning and not an end in itself
  As some problems are solved, new ones arise and some old ones persist China is still a poor, underdeveloped country (per capita of about $250 vs. $9,500 in the USA). Her science and technology in underdeveloped Regional differences still remain despite the policies There are great variations in productivity between communes because of geography and climate which must be overcome There are problems of population growth vis a vis agricultural growth. The present policies of rapid mechanisation and emphasis on rapid growth in science and technology may be inconsistent with a step by step spiral development. The Chinese see the process as a long one which has many contradictions and which will undergo many fluctuations But they have accepted conflict as inevitable for development and are prepared to continue the struggle

Photographs by Hasan-Uddin Khan

Tunney Lee is an architect, presently Director of the Environmental Design Programme and Associate Professor of Urban Design at the School of Architecture and Planning, M I.T , U S A

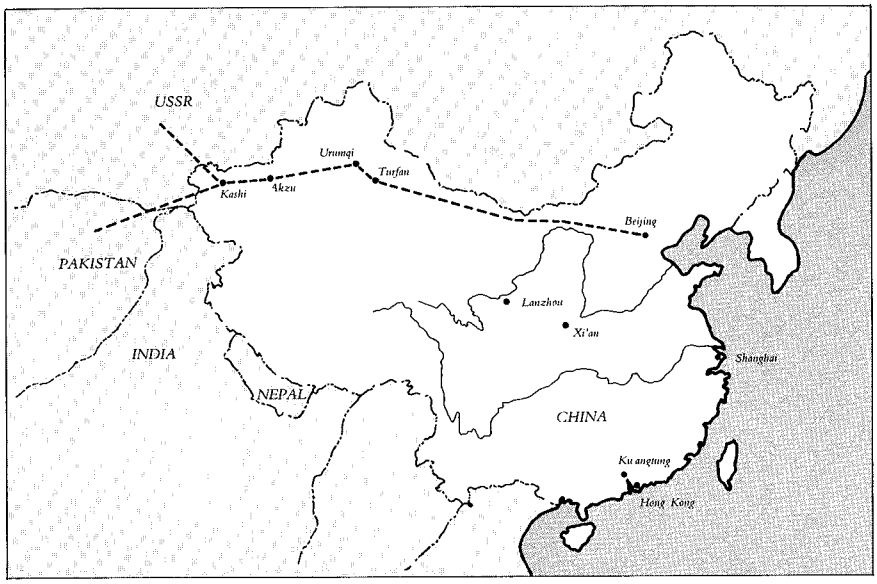
Back to
Table of contents

Architecture in Transition

William S.W. Lim

A visit to the Forbidden City in Beijing is an incredible experience The complexity of architectural forms and expressions, the continuous subtle, and sometimes dramatic, changes of levels, the progression and variety of spatial experiences and naturalness in relating domestic-scale structures to monumental buildings, are some of the aesthetic qualities which generate positive visual excitement. The ancient monuments and historic architecture of China will continue to be a great pride to the Chinese people and a heritage to all mankind

My observations are drawn from a brief but intensive two weeks' tour in China which started in Beijing and then followed the historic silk route from Xi'an to Ürümqi, Turfan and Kashi, gave me the opportunity to visit some of China's famous



Top: Map of China charting out the silk routes Above: The Wu Men gate entrance to the Imperial Palace (the 'Forbidden City') overlooking Tienanmen Square. The Imperial Palace in Beijing was the permanent residence of the Ming and Qing Dynasty emperors The complex was built between 1406 and 1420. The Palace covers an area of about 720,000 square metres, of which 150,000 square metres are covered area. It is the largest, most magnificent and most complete extant group of ancient Chinese architecture Photograph: H U Khan

monuments, its modern day communes, as well as the humble mud huts and peasant cave dwellings.

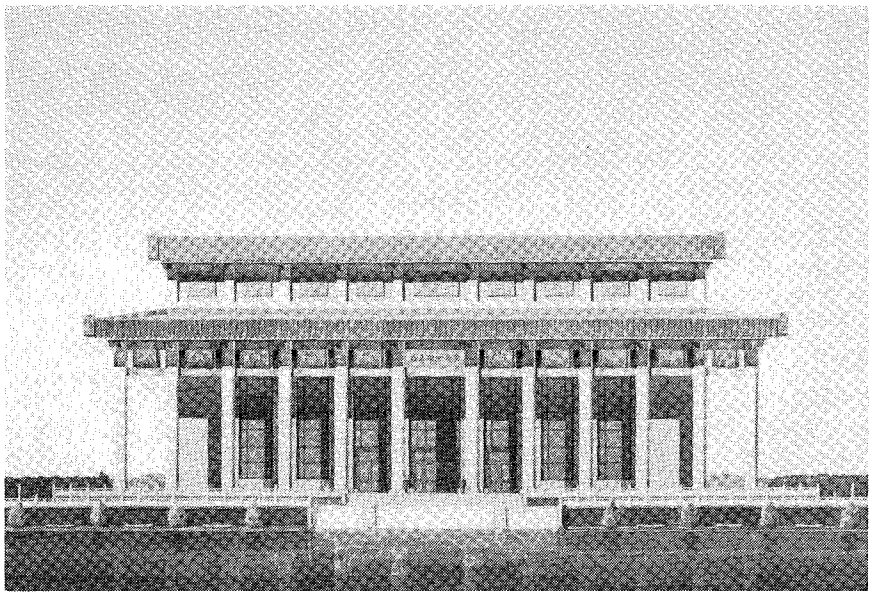
The most striking visual impression of urban China is the omipresence of buses and hundreds and thousands of bicycles These form the main modes of urban road transport The relatively few cars for private use are forever honking for the right of way through the proletariat traffic The Chinese are apologetic about their traffic — "there are so many bicycles" they say Yet, the urban transport in China today is the dream of many an environmentalist and transport planner Their concern is over the inevitable increase in the use of motor-vehicles, especially in the more prosperous coastal cities. This change can quickly endanger safety, and disrupt the peacefulness of millions of easy-going cyclists

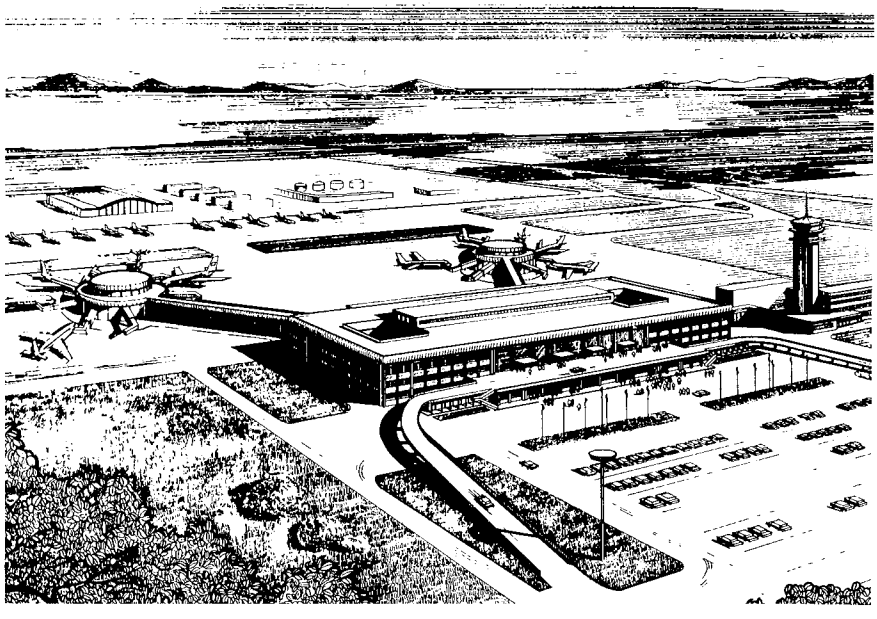
A close second to the bicycles, is the prevalence of carefully planted trees which line urban thoroughfares, village streets, cross-country highways, as well as minor rural roads In arid rural Xinjiang, these trees, usually poplars, are planted very close together, and watered by specially dug irrigation ditches.

Agriculture is given top priority in rural as well as urban China This has been possible, and necessary, because of the acute shortage of agricultural land, the general deficiency in transport infrastructure and the public ownership of land These factors have made it possible for China to allocate much prime urban land for intensive agriculture The Chinese authorities are ever conscious and wary that urban growth must not be permitted at the expense of agricultural land

These are important lessons of urban development which can be applied, with modifications; especially to Third World urban centres

Even China, a country imbued with a sense of its own history, has sacrificed much of its architectural heritage in the process of national reconstruction and ideological development The old city walls in Beijing, the many shrines and temples as well as numerous vernacular courtyard houses have been destroyed in the last few decades Fortunately, much still remains, especially in Beijing It is perhaps timely that a warning note be sounded to control undesirable development With careful planning, much of the urban environmental quality of the inner city of Beijing, and in other cities, can





still be preserved and even enhanced

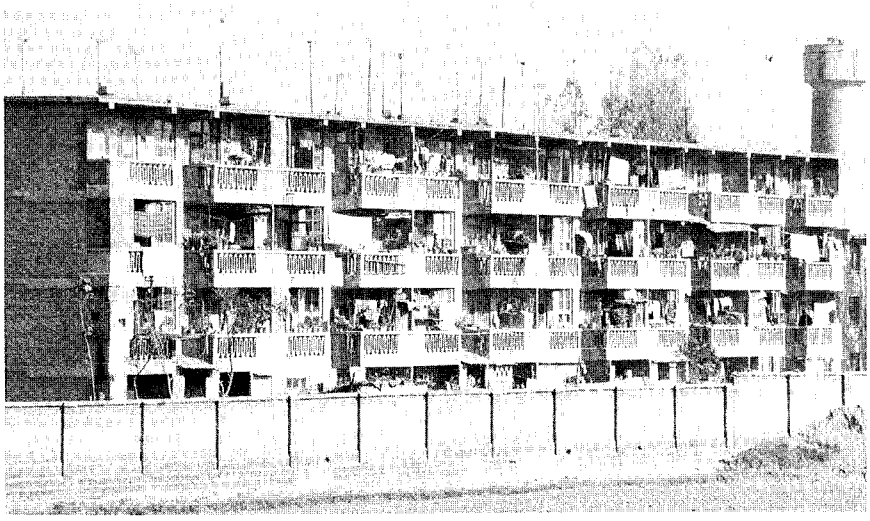
Attention should now be given to the conservation of the old districts of urban centres and vernacular housing, together with the quality of their environment. Effective conservation action must be taken early enough before uncontrolled destruction occurs in the process of redevelopment, especially during a period of rapid economic growth It is always better to conserve too much than too little Once the traditional environment, the street atmosphere and the intimate scale is destroyed, they cannot be recreated

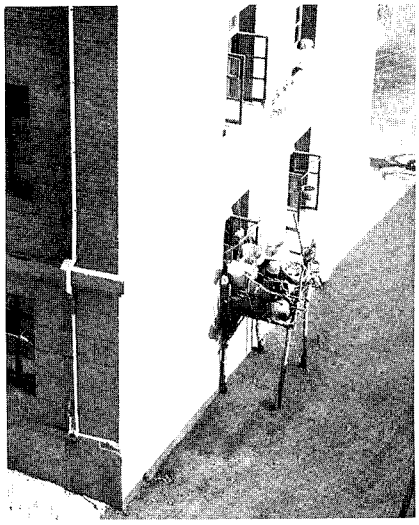
In urban centres, numerous important public buildings have been built Thousands of flats have been constructed and are under construction They are mostly 4-6 storey walk-ups as well as high-rise blocks, usually located along both sides of main roads They fall short of the aesthetic standards of contemporary design This is perhaps understandable as China was cut off from the influences of the modern architectural thinking as long ago as the 1930s Sino-Japanese war In the fifties, the exposure to Stalinist architectural influence did not help much Subsequent periods of self imposed isolation further estranged China from the influences of the modern movement For example, little is known in China about the recent reaction and confrontation to the international style in the form of post-modernism, and the attempt to adapt modern architecture to tropical regions and to conditions in Third World countries

Commercialism, bureaucratisation and the institutionalism of architectural practices and the subsequent de-humanising effects of modern architecture to the urban environment are the major defects of contemporary architecture today. It is just possible that both the early success and subsequent failure of the modern movement have not been fully evaluated, appreciated and exposed in China It is therefore not surprising that some of the most interesting recent buildings are those done in the traditional Chinese style, and in the rural areas and the communes by the people themselves

In the last few years, architects in China have been able to interact more freely with the international architectural fraternity An acute shortage of architects, language constraints, as well as the lack of foreign

Top: Beijing's Friendship Hotel, a large complex, some twelve kilometres from the city centre, was built in the 1950's as a hostel to accommodate Soviet advisors It presents a mixture of Soviet architecture using local design elements such as the carved ballastrade motif Photograph H U Khan
Middle: Memorial Hall for Chairman Mao Zedong was built from inception in about four months in 1976/77 Drawing courtesy of Beijing People's Publishers, 1978
Left: Aerial view of Beijing's new international airport Drawing courtesy of Beijing People's Publishers, 1978





Above In all cities, space is at a premium People devise ingeneous solutions to create outside storage areas

Above left Around Xi'an, four storey walk-ups dot the countryside Balconies are used as open courtyards, for storage and plants Buildings bristle with individual television aerials, ushering in the age of mass visual communication

exchange, are some of the present limiting factors Many foreign architects have recently been commissioned to design buildings in the coastal urban centres such as Quanzhou, Nanjing and Shanghai These projects range from luxury hotels and hospitals to factories and housing for foreigners Many senior members of the profession have travelled and toured foreign countries, visited universities and had discussions with leading architects. An increasing number of foreign architects are visiting and lecturing in Chinese universities There is more frequent participation in international conferences and seminars Foreign books and journals are more easily available Chinese architectural and technical journals such as *The World Architecture* published by Qing Hua University, Beijing, and the Journal of the *Chinese Society of Architects* are informative and analytical regarding architectural development

In the eighties, architecture in China is likely to experience tremendous change During this period of transition, there will be many problems of a technical or theoretical nature Problems of a technical nature, such as building science and technology, energy conservation, detailing and building construction etc can be effectively tackled given the necessary allocation of manpower and research facilities In this regard, selective foreign input with appropriate application adjusted to local conditions can be useful

Problems of a theoretical nature, such as those which deal with architectural theories and planning concepts, are harder to tackle This is especially so as these theories are mainly based on the developed countries with free market economies Furthermore, many of these currently accepted theories are being challenged as their application, even in Western countries have not proved to be particularly successful. In recent years, alternative planning and architectural theories applicable to conditions in Third World countries are beginning to be developed, including the theory of low-resource urban centres. However, no alternative strategy in planning or design approach in architecture for the Third World has yet been established or accepted

On the urban design scale, much research is needed to study problems relating to the layout of housing development, the quality of urban spaces and the relationship of density to height of buildings Intensive design studies are necessary to find appropriate solutions to specific projects as well as on micro-design levels To undertake this, a large reservoir of competent professionals are required Unfortunately, professionals cannot be trained quickly without sacrificing standards. This dilemma is common to many Third World countries. Furthermore, experiences in these countries have also indicated the unsuccessful results in introducing, or worse still, in imposing standardised professionally produced designs More effective building technology and better design solutions can be generated by direct community participation in the total design and building process, particularly in projects outside the major urban centres

It is therefore extremely difficult to predict the trend and direction of urban planning and architecture in China during the critical years ahead A broad analysis suggests three possible options First; intensify the learning and catching-up process; this has already started China must attempt to find out, quickly learn from, and adopt with modification, the positive aspects of the development in architecture and planning ideas during the past decades Secondly; accept the revivals of traditional styles This approach obviously has its inherent aesthetic, functional and technological limitation It can be successfully applied to special building projects However, the traditional styles cannot be effectively applied to most buildings, as construction is slow and expensive Furthermore, the application of traditional styles to multi-storey or new complex building types is aesthetically ludicrous Thirdly; there should be a search for an appropriate new approach This requires a clear understanding of the major planning, architectural and environmental issues confronting the world today. A firm psychological commitment is needed to join forces with other concerned persons to search for an alternative planning strategy and a set of design criteria capable of being effectively adapted to the continuously changing conditions The parameters have yet to be established, as the search for new solutions has barely begun The success of the exercise calls for open-mindedness, intellectual commitment and ideological flexibility

Each of the three options is very different, although they are certainly not mutually exclusive However, the choice of the dominant direction in the development of architecture and urban planning must inevitably have far-reaching visual and aesthetic, as well as social, and even economic consequences The impact on the environmental character of China's urban centres, and on the quality of life for the billion Chinese citizens, will be immeasurable for many decades to come

Photographs by Hasan-Uddin Khan Drawings courtesy of Beijing Peoples' Publishers, 1978

William S W Lim is an architect in private practice in Singapore He is on MIMAR's board of advisors and is the author of several books including "An Alternative Urban Strategy"

Back to
Table of contents

CHINA

Islamic and Rural Architecture
from Beijing to Kashi

Back to
Table of contents

NEWS

Beijing: Seminar on Rural Architecture

The sixth Aga Khan Award Seminar on Architecture was held in China between October 18 and October 30. There were four days of formal meetings in Beijing, followed by a week of travel and visits in Xi'an, Ürümqi, Turfan, and Kashi (Kashgar). A more informal evening meeting in Kashi served as a forum to exchange views and ideas derived from intensely new impressions and also from contacts between participants which were unusually long and varied. There is a useful, albeit expensive, lesson to be drawn for organisers of colloquia or seminars: the value of a meeting increases enormously if its formal proceedings are followed by informal interaction during social or other occasions and then by a sort of "recap" session Throughout this long gathering, the welcome and collegiality extended to all foreign participants by Chinese authorities and, most particularly, by the Society of Architects which served as host will remain for a long time in all our hearts.

The subject of the Seminar was "The Changing Rural Habitat" (An outline of the programme is given below). The publication of the proceedings will be a major event in an area which has not been often discussed in architectural, historical, or anthropological journals. The participants varied enormously in background and experience. Architects and planners predominated, but in addition, there were historians, anthropologists, economists, financiers, sociologists. Many of the architects and non-architects are or have been associated with major international organisations like UNESCO or the World Bank The most notable missing groups were middle level government officials or local authorities, often the very people who either make final decisions for villages or who present the cases to be solved at some higher administrative level. This absence was particularly striking during the seminar's visit to a Brigade near Xi'an, when the local leaders, responsible for the development and use of a rather striking housing project and school carved out of a hill, were explaining what they had done Generalised academic discourse and broad theories of planning do not easily meet with the harshness and immediacy of a village and the formal trappings of tables with "delegates" sipping a welcome tea or speaking through microphones are quite different from the issues of living with and through the products of the earth

By stressing this dichotomy, I would like to introduce the most forceful impression that I, as a historian dealing with remote pasts, have acquired from the seminar The rural habitat may indeed be changing (and I will say more about it presently), but two functions of rurality, the production of food and the overproduction of people, are neither new nor easily changed. Whether in the carefully irrigated oases of Turfan and Kashi, in the cave dwellings of Shaanxi, or in the alluvial plain of the Yellow river, what stands out is not merely the immensity of a problem which affects something like three quarters of humanity, but its almost infinite variety. Urban problems and urban needs seemed by comparison to be almost soluble, or at least amenable to theoretical solutions, however poorly implemented.

This point requires some elaboration The changes which, at least from the reports and discussions of the Seminar, affect the rural habitat are almost never creations of the rural world, except in the very special area of population surplus. They are, on the one hand, technological changes or opportunities involving anything from new sources of energies (for instance the methane developed by Chinese scientists) to new ways of production and storage. They are, on the other hand, changes in expectations about the quality of life, from literacy and basic health to middle level education, clinics, more and better living space, leisure, and so forth. Nearly all these changes derive from non-rural activities (manufacture of implements, training of teachers) and require outside experts

At this level of generality, it is hardly possible to argue with the conclusion. The problem arises whenever the general statement is translated into reality. A few examples of very different types of occurrances drawn from the Seminar illustrate the difficulties involved and lead to more elaborate conclusions. In a small settlement developed at the desert edge of the Punjab, the building by a social notable of a fancier house than the local norm had a slow osmosis-like effect on local housing and eventually affected the decoration and the objects of other houses In a Nubian resettlement project, an infrastructure created by a more or less anonymous bureaucracy is fairly rapidly transformed into a settlement which reflects both the taste of the abandoned villages and a number of idiosyncratic social characteristics. In Yemen, new economic circumstances and a newly acquired wealth led to a partial replacement of traditional techniques of construction by a higher imported technology and to a partial urbanisation of the rural environment In several Chinese examples the penury of available land led to the consideration and even

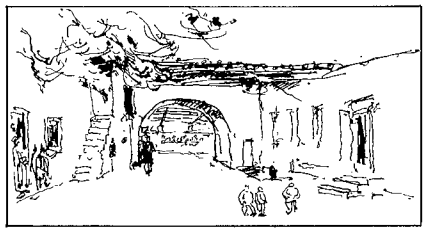
H H The Aga Khan with Professor Yang Ting Bao, president of the Architectural Society of China Photograph C Little

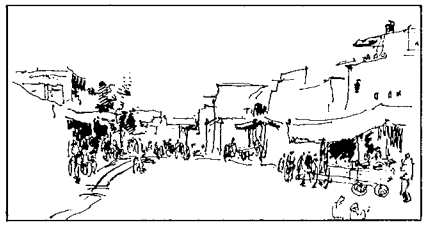
building of multi-storied housing and social or educational centres Also in China, a fascinating experiment seems to be in progress, consisting of the creation in architectural centres or ministries of type plans which are then carried out to the country, discussed by potential users, and hopefully adapted to local needs In West Africa, an equilibrium was sought (and much criticised during the Seminar, for reasons which did not become quite clear to me) between technical modernisation and local self-reliance

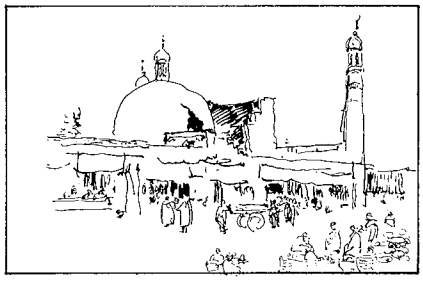
Some Conclusions

Examples could easily be multiplied to lead to what seemed to me to be four tentative conclusions. I must add that these are not necessarily conclusions reached by the Seminar in any formal and official way, but rather the impressions and questions of a listener and observer with a newly developed curiosity about rural matters.

The first conclusion may be called the







Top to bottom: Courtyard house in Turfan, a street scene and the Aitika mosque in Kashi

'double fan effect' What I mean by this is that any decision about rural building is inspired by an infinite number of data ranging from high policy programmes to grass root information and must be fed to a widely scattered population through the narrow funnel of technical and financial services The best laid plans are useless if insufficiently grounded in the unique reality of any one place, but, even in the most utopian thinking, it can hardly be conceived that an individual solution can be elaborated for every rural settlement In other words there is something frightening, if not in fact depressing, about the magnitude of the informational net needed to deal with rural habitat It becomes easy to feel, as some participants indicated with some reluctance, that the most successful results were reached when the initiative for change came from rural settlement and when, as a result, governmental, private, or other help reacted to local needs This seems to have worked fairly well in the case of service building (schools, dispensaries, mercantile centres), but it is clear that population, health, and sustenance problems are of a magnitude which cannot await local initiatives

The second conclusion concerns communication Whatever evils contemporary society may have created, it has developed means of bringing information every place, information, furthermore, which does not require literacy from all, as radios and television will soon be everywhere In other words, it is conceivable that, through intelligent and sensitive programmes, issues and solutions to rural habitats can reach rural areas before policies are established and profit from their feedback Much in this idea may be a dream, but, as one participant put it, "there is something truly exciting about planners and architects being asked to explain their work to the mass of the rural population "

A third conclusion deals with cultural identity In general, when compared to previous seminars held under the auspices of the Aga Khan Award, this one elicited relatively few remarks about national or cultural values The proximity of rural life to earth, its dependency on climate, the apparent sameness of mud constructions, these and other features did make one feel that the grand issues of cultural, ethnic, or national self-awareness are legitimately subordinated to the needs of the environment And yet there was no doubt in our minds that we were in China when in the villages near Xi'an and that in Turfan and Kashi another cultural overlay was present, whether or not it is correctly interpreted as Islamic The strikingly elaborate and ornate doors of China gave way to the simple small doors of the Middle East. There were subtle distinctions in the clothes and activities, and children seemed more numerous The question is how much of what has been called in the Seminar a part of the "social fit" of the rural world can be achieved through architecture and planning In general too little seems known about those symbolic and practical signs which separate one cultural area from another rather than one ecological setting from another

Finally throughout the tricky problem of the role of the 'expert', architect, technician, or political planner, raised its head Some speakers did suggest the possibility of a "total rural architect," one versed exclusively in low-energy materials and rural systems. But, on the whole, there seemed to be a tension between a conception of the architect-planner as the technician of change and one in which he is the upholder of well understood traditions Yet one wonders whether resistance to the new or fear of losing certain values are not in the heads of the rural world but in planners'. Perhaps the rural world is still too little understood to be given to architects as a field of work

I would like to conclude, however, on a slightly different note. Two striking moments from the Seminar may best identify the issues One was when a forceful participant outlined nine basic principles and modes of action for rural planning; they were clear, logical, practical, specific, theoretically feasible, yet somehow as unreal as any bureaucratic manual The other one was when a senior architect told in a moving way how he had been trying to learn from the people how to create an architecture for rural masses and how hard it was. Both speakers were Chinese Dealing, as they do, with the largest rural population in the world, they illustrated for all of us the probably insoluble dilemma of effecting change in the rural world.

Oleg Grabar
Harvard University, U S A

Professor Oleg Grabar of Harvard University is chairman of the Department of Fine Arts He is a historian of Islamic art and architecture and is the author of many works including 'the Alhambra' 1978 Professor Grabar is also a member of the Aga Khan Award for Architecture's steering committee

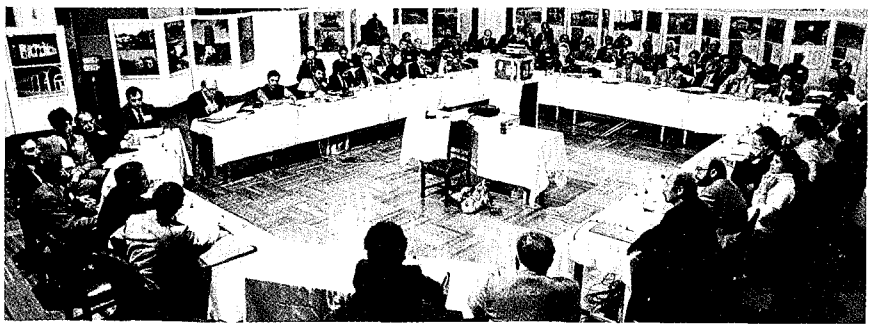
Professor Wu Liangyong (whose marvellous sketches illustrate this News item) is the Dean of Department of Architecture of Qing Hua University in Beijing

Seminar Programme and Participants

Conceived within the framework of China's policy of the "four modernisations" (in industry, agriculture, national defense, and science and technology) adopted in 1978, the seminar had two objectives in the eyes of the local and the foreign organisers. 1 Offer the opportunity to discuss and evaluate through case-study presentations various processes of rural development —

from elsewhere in Asia, Africa, and the Middle East 2. Compare these examples in terms of ideology, of technology and of expertise, with what was actually happening in the field today in China

The keen interest shown in this seminar on the part of the Chinese started at the top, with the presence of H E. Gu Mu, a Vice Premier and Minister in charge of foreign investment, who welcomed H H. the Aga Khan (Chairman of the Award Steering Committee) and participants at the opening session. Physician and renowned writer Han Suyin, with her rich experience of Chinese rural life in general gave a few provocative remarks concerning potential development of biogenetics in the future What may have passed at the time as simply opening formalities in fact set the stage, politically and intellectually for a fascinating series of discussions between Chinese in search of bases for future cooperation with the outside world and the invited specialists who were not at all entirely convinced that the knowledge they brought had a specific relevance for socialist China today



The seminar in session Photograph: C Little

Speakers from abroad, of which there were ten, had been asked in advance to address themselves to three areas of concern in presenting their case-studies: ideology, technology and expertise Pakistani architect Kamil Khan Mumtaz, whose paper *Rural Islam and Change: Case-Study of Cholestan* dealt with problems of indigenous improvement programmes It raised such issues as spontaneous, internally-generated change as opposed to that which is introduced from outside a rural community. Dr Ismail Serageldin, Egyptian economist attached to the World Bank, offered an in-depth analysis of the impact of rapid economic growth on traditional expression in rural architecture of the Yemen Arab Republic The development of government-sponsored agrarian villages in socialist Algeria, on the other hand, presented by Professor Mohammed Arkoun, focussed on the role of urban-based political ideology in attempting reforms within traditional, fragmented, semi-autonomous rural societies.

Among the case-studies was an agricultural training school in Senegal, built with aid from UNESCO, and presented by Mr. Kamil El Jack and Dr. Brian Taylor It discussed 'assisted self-help' as a method of construction, the training masons on site and the introduction of a new building system into the country A special session of the seminar dealt only with technology, such as earthquake-resistant structures, biogas pits, and mud-brick construction The relevance of the Chinese seminar papers, such as the one on the *Development of Rural Housing in China,"* or on *"Improved cave dwellings in Henan"* province was underscored during the ensuing site visits to Shaanxi and Xinkiang provinces

Many of the Chinese architects, academics and technicians on the trek were discovering their own country and its forms of rural habitat for the first time Whether they had been trained abroad as had Professor Yang Ting Bao, president of the Architectural Society and educated at the University of Pennsylvania in the 1930's, or were graduates of local institutions before the Cultural Revolution (there was a noticeable gap in the age range of 25-40 years old), they shared a unique voyage of discovery with their foreign counterparts.

Brian Brace Taylor

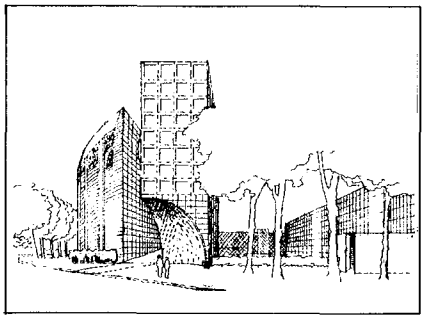
Paris: The Arab World Institute Headquarters Competition

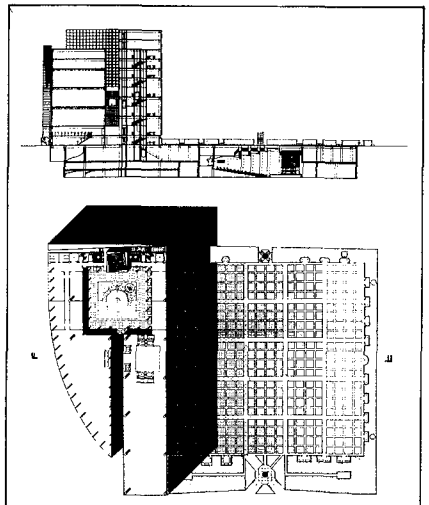
One might have expected just a little better on the part of the newly installed socialist government than its predecessors in setting an example of how the major architectural issues facing us might be resolved Alas, the competition recently held in Paris, which was organised by the Ministry of Culture practically overnight and which gave the invited architects (they were seven) only three weeks to make their proposals, has created even more controversy around the already hotly-debated Arab World Institute.

The creation of the institute itself was essentially a political decision taken following the 1973 Middle-East war, by the previous French administration, in order to "develop and deepen the study, knowledge and understanding in France of the Arab World, its language and civilisation" Nineteen other nations joined in founding the Institute: Algeria, The United Arab Emirates, Bahrain, Dijibouti, Iraq, Jordan, Kuwait, Lebanon, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Somalia, Syria, Tunisia and the two Yemens France agreed to make available land in Paris as the future site for a building, to be designed by a French architect, which would house a library, a museum of Islamic art drawn from France's national collections, and offices of the Institute itself

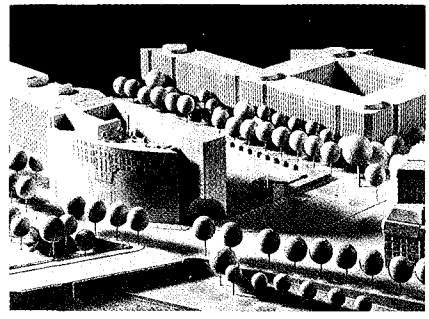
Already the question of taking the collection of Islamic art from the Louvre and depositing it in an international institute raised some eyebrows, but real outrage was vented by Parisians and their presidential-contender Mayor, Jacques Chirac, when the site proposed by the government for the Arab World Institute was a neighbourhood playground near the Seine river. However, an architect, Henry Bernard, produced a design for this site and he is among the most scandalised by the new change of site and corresponding change of architect

In order to find a way out of one thorny political problem, that of the previous site, the new administration offered a prestigious location on the very banks of the Seine in the Latin Quarter, with a magnificent view





Plan and section



Above: Model of the Institute viewed from the north
Above, left: The winning entry for the Arab World Institute Headquarters designed by Jean Nouvel

of Notre Dame Cathedral Situated at the eastern extremity of the Boulevard St Germain, the corner site falls between the ultra-modernist steel-tubular buildings of the Science Faculty and the Pont Henri IV: it is presently occupied by the last remaining (soon to be demolished) structures of the wine warehouses dating from Napoleonic times.

Invited to participate in the closed competition, which was not publicly announced, were seven French architects, all under 45 years old and all from Paris (except one, from Lyon): Roland Castro, E Ciriani, Edith Girard, Yves Lion, Jean Nouvel, Christian De Portzamparc, and Gilles Perraudin (Lyon) Each was offered US$16,000 (80,000 francs) as compensation. It would not seem unfair to note that none of these participants had any previous experience with, or knowledge of, architectural traditions in Moslem lands. (Only one, to our knowledge, called upon a consultant with such experience for aid, and this person happened to be Serge Santelli, whose hotel in Tunisia was featured in MIMAR 2. They were not among the finalists.)

With one exception, the technical review Jury that selected three finalist projects did not possess any profound awareness of Arab culture either. They recommended to the Institute's administrators and Arab ambassadors the projects by Edith Girard, E Ciriani and Jean Nouvel for a final decision. The winning design (presented here) was by Jean Nouvel — and a team of seven other architects — all of whom were founding, activist members of the relatively new syndicate of architects, more sympathetic to the socialist party than was the old order of architects. This fact has led the competition winners and the organisers open to criticism of partisanship.

As to the building proposed by the Nouvel group, which the Arab World Institute is prepared to pay US$16 million (80 million francs) to construct, one finds little inspiration from the architectural traditions of Arab lands Contrary to several other contending projects (e.g. that by De Portzamparc) that included low buildings surrounding interior courtyard, fountains, etc the Nouvel project professes to be "resolutely modern", inspired by "The Athens Charter" as the architect put it (whatever that means). In any case it is two tall buildings (36 metres high) with glass curtain walls. The north wing, intended for the museum, is separated from the south wing, where the library is located, by a narrow ramp leading to a square enclosed area.

Not to be accused of being out of step with post-modernist historicism, Nouvel has provided the north facade with imagery "symbolising in dialectical terms the relation (of the building) with historic Paris": glass bricks suggesting rustication in masonry on lower floors, the upper edges of the glass curtain wall recreating the silhouette of Notre Dame, St. Paul, etc., and on the upper levels, using photographic reproduction on glass and ceramic tiles, representations of architectural elements of old Parisian buildings. When close to the building apparently, these elements will read only as abstract motifs, coming into "focus" at a distance.

The south facade (receiving direct sunlight), not visible in the photograph of the model, contains a "unique technological feat": photoelectric cells activate sun shields across the glazed facade which form geometric patterns inspired by Arab geometry. This electro-artistic feat (attempting to do one-up on the Pompidou Museum) purports to be a contemporary "transposition" of architectural motifs from the noblest examples of Arab design. The marble paving of the open space in front of the south facade has designs which are the mirror reflection of the geometry of the sun shields.

It remains for us to add the Arab World Institute's declared position, which was to approve the 'monumental' character of the proposed edifice, whose Arabness was found present but "impossible to define" Also stated, rather paradoxically, was the wish to have an Arab architect associated with the Nouvel group during construction. To what end, was not made clear.

Brian Brace Taylor

Paris: Earth Architecture Exhibition

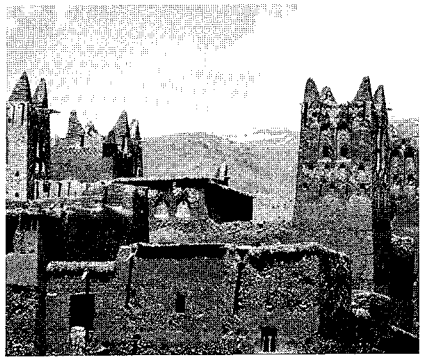
Marketable Mud — how thrilling! It has finally taken place! And where? In Paris, in the most unnatural, even anti-natural building imaginable: The Pompidou Centre, with its peculiar oil-refinery type of architecture. It is an exhibition on *"Earth*

Architecture" and the future of this millenial tradition

I decided that this was one exhibition I really should visit, or rather could not afford to miss. So I found myself on a train heading for Paris, and asking myself a number of questions Why is this exhibition being held? Strange, that it should be in France My mind went back to 1971, just 10 years ago, when a well-known British publisher refused to publish Hassan Fathy's book, *Gourna A Tale of Two Villages* They were not interested because they said it would not sell. Case closed However, it was in France that the book was first published *(Construire avec le peuple, 1973)* outside Egypt after being translated into French, and only later in the U S A. as *Architecture for the Poor* (Chicago) The wave of interest in intermediate technology was rising in 1973 and, one might say that mud-brick was at its crest How far we have come! The question that came to mind was: what is the future of this "millenial tradition" in building, in the middle of a consumer-oriented society that is controlled by big industry's marketing practices?

Is mud brick going to remain the material of the poor and financially deprived? Will the social stigma associated with mud brick continue to force the poor to aspire for materials of industrialised urban society, as the touchstone of "ongoing progress"? How will we teach the poor to love their homes of mud brick and to feel proud to live in them? Explaining to the poor the benefits of mud as a thermal insulator will not make converts Man will continue to hope for a concrete house, that contemporary illusion of security and prosperity, in which he can install an air-conditioner (to complement his radio-cassette and television). Will only deprived people be the ones who feel "condemned" to living in adobe houses?

Or, I asked myself, will mud brick have to be *marketed* for its social status to rise? Purified, insect-repellent, with preservatives added and neatly canned (like California air) or barrelled, and sold only in Health Stores? Maybe this is what the Earth Architecture exhibition is all about Perhaps France is preparing another Vichy or Perrier bottled water industry for mud in order for it to achieve status Is there a really new outlook in architecture, a sign here that the times are changing and that a new cultural movement is starting in France? Can it be true?



Traditional village in Dades Valley, Morocco Photograph: B Taylor

Well, those who have not seen the show have not missed much The best part of the exhibition is the wide selection and variety of photography of buildings from all over the world, also compiled into a catalogue with an interesting introductory text, which is more comfortably read at home However, apart from a hospital built in 1942 by Michel Luyckx in Algeria, some lesser known projects from the 1940's by Le Corbusier, Frank Lloyd Wright and Rudolph Schindler, and more recent examples in the U S A. by Fathy and Antoine Predock, most material was published already elsewhere

The exhibits themselves are made up of models, and of redrawn projects tarted up with pink and mauve cosmetic washes which deserve little commentary The costly models in modern synthetic materials (plastic? polystyrene?) or plaster are better suited to a children's Disney World or, slightly reduced in scale, they might work well in the pastry course of a banquet by a French chef. Table models are great for the imagination as are walk-in life-size ones (even when truncated), but these were unconvincing

No mud in the whole exhibition — save for modelling clay in the children's nursery section Where was the mud, the real earth? Was it absent because it is still unavailable in the supermarkets? Why was there not a single convincing model exhibited with real DIRT, demonstrating building techniques and allowing people to touch and feel earth once again with their hands? When will mud be loved again? Not as a fashion, nor as a 'sensuous' material, nor as an ultimatum for the poor, nor just for its "thermal qualities" This material is part of us, part of our being, and could have an important role for the future habitats of mankind.

Abdel Wahed El-Wakil

Abdel Wahed El-Wakil is an Egyptian architect who spends his time between England and Egypt and is designing buildings in the Middle-East His work was featured in MIMAR 1

Singapore: Mimar Competition Jury

The first Mimar design competition, announced in our first two issues, has brought responses from a number of countries: Bangladesh, The Peoples' Republic of China, India, Mexico, Malaysia, Pakistan, Singapore, and the U S.A The entries, a majority of which are from students are due into our office by the 15th February, 1982

An international Jury of four members will select the winner(s) The following are the Jury members:

Emilio Ambasz, the Argentinian designer, is presently working in Italy and the U S A Mr Ambasz is the president of the Architectural League of New York and has won a number of international prizes for his industrial, book and architectural designs

Charles Correa, the well-known Indian architect, is also a member of Mimar's board of advisors Mr. Correa practices in Bombay and has designed buildings all over India; he is also a visiting faculty member at several universities in both the U.S A and Europe

Ghazi Sultan is a Kuwaiti architect Mr Sultan is in private practice and has in the past few years been developing criteria and methods by which to judge architecture in the Third World

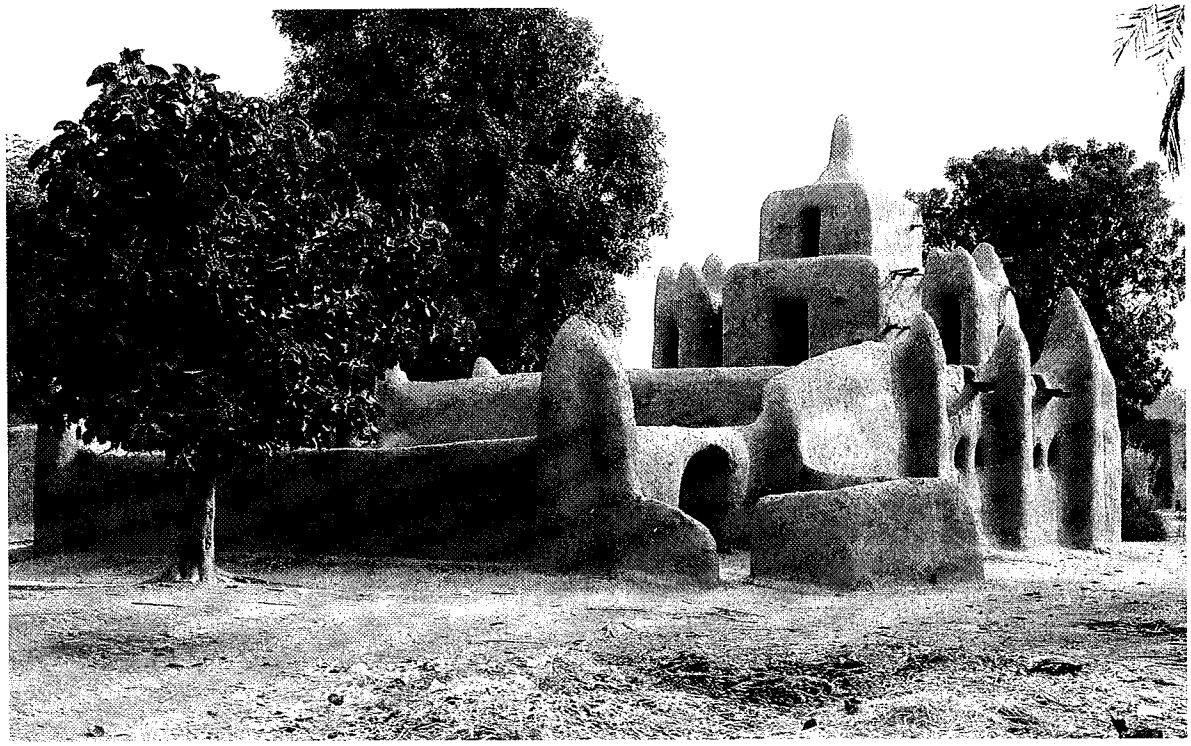
Professor Parid Wardi Sudin, of the Universiti Technologi Malaysia in Kuala Lumpur, is an educator interested in appropriate technologies for rural development and design for South-East Asia

Winning projects will be published in the July-September issue of this magazine.

Hasan-Uddin Khan

Back to
Table of contents

MIMAR GALLERY



Magnificent Mud: Mosques in Mali

In the history of Islam in Africa south of the Sahara, Islamic forms have been incorporated by indigenous Sahelian cultures into a striking architecture — a syntheses of Muslim and African concepts. In the process these cultures have added a new dimension to their own existence.

Islam came into West Africa in about 9th century. The earliest known West African mosques date from this period and are tentatively associated with ancient Ghana and Awdaghost. Ancient Ghana fell in the 11th century and it was not until the rise of the black Muslim Kingdom of Mali, in the 13th century, that Islam spread to the savanna region and the Djenné-Timbuktu area became the centre of Islamic influence.

New York based photographer Carollee Pelos and architectural historian Jean-Louis Bourgeois work as a team. The photographs shown here are the fruits of their treks across West Africa. Having recently mounted an exhibition in New York entitled "Spectacular Vernacular: Traditional Desert Architecture from the West Africa and Southeast Asia", they are collaborating on a book on the same theme. All photographs are copyrights and used with their permission.

Here MIMAR presents a selection of images of five mosques in Mali There are of course other great mosques in Mali, such as the ones in Timbuktu, Mopti and Gao, but those pictured here are, to our mind, representative of the architecture of the Sahel. Editors

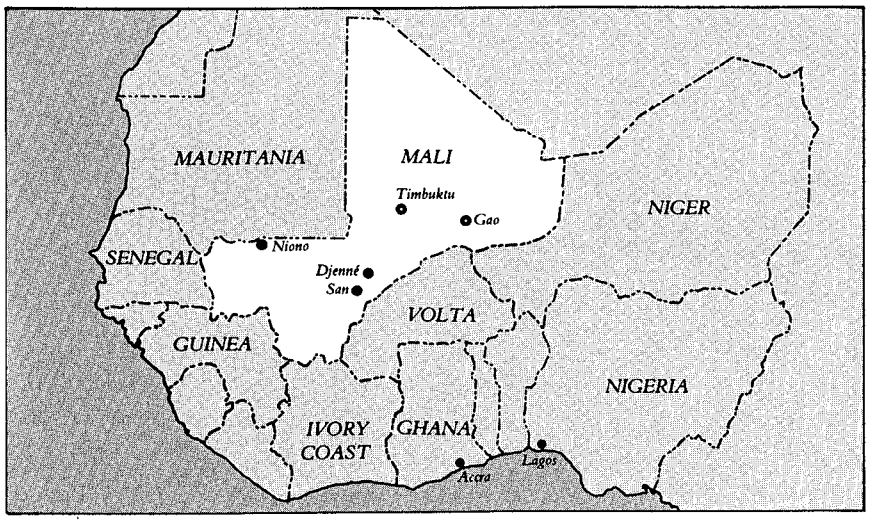
Picture above: Mosque near Niono, Mali

The Sahel is a vast region with little rain, sparse vegetation and a rich, distinctive architecture. The form of the Sahelian mosque is unique: horizontal wooden sticks stud massive towers; mud-plastered walls and pillars are topped by tapering pinnacles, the highest of these often capped in turn, by ostrich eggs.

The contrast between the Mali Sahelian mosque and the classic Middle Eastern mosque is striking. In the classic mosque the earth is brilliantly denied; dazzling colours and exquisite daring masonry produce airy jewels. Since in Mali stone is rare and timber is too scarce to fuel brick or tile kilns, construction is of sun-baked brick finished with mud-plaster. The mosque is closer to the earth: its colour and blunt massiveness echo hers.

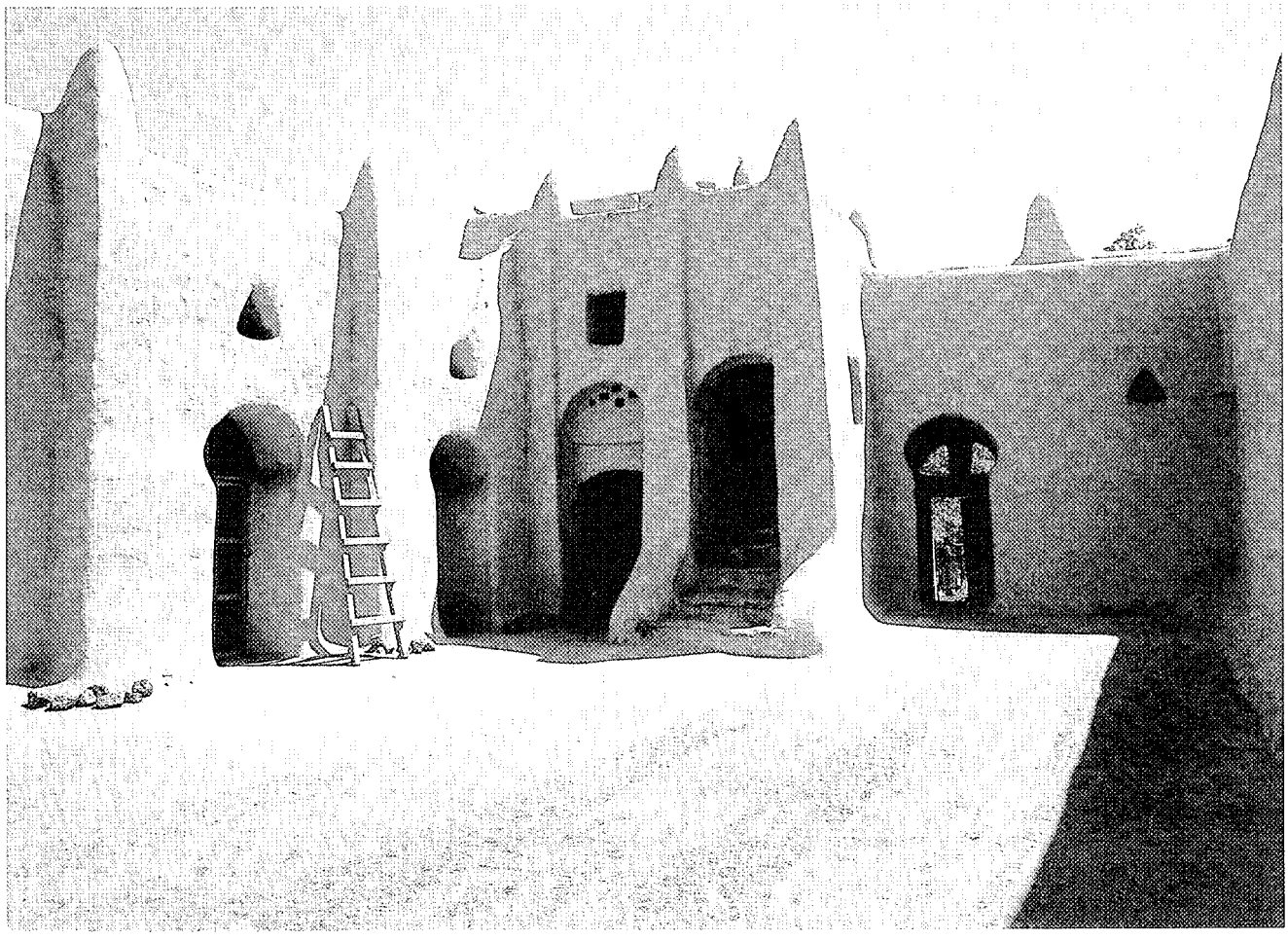
Because the rainy season tends to be short, the buildings need minimal, though annual repair With proper continual maintenance, some of the mud structures in the region have stood for over a hundred years. The carefully spaced sticks, which bristle from the walls, form permanent ladders to provide access to exterior surfaces for replastering. The ostrich eggs also have a practical use — they protect points of the building particularly vulnerable to the rain. The sticks and eggs play important visual roles — behind and below them every surface and contour is moulded Though they often reach toward the hard purities of symmetry and geometry, the forms never attain them. They remain gentle and from the hand!

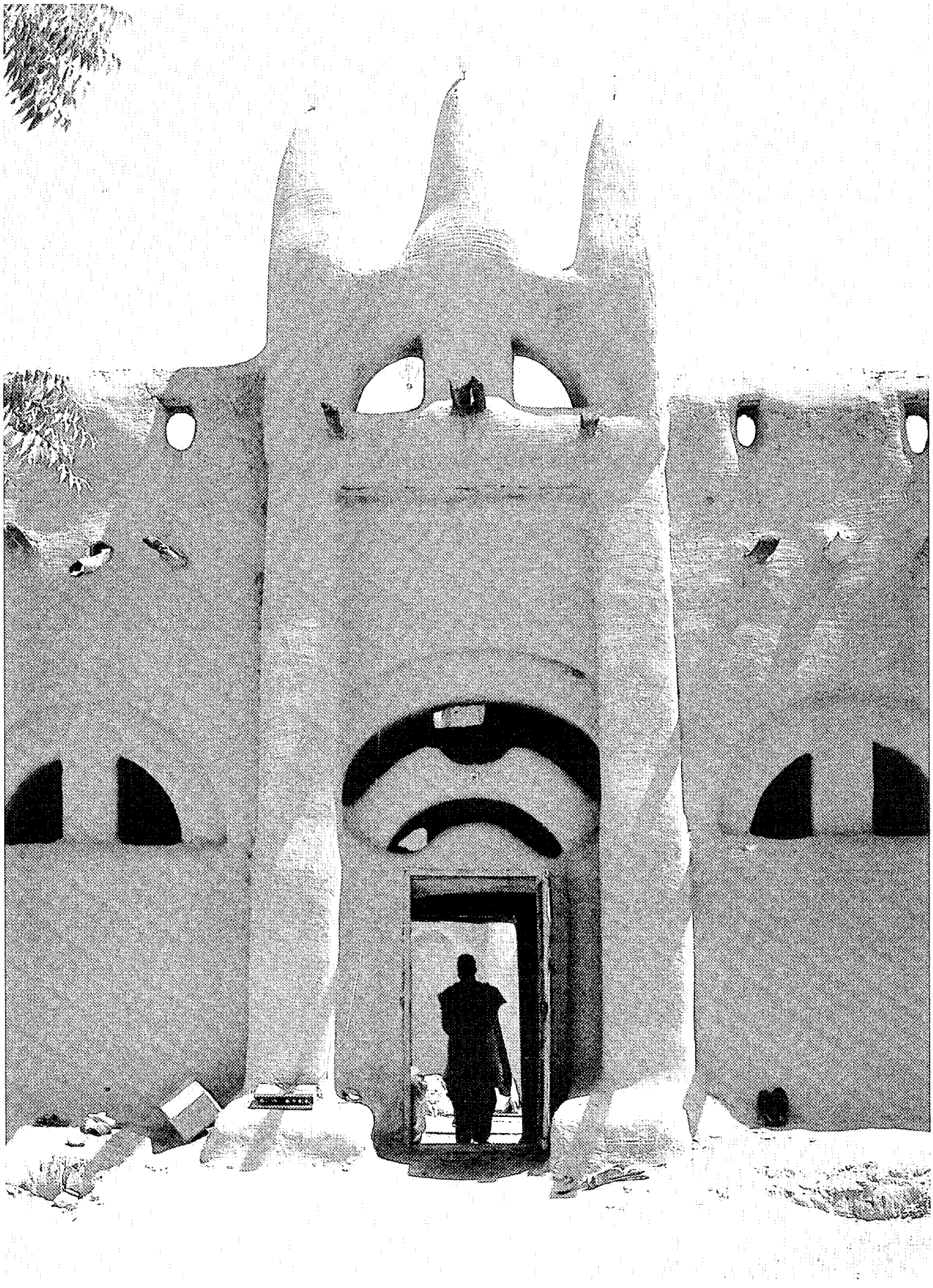
Perched on these relaxed masses the sticks and their shadows are abrupt and angular and the eggs dramatic in their smooth perfection Conspicuously unsculpted, they accent by contrast the sensuousness of the magnificent buildings they help sustain.

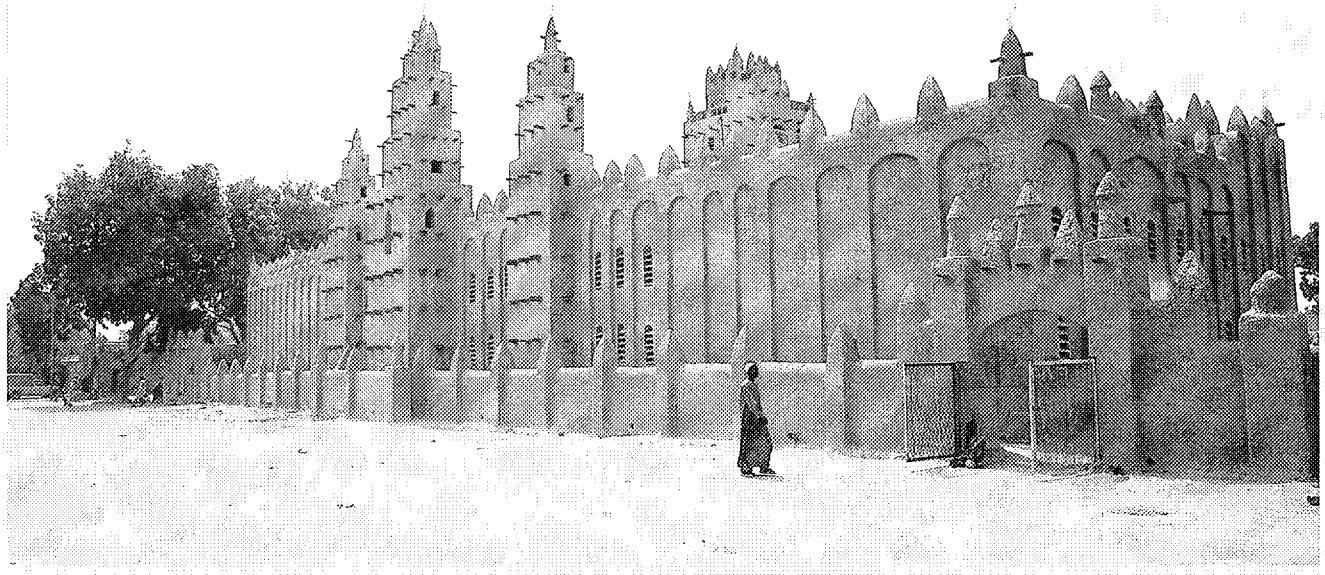


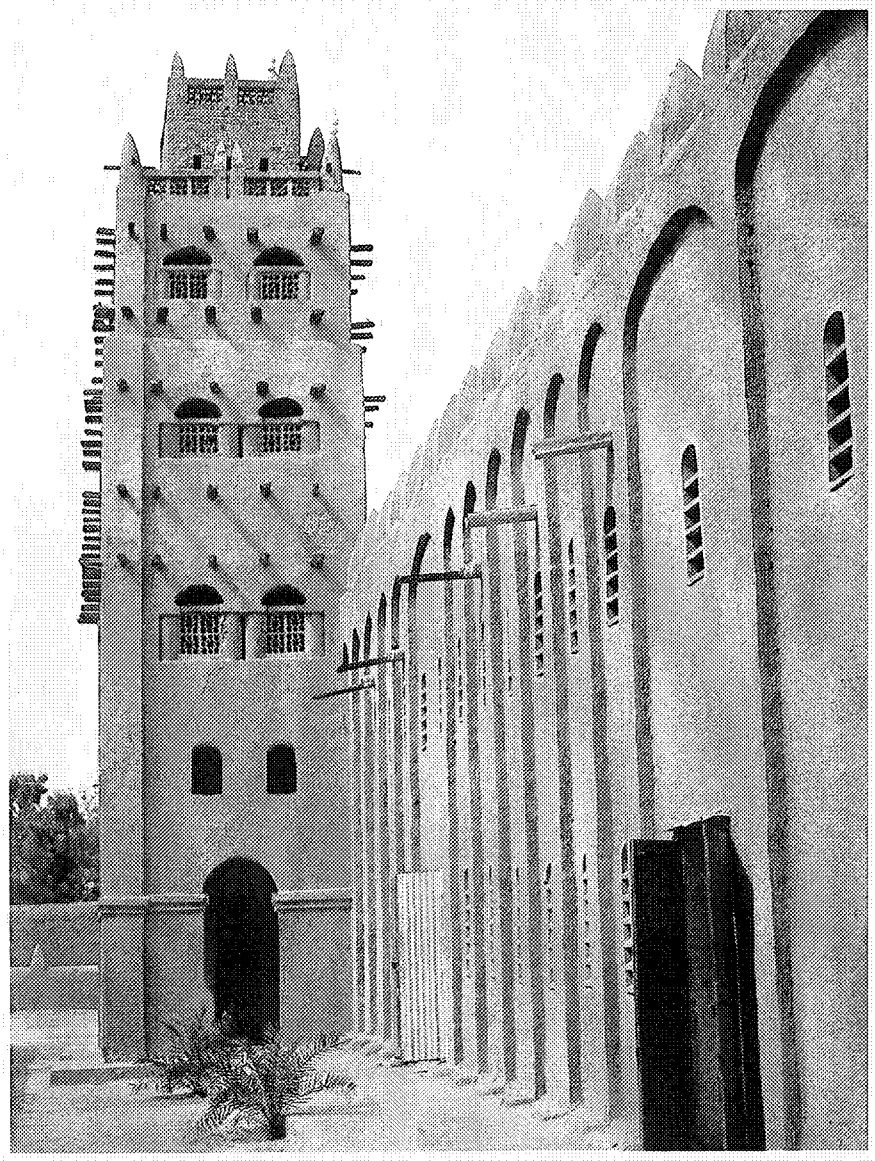
San Mosque

Below: The interior courtyard of the mosque at San (date unknown), with entrances to the prayer hall to the left.
Right: Mosque at San, showing the main entrance on the west facade The entrance replicates the shape and form of a classic pagan African Dogon mask.



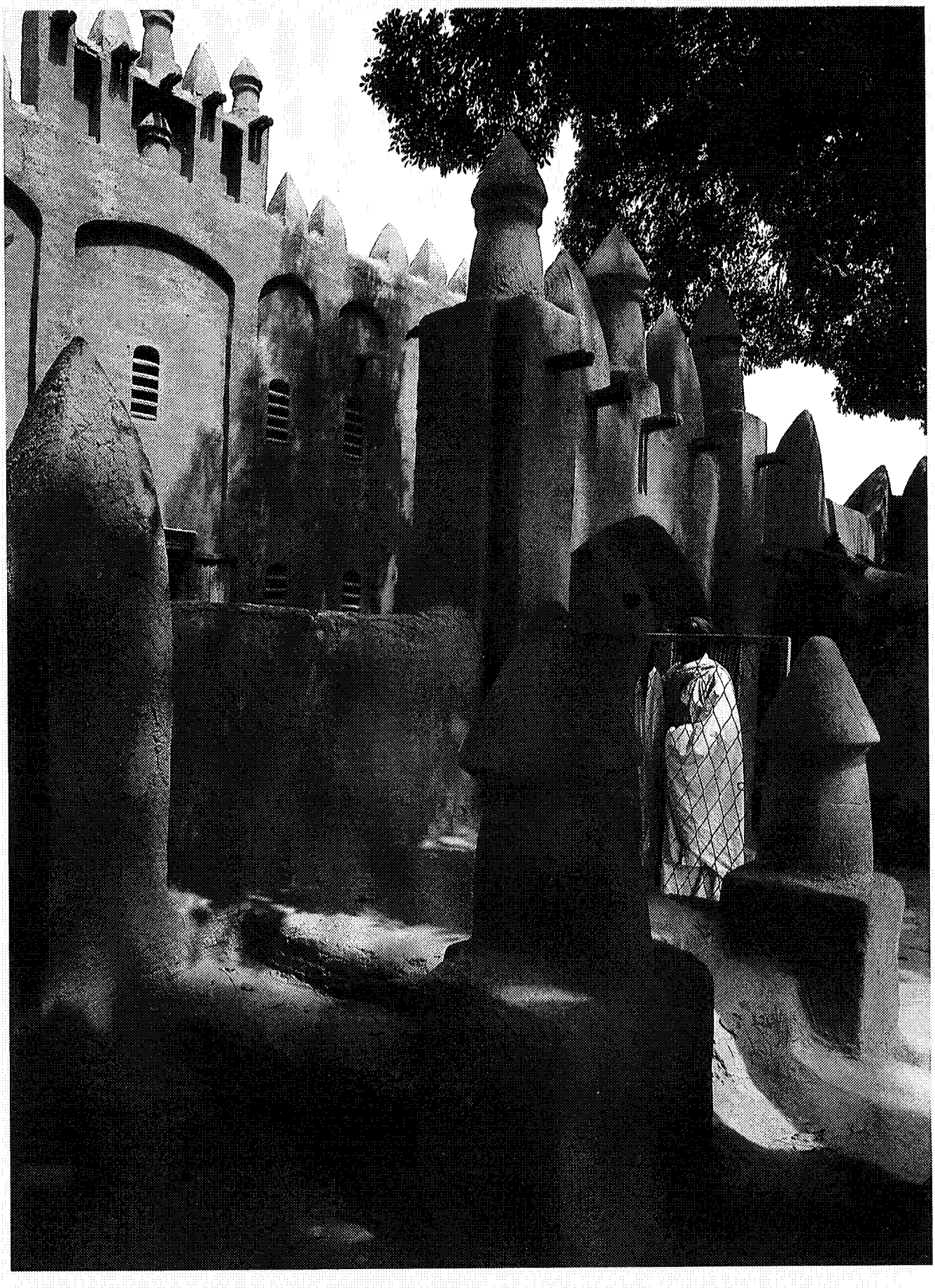


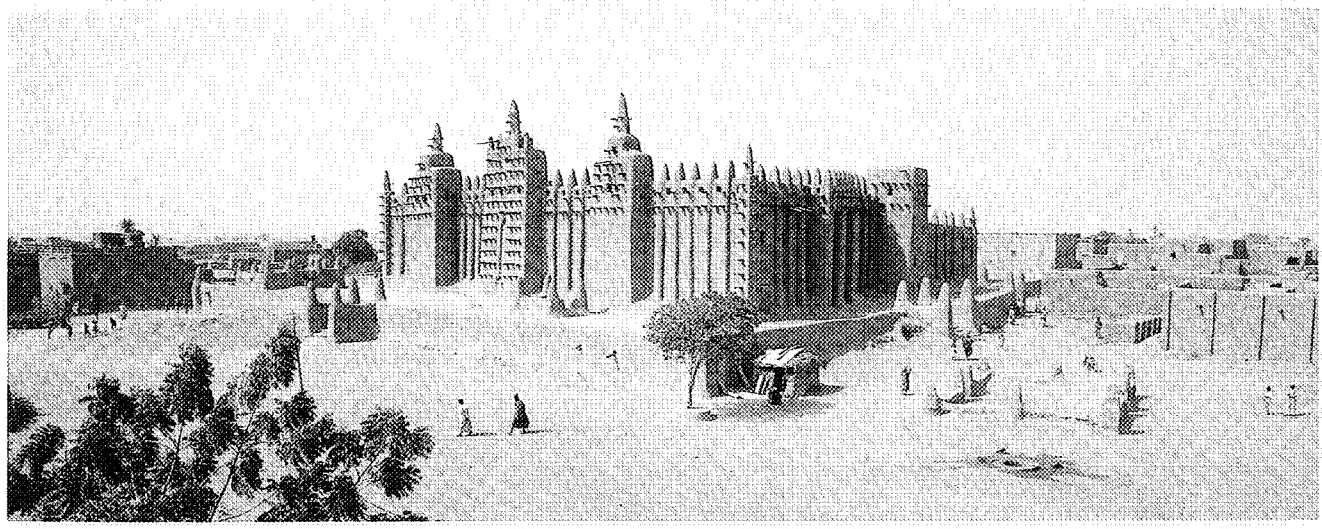


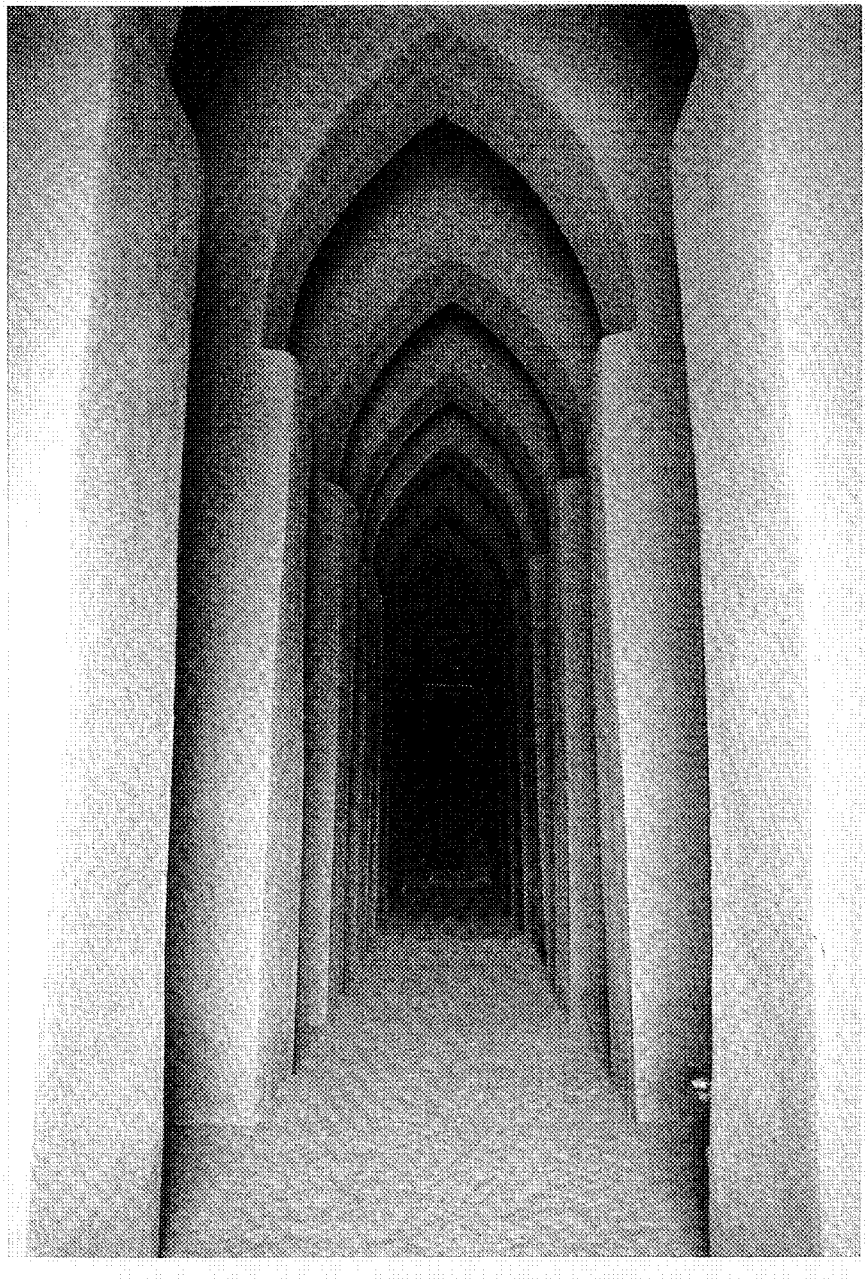


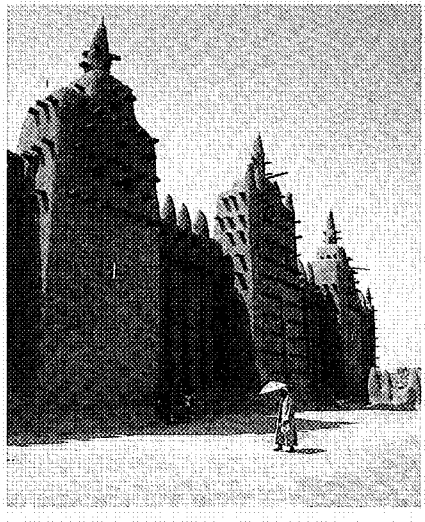
Niono Mosque

Above: The mosque at Niono built in 1957, the east facade measures 162 feet in length
Left: The courtyard tower of the mosque at Niono. The tower, six-stories tall (about 150 feet), is of sun-dried brick, only the platform and parapet at the top are of kiln-baked brick.
Right: The south entrance to the Niono mosque with 'guarding pillars' "The first monument in Sahelian architecture is the ancestral pillar which marks the centre of the indigenous universe. The ancestral pillar, one unrelated to Islam, has been transformed over time and incorporated into an architectonic creation which is a symbolic expression of a new conceptual order. But the form itself, and the names by which people designate it in two different contexts, remains the same" (L. Prussin in Architecture in Islam, Aga Khan Awards for Architecture, 1980)







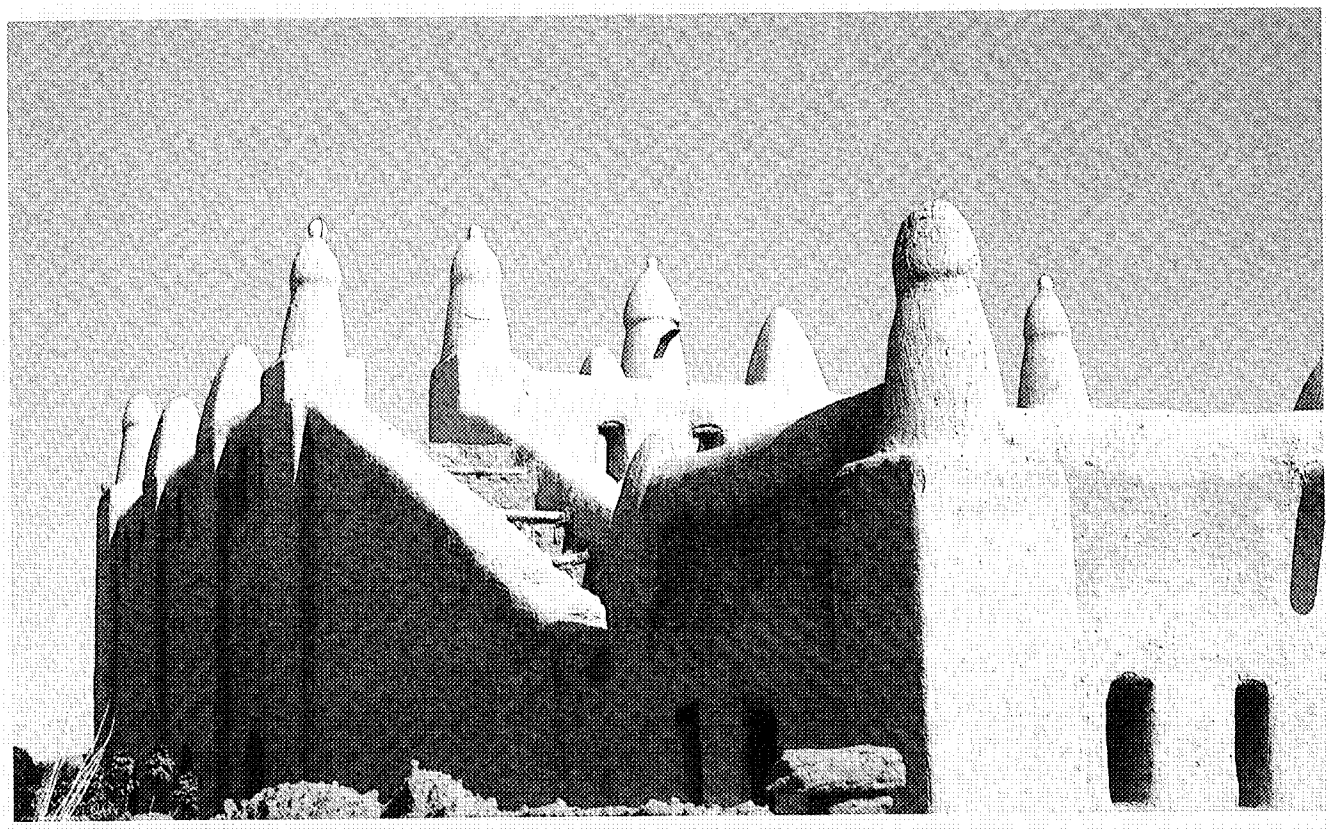


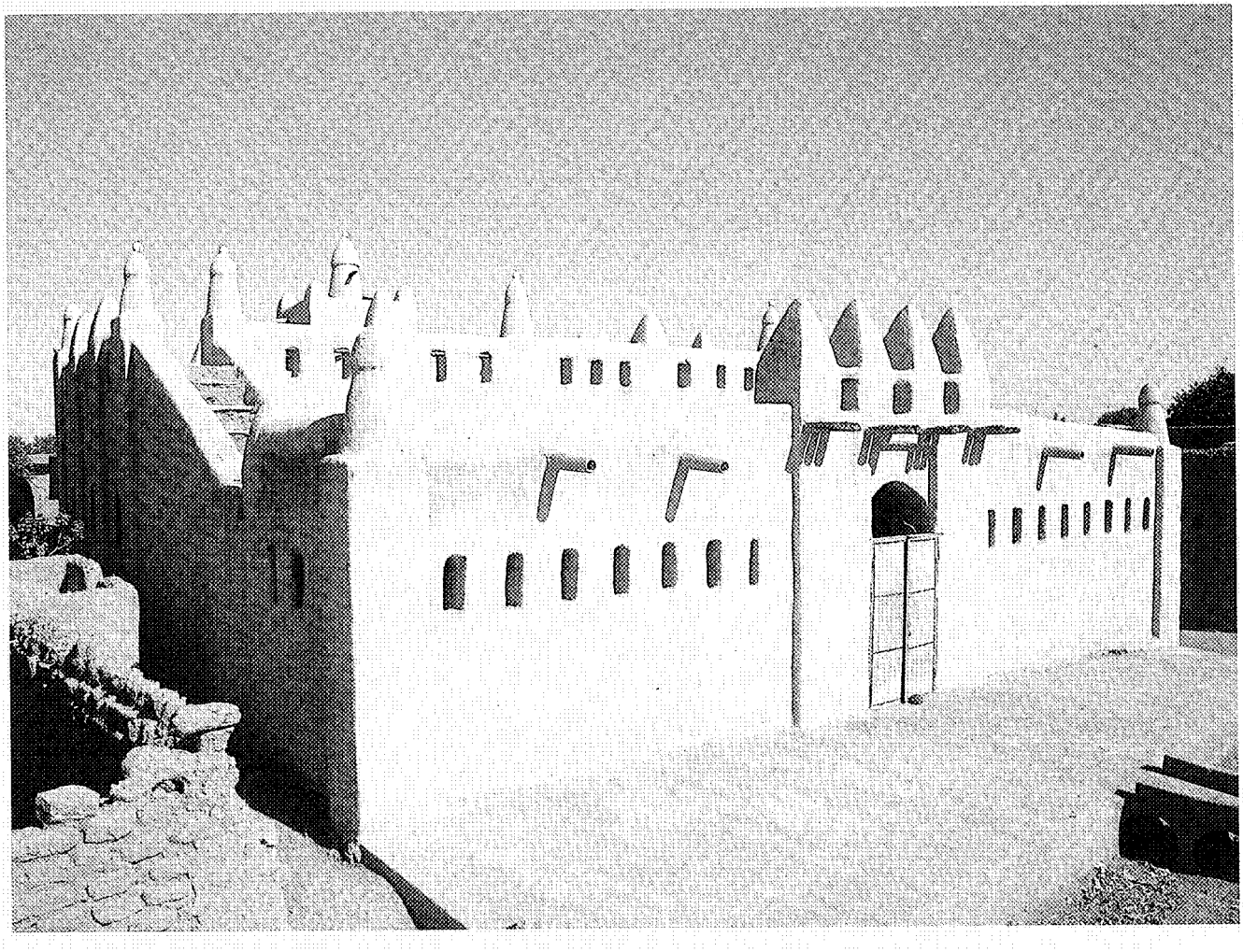
The Great Mosque of Djenné

Top: The Great Mosque of Djenné. The present mosque was built under the aegis of a French administrator in 1907 on the consecrated site of an earlier mosque. It represents the beginnings of an 'official' ethnic style — widely adapted throughout this region The earlier building was largely demolished about 1830 by the Masini-Fulani leader, Sheku Ahmadu. No certain date can be given for its foundation, although the 14th century seems likely.
Above: The east facade of the Great Mosque of Djenné shows how the ancestral pillar has been transformed into the buttresses and Mihrab.
Left: Interior of the Djenné Great Mosque

Titama Mosque

Right, top: Detail of the moulded earth steps leading to the roof of the Titama village mosque.
Right: Mosque at Titama village, built in 1981 continues the tradition of larger mud mosques.



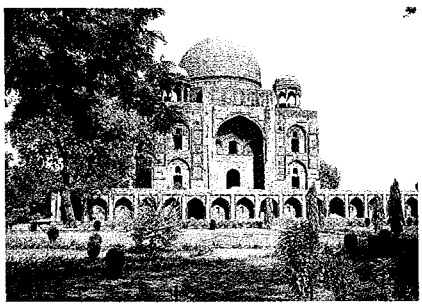


Back to
Table of contents

FEEDBACK

I have just received the first issue of Mimar Magazine I must say it is exquisite, beautifully produced and, I am sure that every issue will be a collector's item. Indeed, it fills a long-felt gap regarding the role of Architecture in the development quest of countries like India, Indonesia etc.

My hearty felicitations and best wishes for the success of this bold new venture.



With some curiosity and delight, I read the article on *Delhi: System of Landscaped Areas:* Much as I appreciate your bringing this significant feature of Delhi's development, I must say that the main point seems to have been lost sight of: The Scheme involving linking the past seven *Dillis* through a system of landscape linkages has several aspects; one is of course, to bring into focus the known as well as the less-known archaeological monuments representing the various phases in the evolution of India's Islamic Architecture in Delhi; the other and, perhaps even more important, to bring through this system of green linkages the architectural heritage back into the mainstream of contemporary life to enable the present generation to appreciate and enjoy the shared heritage and composite culture. Not only that, in order to reaffirm the relevance of these monuments in today's life, continuous system of green open spaces, parks, gardens, orchards and green belts have always to be kept live and green thus providing a significant facility for the present generation. I wish this point was brought a little more clearly in your article on Delhi. I believe our planners' attempt in Delhi is unique in its conception as also of its systematic effectuation by Delhi Development Authority At least, I do not know of any example anywhere particularly in the Third World, of a sustained effort of this kind.

I wish also to point out that the drawing showing some shaded areas around Jama Masjid (on page 65 of MIMAR 1) is misleading. It is true that quite a large number of junk shops and other incongruous activities and trades were cleared from and in-between the three grand stair-cases around Jama Masjid during 1977: there was no eviction of any family from this area Moreover, all the shops except for the junk dealers, were rehabilitated in the Meena Bazaar specially built on the eastern side of Jama Masjid The fact however, remains that no residential area as such was cleared anywhere near Jama Masjid in that operation Since, I was one of the main critics of the manner in which this operation was conducted, I should take this opportunity to correct the record.

Sayed S. Shafi
New Delhi, India

Mr Sayed S Shafi is the Chief Planner of the Town and Country Planning Organisation of the Government of India He is one of the main planners responsible for the Landscaping programme in Delhi

---

First of all I want to congratulate you and your colleagues for the publication of MIMAR. The news and the discussed problems are of great importance, and are both enlightening and very useful, giving the opportunity to create a new basis for developing common attitudes in different parts of the Islamic World.

I believe that the matters studied in Theme Introduction, Technology and Image: Architects' Roles are worthy of interest and I feel that I should put down my thoughts using the created opportunity.

The efforts of the Islamic countries which are struggling to restore or reconstruct their Islamic personalities which were destroyed in the 19th century, should be seriously sustained by everyone Such efforts succeed only with a deep understanding of the problems and the implementation of very carefully designed programmes. The way to the future is a difficult one; sharper than the sword and thinner than a hair.

The Islamic science of practice — *Ilm i Amel* — is the direct reflection of Islamic belief. Submission to the will of the unique all powerful Rahman and Rahim "Allah", determines the totality of Islamic practice, *Amel* Thus in every incidence we should remember the basic Islamic principles. The unity of existence — *tawhid* — should dominate and control efforts for the development of our new Islamic architecture

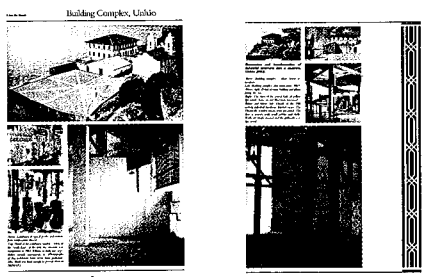
For the unity of the Islamic World we need carefully developed and universally valid solutions while being aware of local constraints. It is clear that our architectural research should be closely related to the religious, philosophical and moral problems we face today.

I believe that MIMAR will accomplish a real mission for a better future

Turgut Cansever
Istanbul, Turkey

Mr T. Cansever is one of Turkey's foremost architects

I am a layman, only peripherally interested in architecture. I bought MIMAR 1 while browsing through a bookshop and found it both interesting and visually very beautiful. I have just obtained your second issue and think that it is even better than the first.



I am glad that someone is covering architects and design in Asia. I was surprised to see your section on women architects — bravo! It's about time that the work of women is considered seriously in the Third World. Your photographs are good: in particular the ones illustrating the Tunisian Hotel were excellent. I also enjoyed reading your editorial, free of professional jargon and easily comprehended by non-architects like myself.

I have just subscribed and also sent my architect brother-in-law a gift subscription.

I wish you success

Shoaib Quraeshi
Singapore

Mr Quraeshi is the operations controller for Texas Instruments in Singapore

Back to
Table of contents

Editor's Notes

On three occasions last year, MIMAR's editors visited the People's Republic of China, resulting in this issue which concentrates on rural and Islamic North Chinese architecture.

In mid-October 1981, a significant event for Third World architecture took place in China: a major international architectural seminar was held in Beijing on "The Changing Rural Habitat", sponsored by the Aga Khan Award for Architecture and hosted by the Architectural Society of China. The four-day meeting was valuable in itself, but the subsequent visits to Xinjiang via Xi'an were unprecedented. It was the first time that a group of foreigners had been allowed to visit Kashi (formerly Kashgar). For journalists, diplomats and tourists, the area — just some 60 kilometres from the Russian and Pakistani borders, on the historic Silk Route — is still out of bounds. It was quite amusing to see the local population, which turned out en masse, gaping at the visitors rather than the other way around! We thank the Aga Khan Award for its invitation to the whole event.

Assisted by photographer Christopher Little and by members of the Chinese Architectural Society, we present a tapestry of present-day building.

Before the Cultural Revolution (1966-76) architects were preoccupied with meeting basic needs, while during the Cultural Revolution, formal architecture played almost no role. Many of the public building projects built in the 1960's and 70's, I was informed, were not designed by professionals. The present period is one of cautious emergence of architecture as a profession and architectural thought as a contribution to the physical environment. Theories and ideas for a new Chinese architecture are in their infancy.

The towns and cities of China have only recently drawn up master plans to cope with increased populations, developing services, and rising expectations. But the villages and the rural communes, where 80% of China's peoples live, present the real focus and challenge for architects and planners in shaping the future habitat. The latter are pursuing the development of the infrastructure, housing and economy of the rural regions *with* the participation of local inhabitants — a worthy major goal of the rural building policy.

The task is yet far from clear in definition and is a stupendously difficult one in a country of over a billion people. China, like most developing countries, must decide on the direction of its building programme. There is the desire to be 'modern', as evidenced by new public buildings and flats. In the main these buildings copy either the European architecture of the 1950's or the monumentality of 1960's Russian buildings. These uneasy manifestations of borrowed forms dominate the Northern cities of China to produce an aesthetic alien to the magnificent indigeneous traditions. The Chinese people may indeed have felt it necessary to deny the past during the early stages of their country's liberation, but now appear to be evaluating the past again to produce buildings that synthesise tradition and culture with the present and future needs of the people.

In housing, the urban solution adopted is one of high-rise flats ... walk-ups of seven or eight storeys line city streets. In rural areas too, where conservation of agricultural land is an important factor, two storey row housing has been developed to replace the more scattered traditional individual units. Architects feel that this rural architecture should reflect regional differences and styles. In practice, unfortunately, the type-plans circulated as suggestions are often adopted in toto by local communities without the thoughtful adaptions to local conditions envisioned by central and regional planners.

As depicted by the editorial cartoon opposite, the present aspirations of architects can be at odds with those ordinary people who have come to see tall urban structures as symbols of progress! This attitude of course poses a problem in many different parts of the world but in China, at least, the government and architects are sensitive to the issue, and are approaching it both realistically and as sympathetically as they can given the situation of having to build tens of thousands of houses every year.

This issue of MIMAR also offers the first of a series of articles by Udo Kultermann on contemporary Arab architects and a column by Renata Holod, On History, which will appear from time to time. The Mimar Gallery features the mud buildings of Mali as an example of a traditional culture's alternative to the Westernised aesthetic of contemporary architecture.

As of yet, we have no formal distribution in many countries although we are working on expanding our network. The publication is somehow getting around, however, as evidenced by responses from people in countries where we have no distribution at all. Some five hundred copies are also being distributed in China: we hope for valuable feedback from there as well. If you have any problems in buying this magazine, we recommend that you write to us in Singapore and arrange for a direct-mail subscription from here.

People from the Third World are responding enthusiastically to the magazine and want to participate in the exchange of information and ideas. We hope that with this issue on China we will expand such an exchange to another exciting, dynamic, and immensely important country and culture.

Hasan-Uddin Khan
Editor-in-Chief