TRADITIONAL DWELLINGS AND SETTLEMENTS REVIEW

The International Association for the Study of Traditional Environments (IASTE) was established at the First International Symposium on Traditional Dwellings and Settlements held at Berkeley in April 1988. IASTE is an interdisciplinary forum where scholars from various disciplines and countries can exchange ideas, discuss methods and approaches, and share findings. As opposed to disciplinary associations, IASTE is a nonprofit organization concerned with the comparative and cross-cultural understanding of traditional habitat as an expression of informal cultural conventions. IASTE's purpose is to serve as an umbrella association for all scholars studying vernacular, indigenous, popular and traditional environments. Current activities of IASTE include the organization of biennial conferences on selected themes in traditional-environments research, the publication of edited books on selected themes, a public outreach program which includes supporting films and documentaries, and the publication of the Traditional Dwellings and Settlements Working Paper Series, which includes all papers presented at IASTE conferences and accepted for publication.

Traditional Dwellings and Settlements Review is the official publication of IASTE. As a semi-annual refereed journal, *TDSR* acts as a forum for the exchange of ideas and a means to disseminate information and report on research activities. All articles submitted to *TDSR* are evaluated through a blind peer-review process. *TDSR* has been funded by grants from the Graham Foundation, the Getty Publication Program, the National Endowment for the Arts, the Center for Environmental Design Research, and the office of the Provost at the University of California at Berkeley.

IASTE membership is open to all who are interested in traditional environments and their related studies. In addition to receiving the Association's semi-annual journal, members are eligible to attend the biennial conference at reduced rates. Subscription to the journal is available only with membership in IASTE. Domstic annual order rates are as follows: Individual, $50; Institutional, $100; Corporations, $160. Foreign members add $15 for mailing. Libraries, museums, and academic organizations qualify as institutions. Subscriptions are payable in U.S. dollars only (by check drawn on a U.S. bank, U.S. money order, or international bank draft). Send inquiries to:

TRADITIONAL DWELLINGS AND SETTLEMENTS REVIEW

Journal of the International Association for the Study of Traditional Environments

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COVER ILLUSTRATION: A Dogon village on the Bandiagara Escarpment. Photo by Trevor H.J. Marchand.

Editor's Note

Every six months I write to you, the members of IASTE and subscribers to the journal, to report on current events and to the introduce the research that is being published in the journal. This time I also have to write about a sad event. Prof. Jeffrey Cook, one of the founding members of IASTE, passed away in March. The news of his death took many of us who saw him in Hong Kong by surprise, as he was indeed in decent health. Jeff has served for the last ten years on the IASTE Advisory Board, and was a regular reviewer of articles for *TDSR*. He frequently bragged about being one of a few members who had not missed a single IASTE conference. Jeff will be sorely missed, and I wish to convey to his family the condolences of the entire IASTE membership.

This issue of *TDSR* contains four feature articles. First, Martin Beattie investigates attitudes toward disease in colonial Calcutta. His article traces the formation of an intertwined Western narrative of health and modernity in that city, with specific reference to an indigenous market area known as "Barabazaar." Next, in "Drawing Boundaries: Vernacular Architecture and Maps," Marcel Vellinga argues for the analytic potential of maps in expanding the discourse on vernacular architecture. Vellinga is currently helping prepare a *World Atlas of Vernacular Architecture* that will serve as a companion to the *Encyclopedia of Vernacular Architecture of the World*. Third, in "A Mediterranean Jewish Quarter and Its Architectural Legacy: The *Giudecca* of Trani, Italy (1000–1550)," Mauro Bertagnin, Ilham Khuri-Makdisi, and Susan Gilson Miller discuss a city that was once home to a significant minority population of Jews. A conception of Jewish separation, even isolation, has been central to the study of late-medieval and early-Renaissance cities in Italy. However, this research uncovers elaborate spatial arrangements in Trani that are indicative of a far more open form of coexistence. The fourth feature article is Trevor Marchand's "Bozo-Dogon Bantering: Policing Access to Djenne's Building Trade with Jests and Spells," which examines the use of interethnic bantering to control access to the building trade in Mali. Marchand bases his article on two seasons working shoulder to shoulder with teams of Bozo masons and Dogon laborers, who together are largely responsible for perpetuating the noted *style-Soudanaise*.

Our last article, in our "On Design" section, presents an examination by Susan Ubbelohde of Le Corbusier's Sarabhai House in Ahmedabad, India. The article tracks the experience and performance of the house through a typical day, showing how it embodies a deep level of climatic response and cultural understanding. Although Le Corbusier was a modern architect, Ubbelohde describes how this house interprets traditional strategies and, ultimately, allows its inhabitants to "dwell" there during the harsh north Indian summer.

Finally, I would like to mention that the site for the next IASTE conference is currently being decided, with a majority of the board members preferring Sharjah/Dubai. A theme is also being developed along lines that recognize that today we are dealing with post-traditional societies in post-global era. I hope you will all respond to the call for proposal that comes out with the next issue and that you will propose appropriate sessions and papers. Until then, keep well.

Nezar AlSayyad

Colonial Space: Health and Modernity in Barabazaar, Kolkata

MARTIN BEATTIE

This article investigates colonial attitudes toward disease in the indigenous parts of Kolkata, focusing on a market area called "Barabazaar." Through the health and planning reports produced by the British authorities, it explores the construction of the "urban history of Kolkata" and the formation of an intertwined "Western" narrative of health and modernity. Concluding, it argues for a hybrid notion of modernity that offers "other" possibilities, one which acknowledges the huge part played by the indigenous population in the urban history of Kolkata.

In his *Colonial Urban Development*, Anthony King proposed a theory of colonial urban development to explain the political, economic and cultural processes that gave rise to new cities in colonized territories.[1] Colonial cities were, according to King, important sites in the transfer of modern capitalist culture to new worlds. Evidence of this process could be seen in the architectural form (the transfer of European architectural styles) and planning of such cities, which regularly mimicked the cities of their imperial rulers. King wrote that colonial cities also operated as important sites in the deployment of technologies of power through which indigenous populations were categorized and controlled. In particular, town-planning regulation became the mechanism by which colonial judgements of cleanliness and modernity were realized on the ground. Indeed, it was in the name of the ideal city that many of the most comprehensive colonial territorializations and displacements occurred, and that the most rigid policies of segregation were implemented. In Kolkata, the racial division of the "black" and "white" towns illustrated just such segregation.[2]

However, Swati Chattopadhyay has also argued that colonial "black" and "white" towns were far from autonomous landscapes, and that the economic, political and social conditions of colonial culture penetrated the insularity of both. She wrote that "the dependence on natives for services made the most intimate spaces of European residences accessible to the natives . . . [while] the opaqueness of the native town was infiltrated by the administrative arms of the British government — the census and the police."[3] Arguably, King's ideas have lacked an approach to reading place that can encompass these overlapping geographies, both indigenous and foreign. A similar observation

Martin Beattie lectures in architecture at the University of Newcastle upon Tyne in England.

might be made with regard to mixed narratives of the present day, that are constantly being negotiated.

What such readings echo is the notion of hybridity, which has become a key concept within the field of postcolonial studies. Within the context of India, the work of Homi K. Bhabha is routinely cited as pointing to the importance of such identities. In his seminal book *The Location of Culture*, Bhabha argued for a theoretical position which might escape the polarities of "East" and "West," "self" and "other," "master" and "slave" — a position "which overcomes the given grounds of opposition and opens up a space of translation: a place of hybridity."[4] According to Bhabha, histories of place and identity must acknowledge other possibilities. These must include contradictions and biases (that may still be present) which undermine the ideal of a linear narrative of progress, and instead open up a view of history as disjointed and discontinuous. With regard to the history of Kolkata, such competing visions have been presented by only a few scholars.[5] But it is within this framework that I will attempt here to relate colonial attitudes to health and modernity in Barabazaar.

COMPETING VISIONS OF MODERNITY IN BARABAZAAR

Once affectionately named "Buro" Bazaar for "old" Lord Shiva, Barabazaar (or the "Great Bazaar") was the oldest and richest bazaar in Kolkata, predating the British arrival in Bengal (**FIG.1**). Indeed, the bazaar's established presence may have been part of the reason why the British decided to establish a trading post on the site of the modern-day city of Calcutta. The British presence began with Job Charnock's decision to set up a factory at Sutanuti, where he landed on August 24, 1690.[6] And as early as 1738 the existence of Barabazaar was traced by Robert Orme.[7] Meanwhile, the earliest known plan of Kolkata, drawn in 1742 by Theodore Forresti and John Ollifres, shows a gated Barabazaar, here called the "Gran Bazaar," in north Kolkata (**FIG.2**). J.P. Losty has written that this "suggests it was already walled at this time."[8]

Historians tell us that during the eighteenth century a "white" town developed in and around Fort William, south of the center of Kolkata (**FIG.3**). However, following the sacking of Kolkata by Siraj ud-Daula in June 1756 (and its subsequent recapture by Colonel Robert Clive on January 2, 1757), work began on a new Fort William on the site of the village of Gobindapur. While the village residents were given compensatory land in the Barabazaar-Sutanuti area, the jungles and marshy lands between Gobindapur and Chowringee were cleared with a view to obtaining free firing space around the fort. And when the fort was completed around 1773, its southerly location and the removal of the original local population to Sutanuti reinforced the southward thrust of the European part of the city. This racial division was sealed by a gradual withdrawal of the English from the

FIGURE 1. *View of a street in Barabazaar. Captain R. Jump,* Views in Calcutta, *"Burra Bazaar," Parbury and co. Ltd., London, 1837. By permission of the British Library, X446 pl III.*

Barabazaar-Sutanuti area, as the European colonial city turned its back to the Indian north (**FIG.4**).

As well as military expediency, what this process hinted at was the modernizing mission of British colonialism, which had started to institute a vision of civil society in Bengal and India. This was also highlighted by the debate over education. At one extreme, Thomas B. Macaulay's infamous "Minute on

FIGURE 2. *Earliest known plan of Kolkata. Theodore Forresti and John Ollifres,* Plan of Calcutta and the Adjacent Country, *1742. By permission of the British Library, Top.C.VX.40.*

FIGURE 3. *View of the "white" town. From Sir Charles d'Oyly,* Views of Calcutta and its Environs, *"Calcutta from the Old Course." Lithographed and Published by Dickinson and Co., London, 1848. By permission of the British Library, X666.*

Education" of 1835 deliberated over whether the paltry funds for education earmarked in the 1813 charter for the East India Company should be spent on teaching Western or Indian languages.[9] Macaulay arrogantly claimed that the Company should use education "to form a class who may be interpreters between us and the millions whom we govern; a class of persons Indian in blood and colour, but English in taste, in opinions, in morals and in intellect."[10] But even in more moderate hands, the educational policy of British colonial administrators engaged in a powerful effort to persuade elite Indians of the truth of a celebratory narrative of European modernity. Yet, of course, when Bengalis sought to act out these principles and enact a story of their own enlightenment, the British authorities obstructed that

process with the racist argument that Indians were intellectually and culturally immature.[11]

By way of contrast to such British colonial ideas, it is today worth considering the Bengali author Bhabanicharan Bandyopadhyay's text *Kalikata Kamalalaya* (1823).[12] This text attempted to explain how the Indian dharmic code defined the relationships between domestic and civil-political life. As such, it offered a view that was often antithetical to that produced according to European notions of universal "civilization." *Kalikata Kamalalaya* was written in the form of a dialogue between an "urban dweller," a Brahmin who lived and worked in Calcutta; and a "stranger," a newcomer from the country who viewed the city with a certain degree of trepidation, and who was eager to discover its ways. Among other

Barabazaar

FIGURE 4. *Early development of Kolkata.* Plan for the Intelligence of the military Operations at Calcutta, 1756. *By permission of the British Library, X1206/1.*

things, the text displayed concern over the changes brought by the new social mobility in Calcutta — in particular, the role that money could play in undermining the "proper" model of Bengali social order and the place of the Brahmins in it. As background to this concern, Chakrabarty has explained how, at the time, religious ceremonies were no longer being observed in the proper spirit: "the celebration of Durga Puja (worshipping of Goddess Durga) in Calcutta, . . . had already acquired a bad name among many who called it, mockingly, 'chandelier *puja*', 'festival of *baijis* [dancing girls]', 'occasion for the worship of one's wife's jewellery and sarees', etc."[13]

Bhabanicharan's aim was to prevent the realm of worldly interests, *vishaykarma* (where British rule was situated), from polluting the purer domains of *daivakarma* and *pitrikarma*. Of particular interest, he proposed a framework for everyday living to confront the demands of a modern colonial civil society. Chakrabarty has provided this clarification:

> The worldly [vishayi] Brahmins of Calcutta conducted their vishaykarma *under the English but took special care to protect the dominance and prestige of the Brahmins in the eyes of their own people. They washed themselves every evening on returning home from work and thus cleansed themselves of the bad effects* [dosha] *born of the [day-long] contact with the* mlechha *[untouchable, i.e., the English]. They would then complete their* sandhya *[evening prayer] and other [rituals of] puja [worship], and eat in the eighth part of the day [about midnight]. . . . Those who found this routine too difficult made a habit of completing their evening prayer,* homa *and other* pujas *in the morning before they left for office. Further they would offer* Brahmins money and other objects *[naivedya: objects offered to sacred powers] and that itself cancelled out all their* dosha.[14]

Bhabanicharan was speaking primarily to and about the Bengali middle class, the social group that was most strongly attracted to the modern British colonial state. It was this group that had the duty of servicing colonial society.

At this point, what I wish to highlight are the differing and often opposed "signs" under which a Bengali modernity was configured. Implicated in this were the structures and relationships of power that produced the familiar narratives of the British colonial state — oppressions and tensions produced by and productive of the categories of class, gender, nation, state and ethnicity. Since the relationship was one that denied the colonized the status of citizen, the Bengali middle-class response to the Western idea of modernity could only be one of partial emulation. Thus, Bengalis had an ambivalent relationship with the modern colonial state and the narrative of European modernity that it represented, producing their own configuration of the modern. According to Bhabha, this is typical of "the place of hybridity," which involves negotiation with "antagonistic or contra-

dictory elements."[15] It is within the context of this sense of a hybrid modernity that I shall try to demonstrate an intertwined narrative of health.

NINETEENTH-CENTURY HEALTH REPORTS AND MAPS

Successive British governments in Kolkata became increasingly concerned with the links between the cleanliness of the city and the health of its inhabitants. This was particularly the case in the northern parts of the city where the indigenous population lived, and where it was believed many of the diseases originated. As Chattopadhyay has argued, no other disease horrified Europeans more than cholera: "the quickness with which it struck, the frightful symptoms, the lack of therapeutics, and the absence of a predictable pattern made it the most feared disease and the most salient among administrative concerns."[16] The disease was considered endemic to Lower Bengal, and fear about it was greatest in the Indian parts of town, with the Indian bazaar being considered an area particularly to be avoided. Medically speaking, all places where Indians collected in large numbers were seen as threats to European health. Consequently, a major theme of public health in colonial India was to control the spread of epidemics from fairs, pilgrimage centers, and bazaars.[17]

As a result of health concerns, two committees were established to investigate and allay such fears. The first was established in 1803 by Richard Wellesley, first Governor-General of India (1798–1805). It eventually became known as the Lottery Committee after its chief source of funds. According to Monidip Chatterjee, Wellesley's Minutes of June 16, 1803, put forward the "British Government's first genuine concern for the ordered development of Calcutta," and set in motion planning and development strategies that would characterize most of the nineteenth century.[18] As the Minutes directed, an Improvement Committee was to be set up consisting of thirty members. Among its tasks were to survey the town and suggest improvements to the public drains and water courses; provide for the regulation of public markets, slaughterhouses, and places of burial; fix permanent rules for the construction and distribution of houses and public buildings; put forward proposals for the improvement of roads and streets; and estimate what the cost of these improvements would be.

Wellesley's motives were unambiguous for "the Capital of the British Empire in India, and the seat of the supreme authority." In the introduction to his Minutes he stated: "It has now become absolutely necessary to provide permanent means of promoting the health, the comfort, and the convenience of the numerous inhabitants of this great town." Of course, Wellesley meant only the European inhabitants of Kolkata. And he criticized the "quarters of the town, occupied by the native inhabitants," whose "houses have been built without order or regularity, and [where] the streets and

lanes have been formed without attention to the health, convenience, or safety of the inhabitants" **(FIG.5)**. Wellesley's motives were unashamedly aligned with social control. He explained that "every improvement which shall introduce a greater degree of order, symmetry, and magnificence in the streets, roads, ghauts, and wharfs, public edifices, and private habitations, will tend . . . to secure and promote every object of a just and salutary system of police."[19]

Eventually, the Lottery Committee was replaced in 1836 by the Fever Hospital Committee, the second of the two committees I referred to earlier. This was set up at the request of Indian and British residents to provide a comprehensive understanding of Kolkata's sanitary needs, and in particular to evaluate the sanitary condition of the Indian part of town. Its formation was primarily due to the work of Sir James Ranald Martin, Surgeon of the native hospital in Dharmatala. Among other things, Martin's 1837 *Notes on the Medical Topography of Calcutta* had recommended the establishment of a Fever Hospital and measures to ensure proper sanitation for the town.[20] Along with the subsequent *Fever Hospital Committee Report*, it established an agenda of attitudes and solutions for the "native" town that would remain in regular circulation for the rest of the nineteenth century.

Martin's description of the "native" town in *The Medical Topography of Calcutta* began in tones of colonial superiority by acknowledging the good fortune of the Europeans: "[with] the black town to windward during the S.W. monsoon . . . here at least, accident has favoured us." At this time it was widely believed that the monsoon winds carried germs from the northern part of town to the southern. However, Martin then pointed out that in the "native" town, "it is less difficult

to find fault, than to remedy the evil complained of." Nevertheless, echoing Wellesley's message of social control, he advised that "[in] an affair so important to the public health, *something* may be done and at last ought to be tried, if only in the way of municipal or police regulation."[21] He then described in greater detail the problems of Barabazaar, and some possible solutions:

> *In the event of a contagious disease . . . the dense state of the Burra Bazaar and surrounding parts, the want of water courses, and means of facility for removing accumulations of filth, &c. would stand as insuperable bars to the best devised regulations of medical police. All masses of buildings should be opened out, old walls and decayed houses removed; for even under ordinary circumstances these are fertile sources of fever.*[22]

For Martin, the need for street-widening was self-evident in "the native portion of the town . . . with its narrow lanes, and 'rankest compound of villainous smells that ever offended nostril.'" Street-widening would "effect the two greatest improvements of all as respects the salubrity of [the] city, free exposure to the sun, to rarify and elevate the vapours, and to the winds to dilute and dissipate them." According to Martin, where new streets were formed, "they should be as much as possible in the direction of prevailing winds." Again in tones of moral superiority, he proclaimed that "the natives have yet to learn, in public and private sense, that the sweet sensations connected with cleanly habits, and pure air, are some of the most precious gifts of civilization." For Martin, there was a direct link between the cleanliness of the "native" town and

moral cleanliness: "the common saying that 'cleanliness is next to godliness,' is founded on reason, in as much as it is conducive to moral purity as well as health and pleasure."[23]

The *Fever Hospital Committee Report*, which appeared in 1839, dealt with town-planning issues more directly. Among other things, it advocated the construction of more thoroughfares and the excavation of large tanks or reservoirs to augment the water supply. And while it argued for a great central hospital and additional dispensaries, it also called for engineers to discuss various schemes for proper drainage, which it identified as the major source of disease.

Of course, drainage was generally supposed to be in its most offensive state in the Indian part of town. In testimony to the committee, John Phipps called these drains "sinks of filth and consequent malaria," and claimed that many were "merely irregular furrows in the soil without any brickwork."[24] Dr. W. Graham further described the drains as "hot beds of disease," and claimed that "the entire native town, must be considered unhealthy from inefficient or rather no drainage, tainted tanks, and an external mass of animal and vegetable matter in a state of decomposition surrounding them." When he was asked if there were any healthy situations in the "native" town, his answer was equally pessimistic: "in all parts of the native town and suburbs, [I have] never found amidst the wilderness the green spot in which the philanthropist could repose and exclaim '*hic sanitas*'." His solution was simple: "widen and water the roads, and Calcutta will be as healthy as any city in the world" (**FIG.6**).[25]

The immediate outcome of the *Fever Hospital Committee Report*, and subsequent Act XVI (1847), was the formal appointment, in 1848, of health officers and the production of health reports and maps for Kolkata. Through these health officers, disease came increasingly under the scrutiny of the British authorities, and cholera mortality became the standard for measuring healthiness, with the origins and character of its transmission being debated furiously. In this regard, it is curious to observe that long after cholera's water-borne nature was recognized in Europe, following the work of John Snow in 1847, European medical practitioners in India continued to support the belief that the disease was spread through the air. And even those who recognized the improvement in mortality following the purification of drinking water in the city maintained the miasmatic theory. Of course, if the Indian government had accepted Snow's waterborne theory, they would have been obliged to radically improve the city's water supply, and this would have created a need for huge capital investments. As matters stood, the Indian part of town was considered its breeding ground. In particular, claimed David Arnold, cholera was written off as "a disease of the poor, of the bazaars and bustees."[26]

In just such a vein, writing in 1872, C. Fabre-Tonnerre, Health Officer for the Calcutta Municipality, provided a description designed to impress on the public the dangers to be found in these parts of town:

FIGURE 6. *Plan showing rapid development of the city following "improvements" by the Lottery and Fever Hospital Committees.* Plan of Calcutta, Showing the Latest Improvements as Existing in 1854. *By permission of the British Library, X/1225.*

A bustee or native village generally consists of a mass of huts constructed without any plan or arrangement, without roads, without drains, ill-ventilated and never cleaned. Most of these villages are the abodes of misery, vice, and filth, and the nurseries of sickness and disease. In these bustees are found green and slimy stagnant ponds, full of putrid vegetable and animal matter in a state of decomposition and whose bubbling surfaces exhale, under a tropical sun, noxious gases, poisoning the atmosphere and spreading around disease and death. These ponds supply the natives with water for domestic purposes and are very often the receptacles of filth. . . . The huts are huddled together in masses and pushed to the very edge of the ponds, their projecting eaves often meeting together, whilst the intervening spaces, impervious to the rays of the sun, are converted into necessaries and used by both sexes in common. In these huts often live entire families, the members of which occupy the single apartment of which it is not infrequently composed, and in which they cook, eat,

and sleep together; the wet and spongy floor, with a mat spread on it serving as a bed for the whole.[27]

According to Tonnerre, it was "a well known fact that many of the epidemics that . . . visited Calcutta . . . first made their appearance in the northern division of the town."[28] The solution for Tonnerre was a systematic improvement of these *bustees*, beginning with "the preparation of correct plans of each *bustee* showing its exact boundary, the situation of the tanks or ponds, and distinguishing the high from the low lands." The next step was to clear the land, if necessary, of all the huts: "The *jungle* should be cut down, the ponds and drains and marshy lands filled up, and the ground properly levelled so as to prevent any possibility of the water stagnating in any place." Next, "the land being prepared, a proper tank should be selected amongst those existing for the supply of water for domestic purposes, as well as one or two sites for public latrines." Finally, "The principal roads should . . . be marked and the land divided into building blocks, after which it would be comparatively easy to define the position of the bye-lanes."[29]

In Tonnerre's desire for well-bounded, easy-to-survey spaces, it is not difficult to read the ideas espoused by preceding medical authorities and missionaries. As Chattopadhyay remarked, "like the medical statistics the idea of the 'model' *bustee* evoked a desperate belief that disease could be contained once the boundaries and rules of surveillance were in place."[30] When Tonnerre made his recommendation he reminded his readers that the International Sanitary Conference had implicated Bengal, and partially Calcutta, as the originating point of the epidemic that had devastated Europe.[31]

According to Chattopadhyay, "the designation of bustees as hotbeds of cholera flourished in the 1870's and continued in the 1890's with the approval of the Bengal Government and the Army Sanitary Commission."[32] The overwhelming concern became the removal of the *bustees* from the white town. In 1873, quoting Ranald Martin from 26 years earlier, and in tones of bleak desperation, Tonnerre again commented on the *bustees*, stating that "as long as they are allowed to remain a permanent disgrace and a source of danger to the town, I shall never cease to draw attention to the present state of things, which absolutely nullifies the benefits of the water supply and drainage operations."[33]

Of course, the actual program of improvements that began to solve these problems was quite different. Filtered water began to be supplied by the municipal government in 1870.[34] The core of an underground drainage system was proposed in 1858, sanctioned in 1859, and laid down between 1860 and 1875. It covered an area of 7.5 square miles (19.2 square kilometers) in the central area of town. And between 1891 and 1906, sewerage was provided to 12.5 square miles (32 square kilometers) in the new southern European areas of the city.[35]

Following the introduction of water and sewerage treatment, cholera deaths dropped dramatically. According to David Arnold, Calcutta suffered between 2,500 and 7,500 deaths from the disease every year from 1841 to 1865. But between 1870 and 1900, despite the city's rapid growth, numbers only exceeded 3,000 in one year (1895).[36] Of course, the progress of areas covered by water and sewerage treatment meant that Europeans gained benefits first, followed by middle-class Indians, and finally the poor.

BARABAZAAR HEALTH REPORT

In 1899 Frank G. Clemow and William C. Hossack completed a health report on Barabazaar titled *Report upon the Sanitary Condition of Ward VII (Burra Bazaar), Calcutta.* Among other things, the report claimed to be "the first attempt to describe systematically and fully the area from a sanitary point of view and to bring home the shockingly unsanitary condition and the terrible expenditure of life and health which this entails upon the inhabitants."[37] Among the report's topics of concern were circulation of air around buildings, admission of light and air to the interior of buildings, water supply, removal of refuse, excreta and waste water, construction of roads, provision of public conveniences, and the control of nuisances. The report also looked in detail at the sanitary condition of certain special buildings and areas. According to Clemow and Hossack, the causes of unsanitary conditions boiled down to overbuilding, errors of building, habits of the "native" occupants, and overcrowding.[38]

At the time Clemow and Hossack wrote that Barabazaar consisted of "extremely valuable property in an intensely insanitary state."[39] The area covered by the report included some 217 acres, which they divided into four zones **(FIG.7)**. Of these, they considered the northern, central, and certain portions of the southern to be the most insanitary. The authors wrote that Barabazaar was "one of the worst areas of its size in any city with which we are aquainted."[40] And they argued that for sanitary reform to be effective, the necessary legislation should first be provided by the "educated and enlightened opinion among the governing classes."[41] In their opinion, what was required was "the application of an Act embodying most or all of the clauses" of the English Housing of the Working Classes Act of 1890.[42] However, if real progress was to made, the local inhabitants had to be made to understand that "an increased recognition of the necessity of the measures enforced, an increased knowledge of the proper use of modern sanitary appliances, and — if this be possible — a really increased desire for cleanliness, light and air" were of vital importance.[43] They reminded readers that "the most carefully worded clauses in Municipal or Government Acts, and the most judiciously framed bye-laws, backed by all the powers of high penalties for their infringement, will never alter the ingrained habits of the peo-
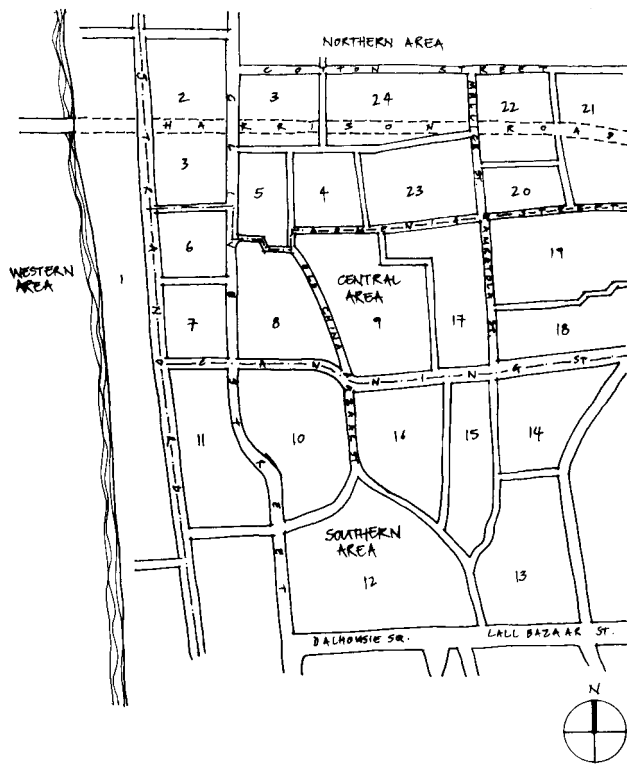
FIGURE 7. *Map of Barra Bazaar in 1899, showing areas covered by the health report. Redrawn from Frank G. Clemow and William C. Hossak,* Report upon the Sanitary Condition of Ward VII (Burra Bazaar), Calcutta, *Caledonian Steam Printing Press, Calcutta, 1899, p.56.*

ple, or the indifference and apathy with which many of them appear to regard the most offensive surroundings."[44]

Clemow and Hossak concluded by questioning "whether a stirring of the waters of Indian apathy and *laissez faire* in matters sanitary shall ever be possible."[45] In an ambiguous and contradictory final statement, they acknowledged that during the course of their visits of inspection "a large number of householders [were] far from blind to the gross sanitary defects around them, and [were] really anxious for their removal."[46] Of course, this phrase hints at different visions of health and hygiene than those typically prescribed by the British colonial state. But health maps and statistical descriptions were far easier for decision-makers in the Indian government to digest than qualitative descriptions containing contradictions. As far as these politicians were concerned, the health maps only confirmed the nightmare of ill health, for which all Indians were to blame.

COMPETING VISIONS OF HEALTH IN BARABAZAAR

As Kaviraj has pointed out, during the nineteenth century British writers discussing disease and hygiene in the Bengali home often commented about the peculiar sense of cleanliness of the Brahmin — "an odd combination of fanatical attention to personal cleanliness with an astonishing indifference to filth in his surroundings."[47] However, the Brahminical sense of cleanliness and *purity* was quite different from emergent Western ideas about *hygiene*. The inside of a Brahmin home was kept scrupulously clean, with interiors swept at dawn and dusk, which coincided with times of worship, or *puja*. Kaviraj has explained the Brahminical sense of cleanliness and purity as follows:

> *The form of this puja especially at nightfall, was to light the auspicious lamp, which had an understated piety about it and was performed by women, who shared a strong connection with the symbolism of the interior. It would be considered odd, and faintly sacrilegious, to take the auspicious lamp into a room that had not been cleaned in preparation for this most ordinary form of thanksgiving. Thus the cleaning chores were considered quasi-religious duties for household members (mostly women). Yet the garbage collected from this obsessive house cleaning would be dumped on a mound right in front of the house. This owed not to a material geographic but a conceptual distinction. When the garbage is dumped, it is not placed at a point where it cannot casually affect the realm of the household and its hygienic well-being. It is thrown over a conceptual boundary.[48]*

Thus, the Bengali notion of "outside" — the streets, squares, bathing *ghats*, and other facilities used by large numbers — did not constitute a different kind of valued space, a civic space with norms and rules of use separate from the domestic values of bourgeois privacy. In Kavaraj's view, indigenous Indian cities performed very different historic functions than their European counterparts, with their unmistakable strands of civic control. In particular, Indian cities were not distinguished conceptually and materially from the countryside. "[T]hey had no corporate life of their own to shelter and encompass the lives of the private families living inside them, which corporate life was to be celebrated in the symbolism of common space."[49] In fact, extended families in Bengal often had their main home in the country, with the house in the city serving as a trading post for business. Thus, according to Kaviraj, there was a sense that the "outside" in the indigenous Indian city was "not amenable to control — not by the individual or the restricted resources of a small family, nor by any organised authority."[50] Obviously, this ran counter to European ideas about such space.

However, mirroring changes in urban life brought about by the modern colonial state, the "outside" as a concept for

Bengalis was changing radically in cities like Kolkata. As Kaviraj elucidated: "to the normal anxieties of people accustomed to living in caste society, which obviated the need to meet utter strangers and improvise responses to untried situations, the new kind of colonial city sparked fears of miscegenation and unpredictability."[51] Such conditions were clearly threatening to the sensibilities of a segmented, small-scale society. But for the Bengali middle classes such places promised the large-scale operation of modernity, a world of "freedom" rather than restriction. As Kaviraj indicated, "the middle-class city represented this new ideology spatially, where the outside was tamed and governed by a civil order instead of the state of nature, which, on this view, reigned before the coming of British rule."[52]

It is important to understand that these "mixed" and competing histories of "private" and "public" life framed competing debates about health and hygiene in Bengali Kolkata for most of the nineteenth and early twentieth century. According to Kaviraj, these were emergent forms that could not be identified in terms of either British or Indian logic. Rather, they were "indigenous, irreducible forms of modernity."[53] These indigenous forms of modernity were, of course, hybrids. And one manifestation of such a hybrid was the Barabazaar Improvement Report, written by a Scotsman — namely, Sir Patrick Geddes — in 1919.

CALCUTTA IMPROVEMENT TRUST (CIT) AND SIR PATRICK GEDDES

At the beginning of the twentieth century, cities in India began to form what became known as Improvement Trusts. Kolkata's was established on January 2, 1912. According to Monidip Chatterjee, it was created "largely in response to the critical situation revealed by a medical enquiry into the condition of Kolkata in 1896 owing to the outbreak of plague, and the Report of the Building Commission appointed in April 1897 to consider changes in the law relating to buildings and streets in Calcutta."[54] E.P. Richards joined the CIT as Chief Engineer on September 12, 1912, and produced the first planning document for the whole of Kolkata, titled *On the Condition, Improvement and Town Planning of the City of Calcutta and Contiguous Areas*.[55] The report recognized the integral importance of the suburbs, and indeed the entire region outside the municipal city limits. Richards analyzed the situation with respect to the roads, slums, parks and open spaces, water supply and drainage, housing and residential conditions, and the distribution and movement of population within the city.[56]

Although Richards did not mention Barabazaar explicitly, a whole section of his report was dedicated to "Calcutta slums," claiming that Kolkata possessed "a far higher percentage of slum area than can be found in . . . any city of the whole western hemisphere."[57] He concluded pessimistically

that they were "many times more extensive, composed of buildings of about one-and-a-half to two-and-a-half times the height found in Western slums, contain[ed] only one-quarter to one-third of the open space found in Western slums, [had] an infant mortality about three times that of European slums, and appear[ed] to have the highest infantile mortality death rate in the world, also the highest *recorded* mortality for tuberculosis." According to Richards, the "evils" of such slums were responsible for most social problems known to mankind, including "crime, insanity, [and] disease (especially tuberculosis)." Finally, they produced "by far the highest percentage of all bad, weakly, and useless citizens," and were "highly destructive of wholesome family life."[58]

Barabazaar was first explicitly considered by the CIT during 1916. The problems of the area were summarized in their Annual Report of that year:

> The area has been largely built over by four and five-storeyed buildings, many of these have been constructed in defiance of all building regulations, and form hot beds of disease and plague. Compared with other parts of the north of Calcutta the road system is regular, but the width of the roads is entirely inadequate to the traffic which they are asked to carry. These roads, 16 and 20 feet wide, are constantly blocked by strings of bullock carts and other traffic mingled in almost inextricable confusion. On sanitary grounds and to facilitate the operations of trade, the opening up of the area with adequate roads is imperative, but the difficulties caused by the high price of land, the expensive nature of the buildings and value of the vested interests are very great.[59]

Between April 1918 and March 1919 a general improvement scheme, covering an area of ten acres in the southwest corner of Barabazaar at the junction of Darmahatta Street and Harrison Road, was prepared, and estimates of cost were approved by the CIT **(FIG.8)**. Helen Meller has written that "predictably [the general CIT improvement proposals] opted for a programme of demolition which would enable roads to be widened, property values to be increased, business needs to be fulfilled, and the poorer people to be evicted from the area."[60] Among the principal features of the plan were the provision of four roads north to south, and seven roads east to west; the widening of existing lanes and opening up of new lanes; a slum clearance scheme in the southwest corner of Barabazaar; and the creation of a playground and several parks adjacent to a new boulevard in the north.

Sir Patrick Geddes was commissioned by Calcutta Corporation toward the end of 1918 to review the CIT plan for Barabazaar. Geddes had worked in a number of Indian cities and towns since his arrival in India in 1914.[61] However, Meller pointed out that "Geddes became convinced that in the Indian context Improvement Trusts were doing more harm than good in their activities in cities."[62] Instead of working in
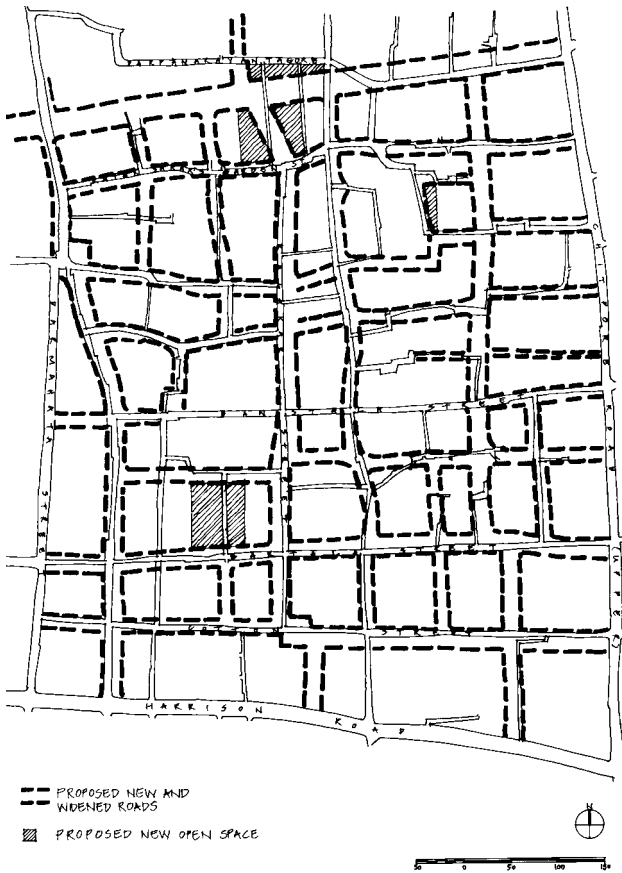
FIGURE 8. *Calcutta Improvement Trust Plan for Barra Bazaar. Redrawn from original document: Sir Patrick Geddes Collection, University of Strathclyde, Glasgow (22/1/1245).*

the interests of the people, especially the poor, Geddes claimed that "the 'improvement' methods, derived their advantage, even their survival, from the opposite viewpoint and interest, that of the propertied and land-speculating classes and their economists; by making site space and working class dwellings permanently and increasingly dear."[63] Geddes's report eventually outlined an alternative scheme to the CIT plan. Among its principal features were the provision of three broad roads east to west and two through roads north to south; the improvement of existing lanes and opening up of new ones; the development of an improved business, warehouse and office quarter; the removal of the Mint; and the creation of three large open spaces and 46 small local playgrounds. The report was completed and submitted to the Calcutta Corporation on March 31, 1919 **(FIG.9).**

The Calcutta Corporation compared Geddes's proposals with the general proposals of the CIT, and "found that according to Prof. Geddes' scheme about 50 percent of the houses would remain in their present condition without any improvement, that large blocks of insanitary areas would not be sufficiently opened up and that the Trusts proposals

would provide more road accommodation." Consequently, the Corporation dismissed his ideas about small local playgrounds, "as it was considered that these small patches of ground surrounded by high buildings with access through narrow lanes would not serve any useful purpose and would be used for dumping refuse."[64] However, the Corporation did adopt some of the alignments suggested by Geddes for road improvements and his proposal for a large park to the north of Ratan Sarkar Garden Street. They also suggested that the idea of a general improvement scheme should be abandoned, since it would entail enormous destruction of property and dislocation of business.

On the face of it, Geddes's immediate impact on Barabazaar would seem to be limited. The apparent reasons for this were distilled by Meller, who suggested that "the clash between the interests of the market and the interests of the people were direct and stark," and that Geddes "found himself committed to trying to put his civic reconstruction doctrine, with its commitment to places and people, in an urban context most hostile to such priorities."[65] More generally, perhaps, Geddes was also out of step with the pace of

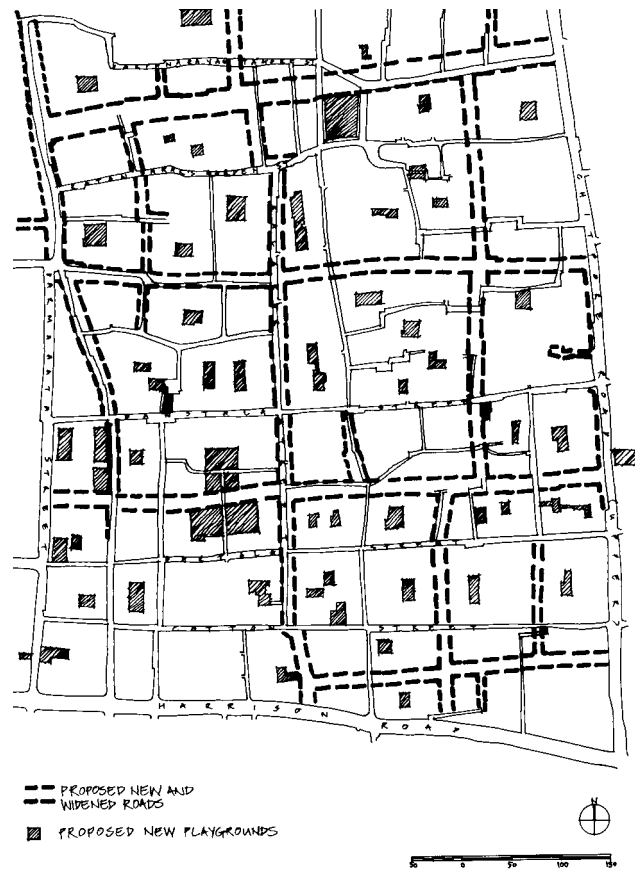**FIGURE 9.** *Patrick Geddes Plan of Barra Bazaar, showing final recommendations. Redrawn from original document: Sir Patrick Geddes Collection, University of Strathclyde, Glasgow (22/1/1245).*

modernization in India. As Meller suggested: "while Geddes was eulogising about ancient Indian urban forms, and the domestic arrangements, for example, of courtyard houses (usually the first target for demolition by British sanitary engineers), leaders of the Indian National Congress were taking their own families from traditional homes to the new-style bungalows."[66] In hindsight, perhaps Geddes biggest impact on Barabazaar was in preserving many of the existing streets and much of the urban fabric of the area. According to Meller, "the way Geddes expressed most of his planning ideas in his reports was designed to goad civic administrations into a new perception of their duties, and to avert some of the damage they were causing."[67]

However, Geddes's ideas were to have a much longer-term effect. In 1995, using Geddes's work as an inspiration, the Foundation for the Conservation of Rural and Urban Traditional Architecture (CRUTA) were commissioned by Building Technical Services, a department of Calcutta Municipal Corporation, to complete a report on North Kolkata. Titled *Barra Bazaar Improvement: A Manual Towards Civic Action*, this study included a broad outline structure for the entire area and a detailed analysis and upgrading plan for two selected pilot areas that included the riverside front (Gangaghat) and an area off Kalakar Street and Mahatma Gandhi Road in central Barabazaar.[68] According to the *Economic Times,* among the initial suggestions made were the "relocation of Posta Bazaar with redevelopment of the area as an attractive retail commercial centre; redevelopment of Raja Katra as a commercial cum residential area; cosmetic treatment of the riverside, with removal of the warehouses and restriction on lorry movement, the old Mint restored to its architectural glory and used partly as a museum and partly as a retail shopping centre."[69]

Despite Geddes's links to some of the colonial ruling elite during his early years in India, when the Barabazaar report was produced, he had become shunned by the British administration; and in Kolkata, he had become very much involved with Sir Jagadis Bose and Rabindranath Tagore.[70] Arguably, Geddes acknowledged the huge part played by the indigenous population in shaping cities in India, and developed an alternative approach to the town-planning practices offered by the British colonial establishment. For Geddes, meeting and interviewing the people of Barabazaar was essential, so that a mental picture could be formed "of the daily life and working of the district in its various branches of activity and of these in their action and reaction with city as a whole."[71] However, developing Geddes's ideas theoretically to inform the way we interpret areas like Barabazaar means promoting a notion of history that includes the everyday histories and experiences of "ordinary" people — one that reveals the contradictions and disruptions integral to the whole "messy" and "dirty" historical process.

REFLECTIONS ON "OTHER" PASTS

One of the key problems of Kolkata's urban literature is the uncritical acceptance of British sources and the recirculation of the colonizers' ideas about the city and its people. The standard "urban history of Kolkata" cites colonial buildings and monuments, such as the New Court House, Government House and the Town Hall, which have become markers of an imperial domain, illustrating the growth of Kolkata as a British city. Such histories have relied heavily upon eighteenth- and nineteenth-century accounts of British administrators, acting after British control had been somewhat consolidated.[72] This literature included the maps and reports from health and planning committees, which cemented the characteristics of the native population, as representing a chaotic landscape that constantly threatened British efforts to order and control.

Not surprisingly, in most of the pertinent literature, these colonial sources are not interrogated for their motivation or point of view. As Chattopadhyay has pointed out, "it is a narrative of heroic British efforts to build a city in the marshes of Bengal, in the face of native hostility, amidst festering jungles and tropical heat."[73] But in so doing, it left out anything that does not fit — what Chattopadhyay has called the "chaos-leads-to-order narrative."[74] In reality, the city always consisted of overlapping geographies and conceptions of space and territory, both indigenous and foreign, that were constantly negotiated. According to Chattopadhyay, "not only were the complex choices and decisions made by the British and Indians simplified into a British winning strategy, the enormous contribution and resistance of the native population during the entire duration of colonial rule is effectively subdued as part of the city's history."[75]

How then is it possible, as a European, to read histories of areas like Barabazaar without resorting to the mistakes of the past? Dipesh Chakrabarty has pointed out that we all "do" European history, often using archives which are themselves relics of an imperial past. By contrast, he has described an idea for reading history that he calls "provincializing Europe."[76] He has defined this notion as a "project [that] must ground itself in a radical critique and transcendence of liberalism (i.e., of the bureaucratic constructions of citizenship, the modern state, and bourgeois privacy that classical political philosophy has produced), a ground that late Marx shares with certain moments in both poststructuralist thought and feminist philosophy." Chakrabarty is keen to explain that he is not calling for a simplistic, out-of-hand rejection of modernity and grand narratives. The point is not that Enlightenment rationalism is always unreasonable in itself. Rather, it is a matter of documenting the historical processes through which "'reason', which was not always self-evident to everyone, has been made to look 'obvious' far beyond the ground where it originated."[77]

For Chakrabarty, Indian history has largely been in a position of subalternity, because Europe has always worked

as a silent referent.[78] And he has described the painful diffi-culties of writing non-Western, Third World histories:

Third-world historians feel a need to refer to works in European history; historians of Europe do not feel any need to reciprocate. . . . "They" produce their work in rela-tive ignorance of non-western histories, and this does not seem to affect the quality of their work. This is a gesture, however that "we" cannot return. We cannot even afford an equality or symmetry of ignorance at this level without the risk of appearing "old-fashioned" or "outdated."[79]

For Chakrabarty, the idea of "provincializing Europe" is not a call for cultural relativism or for atavistic, nativist histo-ries. Yet, controversially, his work stresses the view that Third World nationalisms, as modernizing ideologies (at least in India) have themselves been partners in the process of imperialism. One result of European imperialism in India was to introduce the idea of the modern state with its atten-dant discourse of "citizenship."[80] For Chakrabarty this was a double-edged sword. On the one hand, "the claims of (bour-geois) equality, of citizens' rights, of self-determination through a sovereign state have in many circumstances empowered marginal social groups in their struggles is undeniable." However, on the other hand, "what effectively is played down . . . in histories that either explicitly or implic-itly celebrate the advent of the modern state and the idea of citizenship is the repression and violence that are as instru-mental in the victory of the modern."[81] Instead, what he asks for is "a history that deliberately makes visible, within the

very structure of its narrative forms, its own repressive strate-gies and practices, the part it plays in the collusion with the narratives of citizenship in assimilating to the projects of the modern state all other possibilities of human solidarity."[82]

The ideals of health and hygiene are intimately connect-ed to a dominant "Western" narrative of modernity. In this regard, a I mentioned at the beginning, the writing of history must acknowledge other possibilities, including the contra-dictions and biases (that may still be present) which under-mine the ideal of a linear narrative of progress, and which instead open up a view of history as disjointed and disconin-uous. When interpreting an area like Barabazaar in a former colonial city like Kolkata, rather than emphasizing the duality of poles, such as the "black" and "white" towns, I wish to argue that their critical aspects lie in the uncertainty and ambiguity of such extremes.

In sketching out the important elements of "other" urban histories of a city like Kolkata, one should include hybrid Bengali notions of health and modernity. Arguably, one would also include figures like Sir Patrick Geddes, which reflects Chakrabarty's call that "other" pasts do not only come from "native" sources. Finally, of course, Europe cannot be "provincialized" from within the institutional site of the uni-versity. As Chakrabarty has reminded us, "the globality of academia is not independent of the globality that the European modern has created."[83] Universities, their critical distance notwithstanding, are part of the battery of institu-tions complicit in "the deep collusion between 'history' and the modernizing narrative(s) of citizenship, bourgeois public and private, and the nation state."[84]

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Drawing Boundaries: Vernacular Architecture and Maps

MARCEL VELLINGA

The analytic potential of maps has never been fully explored in the discourse on vernacular architecture. This disregard for cartographic representations is unfortunate, as maps may provide researchers with valuable insights and open up new directions for inquiry and understanding. Using several examples, this paper aims to show how maps may be of particular value in charting the ways in which architectural boundaries sever or coincide with national, cultural or ethnic boundaries, and in identifying new areas for research and recording that go beyond a narrow focus on culture areas.

In March 2001 the Taliban government of Afghanistan, using tanks, rocket launchers, and explosives, demolished two 1,700-year-old statues of Buddha in the Bamiyan Valley, evoking widespread condemnation from an international community that did not seem able to do more than remain a passive spectator. Some twelve months later, backed by the United Nations and Afghanistan's new interim government, plans to rebuild the monuments were put forward by the Afghanistan Museum in Bubendorf, Switzerland. Referring to the cultural significance of the statues and the economic need to restore the area, the latest computer technology was brought in to try and recapture some of the meaning and beauty of the statues.[1] Although the plans are welcomed by most Bamiyan residents, they have raised questions as to whether the resources needed to carry them out could not perhaps be put to a different, more urgent use, such as the provision of food and housing to the millions of homeless Afghans. The focus of international attention on the unique cultural significance of these monuments also threatens once again to obscure more modest components of Afghanistan's cultural heritage, including its vernacular building traditions. Surely, a redevelopment of Afghanistan's nonmonumental built environment is equally, if not more needed to provide economic stability and peace in the region.

Such a redevelopment of Afghan vernacular building traditions was a driving force behind the publication in 1991 of *Afghanistan: An Atlas of Indigenous Domestic architecture* by Albert Szabo and Thomas Barfield.[2] Published two years after the Soviet withdrawal, the

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atlas was aimed to serve not just as a document of the variety and richness of Afghan vernacular architecture, but as "a guide for aiding the reconstruction of Afghanistan in the years ahead."[3] By the late 1980s, twelve years of war had caused the obliteration of countless numbers of buildings, adding to a destruction of vernacular building traditions that had been instigated by modernist government policies in the 1960s and 1970s, particularly in urban areas. By documenting vernacular resources, designs and techniques, Szabo and Barfield aimed to raise the awareness and understanding among both international aid organizations and Afghan architects of the significance of the country's vernacular traditions. As an essential part of the Afghan cultural heritage, they argued, vernacular building skills and knowledge could enable the development of culturally and environmentally appropriate housing, making use of local natural and human resources and providing much-needed continuity in a country traumatized by years of war. The humanitarian and economic problems faced by consecutive Afghan governments to this very day only validate the necessity and value of Szabo and Barfield's effort.

The core of the atlas is formed by architectural drawings. These drawings, including elevations, plans, and "cutaway" perspectives, are accompanied by short descriptive texts and, occasionally, black-and-white photographs. A great variety of nomadic, transhumant and settled building types is included in the atlas, ranging from tents and huts, to caves and fortified farms. In this way, the atlas illustrates the diversity in building forms and materials in various parts of the country. Twenty-nine black and white maps, each taking up one page, serve to indicate the geographic distribution of the various building types (FIG.I). The design of the maps is standardized; each

FIGURE I. *"Distribution of domical Yurts (Turkmen, Uzbek, Central Asian Arab, Kirghiz)." Source: A. Szabo and T. J. Barfield,* Afghanistan: An Atlas of Indigenous Domestic Architecture *(Austin: University of Texas Press, 1991). Reprinted by permission.*

map shows major roads, rivers and towns by means of lines and symbols, with gray tones highlighting the location of the types concerned. And in addition to these maps that indicate the distribution of particular building types, twelve general reference maps are included, explaining such characteristics of the country as climate, topography, and ethnic dispersal. Although fairly plain in execution, the maps communicate geographic information in a clear and straightforward manner. In combination with the drawings, text and photographs, they provide a comprehensive document of the state of Afghan architecture before the wars, adding a geographic dimension that is lacking in other works on the subject.[4]

Although a great many thematic atlases have been published through the years, including one or two that deal with architecture, Szabo and Barfield's atlas of Afghan building types is the only one to date to deal with vernacular architecture as such.[5] This exceptional status not only reflects the marginal position of studies of vernacular traditions in general, but also a remarkable disregard for the use of maps among the growing number of scholars in the field. Indeed, with a few notable exceptions, maps have never been fully part of the methodological toolkit of those working in the field of vernacular architecture. Even in the works of some cultural geographers, the only maps featuring are general reference maps that serve no other purpose than to indicate the location of the countries or cultures that are dealt with. In fact, in the strict sense of the word, Szabo and Barfield's work, although making use of maps, does not even qualify as an atlas (i.e., a bounded collection of maps), since its emphasis is on drawings rather than maps.

This disregard for the value of maps is unfortunate. As I will attempt to show in this article, maps, apart from being a preeminent tool to represent and interpret geographic information, have the potential to help those who use them to gain new insights, raise new questions and hypotheses, and open up new directions of inquiry and understanding. In particular, maps may help chart the ways that architectural boundaries sever or coincide with national, cultural or ethnic boundaries, as well as help identify new areas for research and recording that go beyond a narrow focus on culture areas.

DISTRIBUTION AND DIFFUSION

The techniques of recording and analysis that are employed by scholars working in the field of vernacular architecture have mainly been restricted to descriptions, architectural drawings and photographs. Although maps have long been an important tool in other disciplines with a serious interest in vernacular traditions — for example, archaeology and geography — they have not been able to secure an equally prominent position in the field of vernacular architecture. Whether a study appears in the form of a book or a journal article, whether it deals with particular cultures or regions, or focuses on specific building types, techniques or materials, maps are only rarely

included to communicate information or to illustrate hypotheses or arguments. Plans of buildings or settlements in relation to their natural and built surroundings may be regularly made, but the focus of these is often on individual buildings or settlements. Maps showing the distribution of particular resources and materials, building types, or technologies in an individual country, on a continent, or across the world are relatively rare. Strikingly, the increased importance of graphic imagery, including maps, caused by the rapid development and increased availability of new means of visual communication has not yet altered this neglected status of maps.[6] Despite the accessibility of relatively cheap desktop mapping programs and more sophisticated Geographical Information Systems (GIS), maps of vernacular architecture are still hard to come by.

This is not to say that maps have not been used at all and that Szabo and Barfield's atlas of vernacular Afghan architecture is truly unique. Various studies have been published in which maps have been used to support an argument put forward in the text — for example, by showing the distribution or geographic movement in time of certain building elements, or the diversity in location and density of particular building types. And these instances only further point to the utility of mapping as a research tool. Such studies have generally been carried out by geographers concerned with the identification, classification and distribution of particular types or features in specific regions and periods, or by scholars interested in geographical diffusion and the question of how and why particular buildings undergo changes during processes of migration. Ronald Brunskill, for example, used distribution maps to show the variations in location and density of timber roof constructions in Britain — as well as a map intended to indicate general regional variations in "traditional" British buildings through the identification of eighteen vernacular regions.[7] Likewise, Allen Noble used quantitative-distribution maps to chart the distribution and diffusion of various types of barns in the American Midwest, while Philip Drew used several maps to illustrate the distribution of various tent types in North America, the Middle East, and East and Central Asia.[8]

A particularly well-known study in which maps were used to support hypotheses about housing regions and the geographical and temporal diffusion of buildings was Fred Kniffen's article "Folk housing: Key to diffusion" (FIG.2).[9] Based on almost thirty years of field research into American vernacular traditions, particularly those of European origin, Kniffen distinguished three "source areas" or "cultural hearth zones" along the East Coast of the United States — New England, Middle Atlantic, and Lower Chesapeake. Applying the concepts of "initial occupance" and "dominance of contemporary fashion," he then attempted to trace how, during the eighteenth and nineteenth centuries, house types were diffused westward from these source areas through the migrations of European settlers, drawing his hypothetical "hearths" and routes of diffusion on a map. By comparing this (by his own admittance) very generalized map with distribution maps of American "community
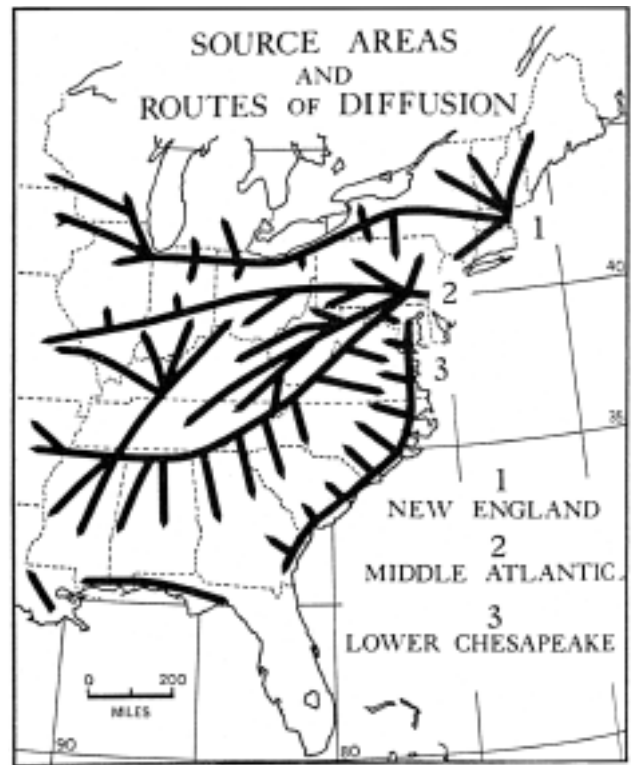
FIGURE 2. *"Source areas and routes of diffusion." Source: Fred B. Kniffen, "Folk Housing: Key to Diffusion," in D. Upton and J. M. Vlach, eds.,* Common Places: Readings in American Vernacular Architecture *(Athens and London, University of Georgia Press, 1986). Reprinted by permission.*

areas" and dialects, he then tried to validate the hypothetical source areas and routes. Although diffusionist studies like that of Kniffen are relatively rare in the field of vernacular architecture, similar types of maps that chart, for example, the spread of flat-roofed adobe houses from Mexico to the southwestern United States or the diffusion of wood construction in the eastern United States have been published.[10]

Most of the maps referred to above are small and rather crude in design, sometimes resembling sketches rather than finished products, and many of them do not portray any data other than the distribution or diffusion of the building types or features concerned. They mainly serve to illustrate classifications or explain arguments made in the texts that they accompany. Thus, even though the maps may have been essential in the research process and the development of hypotheses, as in the case of Kniffen, they have not been selected as the prime medium to communicate the results. In most instances, texts, photographs and drawings are still dominant. Maps that are intended to "speak for themselves," with little or no commentary do exist, as in the case of John Prizeman's map of regional variation in stone construction in relation to ethnic divisions and rainfall in Great Britain, or Christopher Tunnard and Henry Hope Reed's map of the predominance of three-decker

dwellings in New England (**fig.3**).[11] Interestingly, however, those maps are often found in books or atlases that focus on the cultures of particular countries, regions or ethnic groups, rather than works dealing with vernacular architecture as such. In such publications, a map of "shelter" or "rural house types" may sometimes be included alongside similar maps on settlement patterns, clothing or languages in an attempt to offer a comprehensive survey of the cultural geography of the peoples concerned.[12]

MAPS AND BOUNDARIES

The usefulness of maps to show the diffusion, distribution or numerical variation of building types, resources or technologies should be obvious. As symbolic representations that facilitate the visual display of spatial data, maps have the capacity to communicate geographic information in a way that is visually direct, clear and effective. In the specific context of architectural boundaries, distribution maps can be

helpful in charting the way in which the boundaries relate to the configuration and negotiation of cultural or ethnic identities. Vernacular architectural boundaries may be of various sorts; for example, they may concern the distribution and use of building materials and resources, technologies or service systems, building forms and types, or decorative motifs and symbolic associations. The geographic positioning of such boundaries and the traditions they define is based on a combination of geological, climatic and cultural factors. Likewise, the way in which they may sever or coincide with national, cultural or ethnic boundaries is complex and, to some extent, variable. Because of the regional focus of most studies of vernacular architecture and a disregard, hitherto, for boundaries as interesting subjects in their own right, our understanding of the geographic constellation of technological, functional and formal traditions that is the result of this overlapping of boundaries as yet seems small and fragmented. Thematic maps that chart the location of architectural boundaries, both cross-culturally and at the level of individual cultures or countries, can be of great value in raising
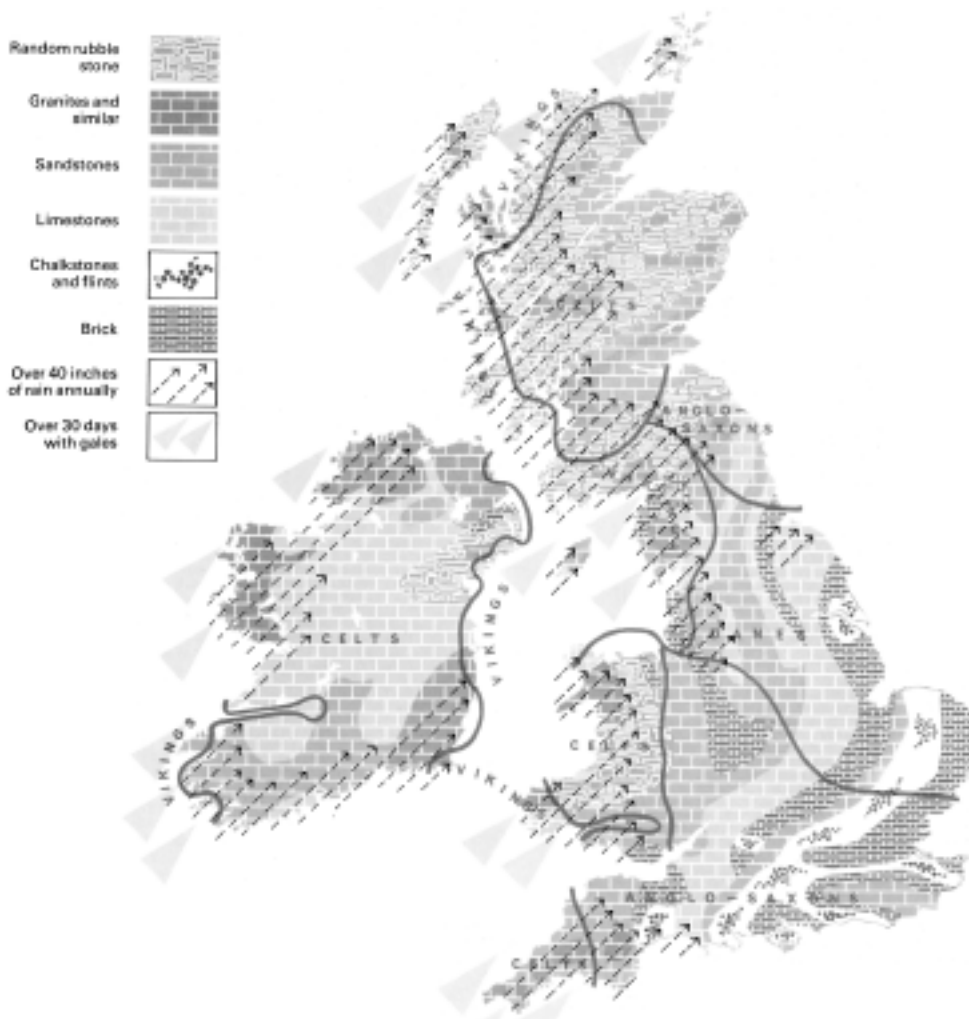

FIGURE 3. *"Regional variation in stone construction in relation to ethnic divisions and rainfall in Great Britain."* Source: J. Prizeman, Your House: The Outside View *(London: Hutchinson, 1975 [new ed., Quiller Press, 2003]). Reprinted by permission.*

such an understanding, which is needed if the consequences of current and former processes of cultural interaction, modernization and globalization are to be fully appreciated.

Until now, many published maps dealing with vernacular building traditions have focused on particular countries or cultures. Given the regional focus of most vernacular architecture studies, this should come as no surprise. It would also be quite understandable if the feature to be mapped was indeed only to be found in the country concerned. Quite frequently, however, the traditions that have been mapped are encountered in other places as well, crossing national or cultural borders. For example, the distribution of domical yurts, black tents, or sun-dried brick walls charted by Szabo and Barfield extends well beyond the present-day political borders of Afghanistan. Indeed, their extensive distribution is related to the complex cultural history of the area, Central Asia having acted as a stage for commerce, wars, migrations, and religious dissemination for thousands of years. The result is a cultural matrix in which some traditions are found across several national borders, while others are restricted to particular isolated areas. Clearly an accounting of the overall distribution of yurts, black tents, or sun-dried bricks would tell us more about the history and origins, diffusion and meanings of these traditions than a more limited focus on dispersal of the forms within the current borders of Afghanistan. A similar observation might be made with regard to M.E. Harvey's map of rural house types, including circular huts with thatched conical roofs, in Sierra Leone (**FIG.4**).[13] In both instances, the maps fail to indicate that the political boundaries which define them do in fact not necessarily coincide with the cultural and architectural ones represented on them.

A map that is not restricted to a particular culture or country, even though it does focus on one specific geographic region, is Peter Andrew's map of Middle East nomad tent types (**FIG.5**).[14] Designed by a cartographer rather than the author himself, this map shows the location and relative density of various tent types, divided into several types of "framed" and "velum" (frameless, membranous) tents, some of which are further distinguished on the basis of the material used as cover (e.g., felt, goat hair, palm matting). The map not only shows general distribution patterns, but indicates where particular types have definitely been found ("observed"); where they may probably be found; and where they have been common in living memory, but are now no longer in use. In addition, arrows are used to indicate the migration routes covered by the nomadic peoples who use the tents — with a distinction being made between routes that are carried out periodically, and those that take place only occasionally. The names of the various groups are included on the map, as are, in certain areas, the locations of tribal boundaries. Further background information is given that helps show how various typological, cultural, geological and national boundaries sever different regions or coincide with them. These include national boundaries, watercourses, differences in altitude, and the locations of towns and cities. Together

FIGURE 4. *"Rural house types." Source: M.E. Harvey, in J.I. Clarke, ed.,* Sierra Leone in Maps *(London, University of London Press, 1969). Reprinted by permission.*

with Andrews's two-volume *Nomad Tent Types in the Middle East*, the map provides a unique and authoritative documentation of the diversity of tent structures in the region.[15] If the books add to the map by providing detailed descriptions and illustrations of the various types of tents, the map equally contributes to the books by showing complex distribution and movement patterns that would be difficult to communicate in written form.

There are a number of other maps that focus on the distribution of particular building types at a cross-cultural, international level — albeit at a less detailed scale. One example is Harold Driver's maps on the vernacular traditions of Native American groups in North and Central America (**FIG.6**).[16] The maps, which are accompanied by illustrations and descriptions, show the distribution of various types of Native American houses and tents before "contact" with European settlers, bridging the borders of Canada, the U.S.A., Mexico and the Central American countries. Another example is provided by Drew's maps of, once more, nomadic tent types.[17] In some cases, such as the map on the geographical distribution of black tents in the Middle East or the geographical distribution of tent types in Northern Eurasia, cultural and national borders are clearly bridged and an overall picture is presented, the geographical limits of which are defined by the typological traditions concerned rather by a predetermined cultural or national focus. It should be said, though, that not all these maps are completely free of such biases. For example, Drew uses different maps to show the locations of tent-dwelling peoples in northern America and in northern Eurasia, even though similar (conical) tent types can in fact be found in both regions.
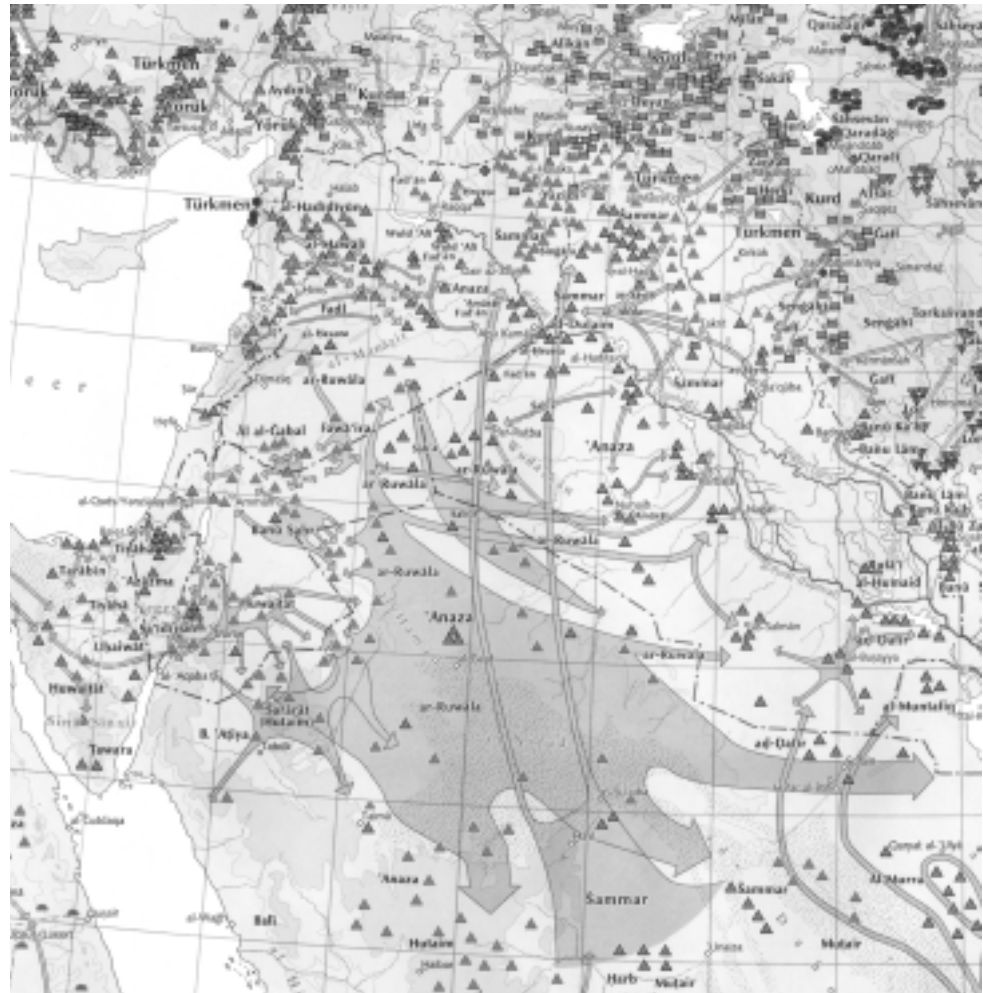
A PROBLEM OF DATA

The exceptional status of Andrews's map as regards its level of detail, cartographic design and, to some extent, scale, underlines the assertion that maps have not been able to secure a firm position in the field of vernacular architecture studies. Although the scarcity of maps and atlases on vernacular traditions is particularly marked, this disregard for maps seems related to a fairly general ignorance among both scholars and the general public of the power of maps, and of the skills and knowledge needed to read or make them. Although architectural drawing is generally part of the curriculum of architects, cartographic education is definitely not, nor has it generally been taught to anthropologists, sociologists or art historians involved in the study of vernacular traditions. In fact, maps and mapping do generally not receive as much attention in education as reading and writing, despite the fact that graphic images, not in the least maps, are playing an ever more influential role in our lives nowadays.[18] Such an awareness of the potential and use of maps would also help reveal the power relations that are involved in cartographic represen-

tation. Often, maps are thought of as objective, ever more accurate representations of reality, a notion that is easily enhanced by their frequent association with up-to-date technology. But, in truth, as recent writings on cartographic representation have made clear, they are as selective and subjective as any other means of communication.[19]

In comparison with Andrews's map, most other maps of vernacular architecture referred to so far, both the cross-culturally and nationally focused ones, are very crude, generalized and simplified. The vast majority of them are in black-and-white, using outlines, simple symbols or shading to indicate the locations or diffusion of the architectural features concerned, often on a relatively small scale. To a large extent this generalized quality may be helpful (indeed, even needed in thematic maps), since the inclusion of too much information would make it very difficult to read and interpret them.[20] Yet, in the case of some of the maps, the level of simplification is so high that their actual usefulness in raising the reader's understanding of the geography of the traditions concerned is minimal. For an extreme example, Henry Glassie's maps on the distribution of house types in Louisa County in Middle
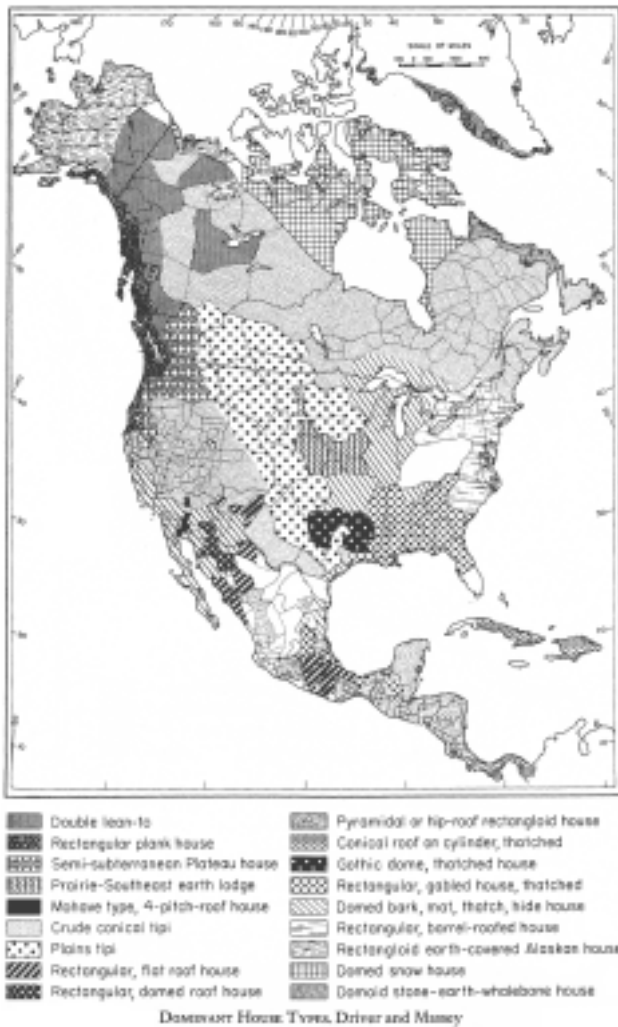
Virginia only consist of a few lines, triangles, squares and circles which, without any added information on the location and names of towns, rivers, roads, and so on do not add much to our knowledge of the building types concerned — except for giving a very general idea about where we might be able to find them (FIG. 7).[21] A similar remark can be made with regard to, for example, Harvey's map of rural house types in Sierra Leone, Brunskill's maps of houses and cottages in Britain (which are really just very rough, and very small sketches), or Torvald Faegre's maps of the distribution of black tents and yurts.[22] In all cases, a very generalized picture of the location of particular traditions is presented, while the actual location of their boundaries remains vague and uncertain.

Although this generalized and crude nature of most maps is no doubt related to the absence of cartographic education noted above, a more fundamental problem is a general

lack of data. Although it will in many instances be possible to show general distribution or diffusion patterns of vernacular building types, services or resources, it is very difficult to get to a level of detail at which regional variations or differences in relative density can be portrayed, simply because the geographic information needed to do so is in most cases not available. In the case of Andrews's map, the information portrayed has been gathered over a period of some twenty years. Similar databases may perhaps exist on other subjects, but, generally speaking, our knowledge of vernacular building traditions is not as thorough as needed to allow for the compilation of similarly detailed maps. For many parts of the "third" or "developing" world, in particular, our knowledge is very scattered and partial. Since the focus of scholars has been restricted to particular regions, the necessity for documentation and preservation has not always been recognized, or the opportunities to do research have not occurred. Ronald Knapp noted that, beyond Europe and North America, our understanding of the geography of vernacular traditions is generally very limited.[23] But even in parts of Europe and North America, where long-standing and intensive research efforts have led to the availability of more comprehensive sets of data, as in Great Britain, the mapping of traditions in any great detail is still a difficult exercise.

Yet, even though the absence of geographic information severely limits the possibilities for compiling detailed maps, it is possible to approach the difficulties involved from a more constructive point of view. If the making of maps is regarded as an exploratory analytical process, rather than a mere means to communicate data, the maps that are made can be valuable in showing us what we already know about the geographic distribution of particular traditions, and what

information is still lacking. In other words, by attempting to chart the availability and use of resources, service systems or building techniques, we may be able to identify the "white spots" on our conceptual map of vernacular building traditions, the lacunae in our knowledge and understanding of the traditions concerned. In so doing, we may use the maps to indicate new areas for recording and research, treating them not just as media for communication, but as tools for visualization — i.e., as valuable means to gain insights in spatial patterns, relationships and contexts that are otherwise not known or not immediately obvious.[24] With regard to architectural boundaries, maps can furthermore be used to indicate the locations of particular technological, formal or functional borders in various parts of the world, as far as these are known. And in combination with cultural maps, they may reveal or help to clarify the complex interrelation of such boundaries with cultural and ethnic constellations.

AN EXAMPLE: MAPPING BAMBOO

The capacity of maps to visualize patterns and relationships has become increasingly clear in recent years, and the use of maps as tools for visualization has expanded enormously thanks to the possibilities offered by Geographical Information Systems and technologies such as terrain modeling and dynamic mapping.[25] Although such sophisticated software is not of immediate use to scholars working in the field of vernacular architecture because of the general lack of huge, comprehensive databases, the principle of the concept of visualization can still apply, even if the sets of information and the maps that are created are more modest and general-

ized. For example, on the basis of their maps, Szabo and Barfield noted that the geographic distribution of huts of sedentary villagers in northern and central Afghanistan closely coincides with that of the yurts of nomadic groups, an overlap that raises questions and hypotheses about long-standing relationships between both groups.[26] Another example is provided by a map of the worldwide availability and use of bamboo as a vernacular building resource (**FIG.8**). The compilation of this map reveals the difficulties with regard to information faced when making maps of vernacular architecture, while, at the same time, its contents demonstrate the capacity of maps to reveal both lacunae in our knowledge and particular trends and patterns that were perhaps not so patently obvious before a map was made.

Bamboo is a plant species that offers a lot of possibilities to the people that have access to it. Because it grows very fast, reaching maturity in three or four years, is easily harvested and worked, hard, and possesses a great tensile strength, bamboo has been used to make a broad range of objects by many peoples and cultures, at least since the beginning of the Christian era. In his *The Book of Bamboo: A Comprehensive Guide to This Remarkable Plant, Its Uses, and Its History*, David Farrelly noted more than a thousand of such objects, ranging from fences to ornaments, from boats to napkin rings, and from lamps to umbrellas.[27] Because of its widespread availability, its advantageous features, and the fact that it can easily be worked with rudimentary tools, bamboo is widely favored as a vernacular building resource. As such, it has been used to make walls, floors, posts and beams, roofs, suspension bridges, and scaffolding across three different continents. When used for structural purposes, the canes can be applied without working. For use as walls, doors or floors, the bam-
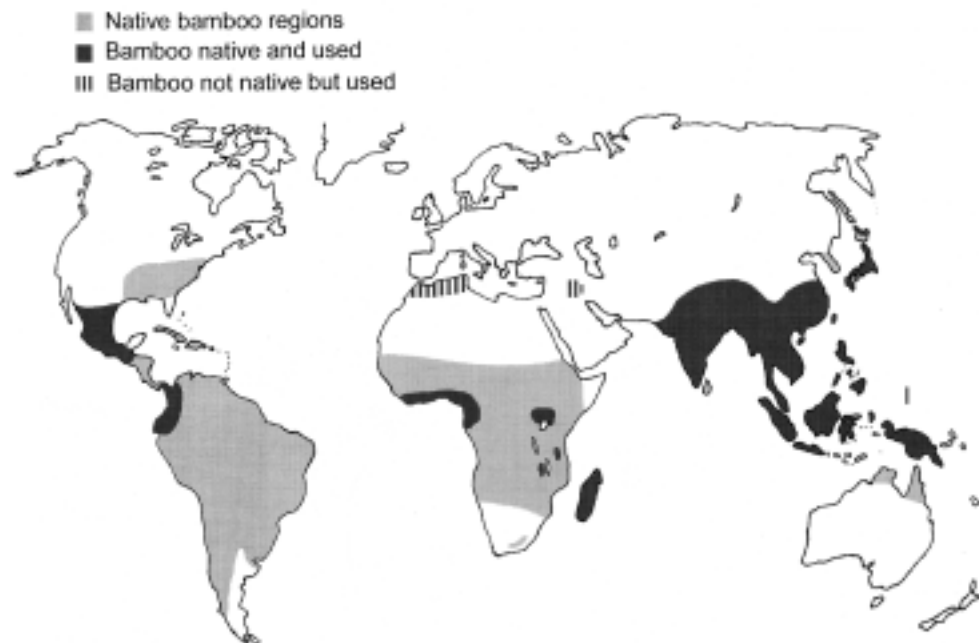

FIGURE 8. *"Availability and use of bamboo as a vernacular building resource." Courtesy of* World Atlas of Vernacular Architecture *project, Oxford Brookes University.*

boo canes can easily be split and flattened in order to nail them; alternatively, they may be split, flattened and woven into mats. Since the 1950s the potential of bamboo as a building resource has been stressed in various publications, and several experiments to use it in modern construction practices (e.g., as reinforcement for concrete) have been carried out — albeit with a varying level of success.[28]

The widespread popularity of bamboo as a building material is well known among most scholars working in the field of vernacular architecture. Yet even a simple attempt to map it reveals how our knowledge of its availability and use is partial, scattered and restricted to particular parts of the world. For example, the widespread use of bamboo in India, South China, Southeast Asia, and Melanesia is pretty well documented — even though a publication that pays special attention to it does not seem to exist, and most information has to be gathered from more general sources. However, as regards Africa, our knowledge of the use of bamboo is far more limited. The onion-shaped houses of the Sidamo in Ethiopia or the wall and roof frameworks of the dwellings of the Bafut and Bamilike in Cameroon are well documented. But to what extent and for what purposes bamboo is used in other parts of Africa where it grows naturally is not really known. The literature on African vernacular architecture is rather vague on the subject and restricted to references such as "[houses built of bamboo can be found] from southern Cameroon through Zaire and Angola and across to the lake regions of East Africa."[29] Such references may indicate that bamboo is indeed widely used, but they are too general to be of any real use. Finally, in the case of South America, the use of bamboo is well documented with regard to the "bamboo culture regions" in the Colombian highlands and coastal Ecuador. But again little is actually known about other parts of the region where bamboo grows in abundance, such as Amazonia or Central America.[30]

Our knowledge of the use of bamboo thus proves to be limited to particular regions, and clearly contains many gaps, not just geographically, but also thematically. Although, given the lack of reliable data, conclusions regarding the availability and use of bamboo need to be drawn with caution, the accompanying map suggests that, despite its advantageous characteristics, bamboo is not necessarily used in all regions where it is found. In large parts of Africa and South America bamboo will be available, but other resources such as palms, earth or timbers have proved to be more popular building materials. On the other hand, in countries like Iraq and Iran bamboo is sometimes used in the construction of roofs and wind towers, even though Mesopotamia is not a native growth area. The presence of bamboo in this region thus points to the existence of a bamboo trade, possibly with Africa or India, but the particulars of such a trade are not well known. Nor, in fact, do we have much understanding of why bamboo is extensively used in some parts of Latin America and Africa, such as Colombia or Cameroon, and hardly at all in others; why, as the map reveals, there are differences in the use of bamboo

between, but also within, regions and cultures (**fig.9**); or why bamboo matting is a widely used technique in southwest India, south China, Southeast Asia and Melanesia, but not at all in Africa or Latin America. Such differences are undoubtedly the result of a complex interplay between climatic, cultural and geographic factors. They may also have to do with the particular species of bamboo available in different regions. But the actual details are not known, mainly because most research on the architectural use of bamboo has focused on the technicalities of bamboo construction. Thus, besides showing where bamboo is used as a building material, a map such as that shown here serves to identify an interesting and largely uncharted field of research, as well as a need for further documentation.

A WORLD ATLAS OF VERNACULAR ARCHITECTURE

The distribution map of bamboo as a vernacular building resource has been made as part of a *World Atlas of Vernacular Architecture* that is currently being compiled at the Centre for Vernacular Architecture Studies at Oxford Brookes University.[31] The aim of the atlas is to enhance knowledge and understanding of the vernacular traditions of the world by mapping, on a cross-cultural basis, the distribution of building types and forms; the provision of services; the availability, use and possible depletion of resources; the distribution of rule systems and ritual practices; and the vulnerability of traditional buildings to natural hazards. The mapping of these and other aspects will contribute to our understanding of the world's vernacular traditions from a thematic rather than a culturally specific point of view, and will provide a geographic documentation that has so far been lacking in the field of ver-

■ Walling, framing and roofing
▒ Walling and roofing
▦ Walling
▓ Roofing and framing
▥ Framing

FIGURE 9. *"Differentiation in the use of bamboo in South and Southeast Asia." Courtesy of* World Atlas of Vernacular Architecture *project, Oxford Brookes University.*

nacular architecture studies. Alongside their documentary value, it is hoped that the maps can be of analytical use, as in the case of the map of bamboo, by visualizing specific trends, relationships or anomalies that were not known or obvious before. In so doing they may help identify gaps in our knowledge and understanding of particular traditions and regions. By providing a cartographic documentation of vernacular traditions and by pointing out new directions for recording and research, the atlas may prove of importance to the responsible use of resources, the efficient and successful response to natural or manmade calamities, and the development of culturally appropriate housing during the twenty-first century.

Of course, the mapping of vernacular traditions is not without its problems. Apart from the lack of data referred to above, the nature of architectural and cultural boundaries and the way in which they can be cartographically represented raises particular concerns. Much like the distinctions between different historical periods, cultural boundaries are porous and not always as easy to define or allocate as their political counterparts. Quite frequently, moreover, their nature and location is contested by different ethnic groups or classes, and subject to movements in time. On the whole, this porous, dynamic and contested character of boundaries is difficult to portray on a map. Lines can be drawn, either interrupted or not, symbols and signs may be located, and tones or colors can be added to indicate the distribution of traditions and their boundaries, but by doing so a fixed, static picture is presented that leaves little room for nuances or deviations. More than written texts, in which convenient terms like "often," "perhaps" or "mainly" can be used to indicate degree, variation or anomalies, maps do not really allow for nuances, and as such they are very susceptible to generalizations and polarization. The classification and selection of information is very important in this respect, as the decision of what to show on a map and what to leave out (a decision that will also be related to the scale of the map) clearly influences the message that the map conveys.

Another important point regards the methodological status of maps. Obviously, not all aspects of vernacular traditions can easily be mapped, even if the geographic information that would be needed is available. In general, the "mappability" of material features like building materials or techniques will be higher than that of social or symbolic ones. It is not easy, for instance, to map the symbolic meaning that may be attributed to particular dwellings or building elements, or to map the preferences and attitudes of peoples and cultures with regard to the choice of resources or building forms. It is, of course, possible to map the distribution and diffusion of particular motifs or decorative forms — as, for example, Andreas Lommel has done for the spiral, but such information does in itself not necessarily tell us much about the meanings that may be associated with them in particular cultures or regions.[32] In order not to fall into the rather con-

fined practice of "vernacular housespotting" (i.e., the gathering of data on locations and distribution patterns for the sake of recording only), any map of vernacular architecture would therefore profit from being accompanied by other means of representation (e.g., written texts) that are better suited to communicate information on meanings, attitudes or preferences.[33] In the case of the atlas, the *Encyclopedia of Vernacular Architecture of the World*, which the former is intended to supplement, will provide such complementary information.[34] All maps will be cross-referenced to entries in the encyclopedia where related and relevant background information can be found. As noted before, the mapping of vernacular traditions, like other means of recording, should be regarded as a tool rather than as an end in itself. For, in the words of Paul Oliver, to do the latter would "offer information but no hypothesis: data but no meaningful conclusions."[35]

Because of the problems involved in the mapping of vernacular traditions, the atlas and its constituent maps are bound to be contentious. The generalized and fixed nature of the maps will probably raise more questions about objectivity, correctness and completeness than the majority of texts, photographs or architectural drawings shall ever do — even though, as we all know, no means of representation is without its biases and limitations. Yet, perhaps by being questionable and contentious, the maps in the Atlas are more likely to bring about serious efforts to correct, supplement or refine them. Such revisions and additions are in fact desirable and to be encouraged, as they will have to be accompanied and preceded by new research projects that will uncover traditions that were hitherto not documented or known. If special attention is paid to the geographic distribution and contiguity of particular traditions, such projects will enable us to learn more about the location and nature of architectural boundaries in various parts of the world and may give us more insights into the way in which these relate to the constitution of national, cultural and ethnic identities — insights that can help us understand former processes of cultural interaction and hybridization, and which are needed before any serious discussion of the scope, impact and manifestations of current globalization processes can be engaged upon.

Clearly, a lot of documentation will need to be carried out before the large number of white spaces on the conceptual map of vernacular architecture have all been colored in and our knowledge of technological, formal and functional boundaries is anywhere near comprehensive. Even more research will have to be carried out before such knowledge will lead to a better insight into the dynamic and variable nature of such boundaries and its relationship to cultural identities. As I have hoped to show, despite the problems involved in cartographic representation, the potential role of maps in this extensive undertaking is one that is definitely worth exploring.

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28. See, for example, F.A. McClure, *Bamboo as a Building Material* (Washington, D.C.: U.S. Department of Housing and Urban Development, Office of International Affairs, 1953); and United Nations Secretariat, *The Use of Bamboos and Reeds in Building Construction* (New York: United Nations Publications, 1972).

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31. The map that has been made for the atlas is in fact more detailed, combining Figures 8 and 9 and using color rather than black and white lining.

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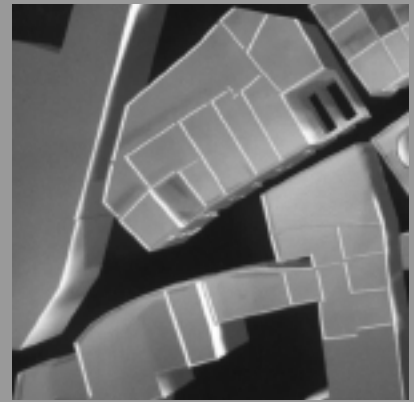
A Mediterranean Jewish Quarter and Its Architectural Legacy: The *Giudecca* of Trani, Italy (1000–1550)

MAURO BERTAGNIN, ILHAM KHURI-MAKDISI AND SUSAN GILSON MILLER

During the late Middle Ages the city of Trani in southeastern Italy was home to a significant minority population of Jews. This community reached a highpoint during the thirteenth century, when under the protection of the progressive King Frederic II, it combined successful commercial activities with the presence of noted religious scholars. A conception of Jewish separation, even isolation, has been central to the study of late-medieval and early-Renaissance cities in Italy — particularly after the sixteenth century, when the prototype of the *ghetto* was invented in Venice. However, the *giudecca* of Trani was compact in size and diverse in architectural character and largely open to the city around it, indicating that this *ghetto* model may have been far more limited in time and space. Indeed, the elaborate spatial arrangements of Trani's *giudecca* indicate a specific form of coexistence the lasted five hundred years. Today, only the buildings of this once-vital community remain to provide evidence of its former existence at an important Mediterranean crossroads.

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The southern Mediterranean world forms a cohesive historical and cultural continuum distinguished by a Greek and Roman heritage blended with Arab, Turkish, and Islamic influences. It forms the background for a pervasive aspect of Mediterranean society — namely, the existence of a far-flung Jewish diaspora fully at home in its environment yet distinct from it. Movement and displacement was an ongoing theme for this diaspora, as noted by social historian S.D. Goitein in his magisterial work *A Mediterranean Society*.[1] Jews were wanderers par excellence, traversing the geographical breadth of "the Sea" from Biblical times onward for the purposes of commerce, pilgrimage, marriage, and the

pursuit of knowledge. Influences were carried from one corner of this vast Mediterranean world to another through mobile currents of trade and migration, creating an expansive and cosmopolitan environment for social life. Many towns and cities around the Mediterranean basin still contain the remnants of Jewish settlement, although their Jewish populations are gone.

A reevaluation of this sediment is long overdue, taking into account new methodologies in urban studies, new historical sources, and new attitudes toward the meaning of hybridity in zones of cultural contact. A team of architects and historians from Harvard University and the University of Udine in Italy have been revisiting sites of former Jewish settlement around the Mediterranean basin, making in-depth studies of physical remains, and writing architectural and social history sensitive to matters of space. The team has carried out research in the Jewish quarters of Fez (1998), Trani (2000), Palermo and Tangier (2002), with plans to continue the project in Istanbul (2003), Tunis, Livorno, and Seville. Our aim is to situate the Jewish quarter within the fabric of the larger city and study its evolution over time by asking questions that foreground matters relating to the built environment.

Depending on physical and historical circumstances, different patterns of coexistence evolved between Jewish communities and their Gentile neighbors, expanding the repertoire of ways in which Jews (and other minorities) fit into the Mediterranean city. But were there any regularities amidst all this difference? In order to answer this broad question, we must look at more specific issues. For example, how was the quarter created, and how did it expand? What were the actual processes of expansion? What form did the houses, streets, and the quarter take? How much space did the minority command, and how was it used? What access did the minority have to the rest of the city? Does the form and placement of the quarter respond to recurrent themes?

In contemporary urban studies, there is much discussion of how cities may be read and compared across time and space. The basic unit of analysis used here is the concept of type, which is the grammar used by architects to find their way through the complexities of the urban fabric. We begin with a reading of the urban space as it currently exists, then move backward in time using techniques of typological dissection to conceptualize the original form.[2] The physical analysis commences with the smallest unit of the house, then proceeds up the hierarchy to the street, the neighborhood, and finally to the entire quarter. This approach permits an accumulation of physical data that may be correlated with other evidence to give a layered reading of the quarter and its evolution over time. At the same time, we seek to generate a social reading that complements our spatial understanding by asking a number of important questions. How did ritual and religiously inspired behaviors have an impact on physical space? How did Jews regard their "membership" in the city, and how did others regard them? Were they strangers or fellow citizens?

French sociologist Maurice Halbwachs was the first to emphasize the social reading of space as fundamental to understanding how cities work: "Place receives the imprint of the group and vice-versa," he wrote.[3] Following his lead, we argue for a hypothesis that is not new, but is here reinforced by evidence from the built environment. Simply stated, our research indicates that Jews in the premodern Mediterranean city lived in complex and multiple arrangements with their non-Jewish neighbors, bound to their city by an overriding feeling of common identity based on a shared sense of place.

THE SETTING

Our setting is the city of Trani on Italy's Adriatic coast. Trani has a beautifully preserved medieval core and a distinctive *giudecca* (Jewish quarter) with streets, houses and synagogues dating back to the period between the tenth and fifteenth centuries (**FIG.1**). By virtue of its geographic position midway between the eastern and western halves of the Mediterranean, southern Italy was a meeting point for various traditions and ideas coming from Northern Europe, Spain, the Levant, and Northern Africa. It was a region of mediation, harmonization and synthesis, not only for its Jewish population, but also for all migratory peoples who arrived there.

Jews have lived in Italy without interruption for almost two thousand years, moving from place to place as conditions changed and new opportunities arose. Permanent Jewish settlement first appeared during the first century BCE, when Jewish slaves and merchants were counted among the heterogeneous population of ancient Rome.[4] By the sixth century, Jews had made their appearance in southern Italy. Jewish symbols and inscriptions in Greek and Latin found in catacombs discovered near Venosa suggest that Jews in that region took part in a wider cultural milieu that was Mediterranean and Classical in origin.[5]

Jewish scholars from North Africa arrived in the south of Italy following the Muslim invasion of Sicily in the late ninth and early tenth centuries. These migrants maintained their contacts with the centers of Jewish learning in Palestine and other parts of the Islamic world. Acting as cultural intermediaries, they reintroduced the Jewish communities of southern Italy to their Eastern roots through a revival of Hebrew literature and an exposure to ideas emanating from the East. Following their influence, a number of cities along the Apulian coast become seats of learning, including Trani, Bari, Brindisi and Taranto.

Trani as a Center of Medieval Jewish Life in Apulia
The high point of Jewish scholarship in Trani came in the person of Rabbi Isaiah of Trani (1200–1260), also known as the "Rid." Rabbi Isaiah was a figure of such importance that "no study of medieval rabbinic literature may claim any

1 Palazzo Lopez
2 Sant'Anna synagogue
3 Piazza between the synagogues
4 Cul de sac area
5 Scolanova synagogue
6 Via del Cambio
7 Port

measure of comprehensiveness without integrating his contributions," according to Isadore Twersky.[6] Rabbi Isaiah's thinking was based on the works of the eminent French scholar Rashi, but he was thoroughly inventive in his own right, writing legal opinions (*responsa*) that were marked by a "discriminating eclecticism."[7] He inspired a following that included his grandson, Rabbi Isaiah ben Elijah di Trani (d.1280), also a scholar of great repute.[8] Thus, we find in the *giudecca* of Trani — precisely at the moment of its greatest physical expansion — a rabbinical school that could attract Jewish students and scholars from all over the Mediterranean world.

Traditionally, such scholarly centers, known as *yeshivot*, were supported by wealthy individuals who wished to translate worldly success into religious currency through acts of piety. In Trani, a rising Jewish bourgeoisie engaged in overseas trade was critical to all aspects of communal growth. The expansion of the *giudecca* in the thirteenth century resulted from a combination of intellectual vigor and economic prosperity. Another essential element in this conjuncture was the encouragement and acceptance offered to the Jewish minority by the ruler of Sicily and southern Italy, the renowned Frederic II.

Frederic II and the Protection of the Jewish Minority

Frederic II, King of Sicily and Apulia — and Holy Roman Emperor (1197–1250) — cast an immense shadow across southern Italy in his day. Progeny of both Norman and German royal houses, Frederic's domination of southern Italy is the larger framework for understanding the situation of Trani's Jews. He was "a Mediterranean ruler, brought up in a world conquered from the Muslims, where Muslim traditions were still strong."[9] A cultivated intellectual with interests in natural science, literature, the arts and architecture, he knew some Arabic, encouraged the translation of scientific works from Arabic into Latin, and corresponded with Jewish philosophers. He was also a promoter of the building arts. His rural retreat at Castel del Monte combined his curiosity about astrology with a passion for construction, producing an unusual eight-sided building that expressed both pragmatic and cosmological influences. He also maintained a cosmopolitan court in Palermo, where the presence of lions and dancing girls, black musicians and a royal harem further compromised his orthodoxy in the eyes of believing Catholics.[10] Frederic's reluctant participation in the Crusades eventually culminated in his brokering of a ten-year truce with the Muslim overlords of Palestine, and as a result, commerce and exchanges with the Levantine coast increased, stimulating Apulia's role in Eastern Mediterranean trade.

In contrast to the repressive and often unpredictable policies of the Papal States, Frederic's rule was equitable toward subaltern groups such as the Jews. Directing a highly centralized state supported by a loyal nobility, Frederic demanded reg-

ular tax payments in return for legal protections.[11] A sampling of documents from the archives indicates that the Jews of the south had frequent exchanges with a ruler who was deeply involved in the day-to-day details of governance. Frederic granted Trani's Jews personal and commercial protection "*in perpetuo*," in return for the payment of an annual tax.[12]

Frederic used the transfer of at least a part of these taxes to the Church as a clever foil to appease his clerical opponents. But this policy of appeasement did not last, and in 1239 the fragile truce between the Emperor and the Church dissolved. At that moment, Frederic launched an open war against his papal rivals. Over time, the high price of his protracted struggle against the Papacy in human and material terms caused a drain on resources that retarded the south for centuries. Yet this complex character remained highly regarded by the southern Jews. He had a profound appreciation of Eastern cultures, and his peaceful opening to the Holy Land worked in the favor of the Jewish minority by allowing it to maintain close ties with co-religionists in Egypt and Palestine.[13]

Perhaps the most significant aspect of Frederic's relationship with the minorities of Apulia was the sovereign protection he gave through a code of laws instituted in 1230, which applied to every subject, native or foreign, without regard to birth, race or religion.[14] Although they were still considered inferior to Christians, the code gave Jews the means to make legal appeals in their own defense. Furthermore, in 1236 Jews were protected by law against the false and deadly accusation of blood libel, and were also protected against forced baptism.[15] On the other hand, sartorial laws remained on the books, requiring Jews and Muslims to wear a beard and a special blue shift covering their clothes. The extent to which these laws were enforced is not known, but their intention is clear — to maintain a strict separation between Jewish and Muslim minorities on the one hand, and the Christian majority on the other.

Was the Svevian period a "golden age" for the Jews of Trani and southern Italy, as it has traditionally been depicted by Jewish scholarship? It is true that Frederic guaranteed legal status to Jews, giving them recourse to the law courts and moving them from the condition of "marginalized" to "tolerated," a significant advance for that time. He also placed outside the law noxious practices such as forced conversion. On these grounds alone, his reign must be viewed as an improvement over that of his predecessors. However, some historians have argued that by granting these concessions, Frederic was simply building on a tradition of protecting minorities that was already present in southern Italy.

To illustrate this point, Francesco de Robertis argued that in 1199, well before the rule of Frederic, Brindisi had concluded a treaty with Venice that was signed by Isaak, a member of the flourishing Jewish community there. De Robertis maintained that Isaak was not merely representing the Jews of Brindisi, but all of the *populus brindisiano*. Another point that De Robertis has made is that the 1219

code of laws that preceded Frederic's code of 1230 was even more tolerant than Frederic's. Indeed, before writing the code of 1230, Frederic sent a circular letter to local magistrates asking them to transmit to him outlines of the customs followed in their districts. This suggests that he was merely confirming in law certain practices that were already in use.[16] In any case, Frederic put his own imprint on these antecedents and came to be viewed as the cause and perpetuator of the peaceful milieu in which Trani's Jews flourished.

Trani in the Mediterranean Economy

Trani's role as a center of mercantile activity for the entire region was mentioned by Benjamin of Tudela, who passed through the city around 1166. He wrote that "Trani [is located] on the sea, [in a place] where all the pilgrims gather to go to Jerusalem, for the port is a convenient one. A community of about 200 Israelites is there, at their head being Rabbi Elijah, Rabbi Nathan the Expounder, and Rabbi Jacob. It is a great and beautiful city."[17] According to Benjamin, Trani's position as an Adriatic port was the key to its economic prosperity.

How did the Jews of Trani make a living? Italian historian Cesare Colafemmina has said that during Svevian rule, the activity of Apulian Jews consisted mostly of long-distance trade and the dyeing of fabrics, especially silk. There were also money-lenders among the Jews, but this activity usually went hand in hand with commerce. "Some [were] also landholders, and [owners of] vineyards used to make wine for the Sabbath, and oil for [the lamps of] the synagogues."[18] Archival sources also mention soap-making.[19]

On money-lending, Colafemmina has remarked that Jews lent only modest sums. The larger banks and money-lending institutions that appeared later in the south were not controlled by Jews, but by Tuscans, Lombards and Genovese — "all foreigners and all Christians."[20] The presence of Venetian Jews in Trani is a reminder of the close ties between that city and Venice, the most important center of Adriatic trade. Relations were closest in the period of Frederic II; but even later, Trani continued to serve as an outpost for Venetian merchants, and was firmly fixed within its economic orbit. There was even a Venetian consulate in Trani in the thirteenth century.[21] And the names of Venetian Christian families begin to appear in the local archives in the fifteenth century.[22]

THE ARCHITECTURE OF THE *GIUDECCA*

The thirteenth century was the period in which the most concentrated building took place in the Jewish quarter, including the two largest synagogues, the Sant'Anna ("Great") and the Scolanova, the most important buildings visible in the *giudecca* today. The solidity, grandeur and variety of building types found in the *giudecca* dating from that period speak of a wealthy community that enjoyed economic prosperity, access to power, and an optimistic view of the future **(FIGS.2,3)**.
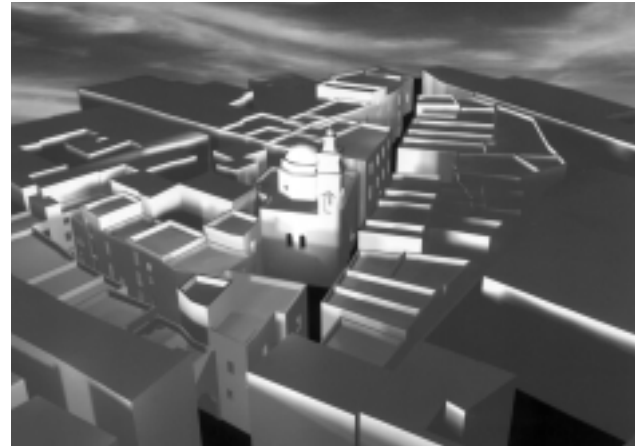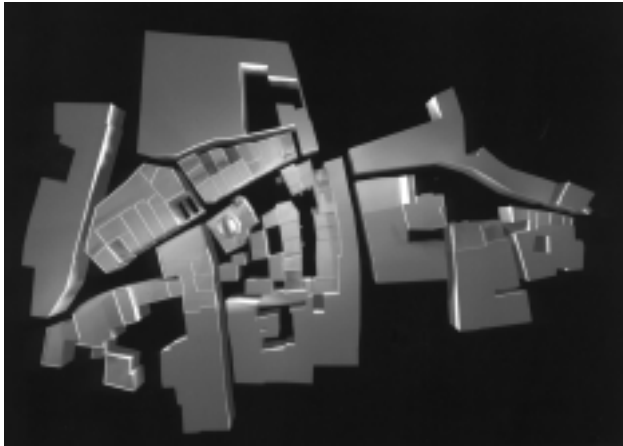
FIGURE 2. (LEFT) *Top view of model of the Jewish quarter of Trani. Computer model by Mauro Bertagnin, Roberto Di Tolla, and Stefania Lanzidei.*
FIGURE 3. (RIGHT) *Birdseye view of the* giudecca *model looking down its main street and showing the dome of the Great Synagogue. Computer model by Mauro Bertagnin, Roberto Di Tolla, and Stefania Lanzidei.*

The Houses

The grand palaces that greet the visitor on entering the *giudecca* housed the wealthy families whose economic activities set the rhythm of daily life. The facades of impressive buildings such as the Palazzo Lopez show *bugnato* type stonework, the same used in the great *palazzi* of Florence and Venice. Passing through the wide doors of the Palazzo, one finds oneself in a spacious courtyard. A staircase leads from the courtyard to the main living quarters located on the floor above (**FIG.4**). The floor plan suggests that this grand house was inhabited by a single extended family. The rooms flow into one another naturally, allowing free movement throughout the entire complex. The main salon faces the port, its large windows framing a spectacular view of the harbor.

To find such a large palace within an Italian Jewish quarter is unusual. Generally, Jewish houses in Italian towns were small in scale and densely crowded together. But there were only two or three such palaces in the *giudecca* of Trani, indicating that the number of very wealthy families was small. Elsewhere, the contrast between the grand houses and the more modest row houses lining the main street suggests a multilayered society accommodating various social and economic strata. A third type of house, described below, was attached to the synagogue and served as the home for the rabbi.

The ground floor plan of the Palazzo Lopez reminds us of the great commercial houses of Venice and Florence (the *casa bottega*). A series of vaulted rooms and storage areas speak of a world of work incorporated into the domestic environment. In most cases, the only entry was from the street (**FIG.5**). This space could be rented out, providing a source of income. Such areas are today found in almost every house, including the more modest ones, suggesting that the quarter was alive with commercial and artisan activities.

FIGURE 4. *The courtyard of Palazzo Lopez. Photo by Mauro Bertagnin.*

FIGURE 5. *Door to the commercial space. Photo by Mauro Bertagnin.*

Interspersed throughout the quarter, but especially in the area of the Great Synagogue and the cul de sac behind it, are row houses consisting of two levels of living rooms built above ground-level commercial space. These structures are modular, varying only slightly in elevation and width. They march along the street front, filling their lots and giving the distinct impression of having been built at one time.[23] Their ground floors were used as workshops, with wide entry doors to facilitate the movement of goods. Vaulted rooms at the subterranean level were also used for storage, and access to the upper levels was via an external staircase. The second and third floors are two rooms deep, making for four-room living units, with the kitchen on the second floor. The roof area provided important additional domestic space (**FIG.6**).

The Synagogues

The quarter is anchored at its center by a complex of religious and communal buildings built around a large open space. The two largest synagogues of the quarter were built near to each other in the thirteenth century. The Sant'Anna or Great Synagogue is unusual because it was conceived as a synagogue, and did not emerge from converted domestic space. It was also built with the intention of accommodating the entire community. The structure was converted into a church late in the fourteenth century, and was abandoned in a more recent period. Today it is boarded up and a near ruin (**FIG.7**).

FIGURE 6. *The row houses. Drawing by Mauro Bertagnin, Roberto Di Tolla, and Stefania Lanzidei.*

The inspiration of the design of this synagogue was the Byzantine church, with a main hall almost perfectly square (38 x 40 feet), enclosed by four immense arches that support a 26-foot-high dome, reminiscent of the Hagia Sophia (although on a much smaller scale).[24] Although the dome gives a sense of a great interior space, on the outside the synagogue is no taller than the surrounding buildings. This effect was intentional, to avoid making a Jewish house of worship conspicuously taller than the edifices of Christians (**FIG.8**). A niche in the western arch held the *tevah*, the platform supporting the reader's desk. Today the main doorway is found on the eastern wall, where the ark of the covenant (*aron ha-kodesh*) would normally be placed. The building underwent many transformations over the years, and the eastern doorway is most likely a later addition. According to Ernst Munkácsi, it would have been very unusual to place a door in the wall that marks the direction of prayer, especially when this door leads directly to the street (**FIG.9**). The more usual practice in synagogue design was to have a mediating space between the street and the interior. Munkácsi speculated that the original entry was on the northern side, where a door led into small hallway that was a sacristy at the time of his writing.[25]

FIGURE 8.

Cutaway axonometric drawing of the Great Synagogue. Drawing by Mauro Bertagnin, Roberto Di Tolla, and Stefania Lanzidei.

FIGURE 10. *The inscription found in the Great Synagogue. Photo by Susan Gilson Miller.*
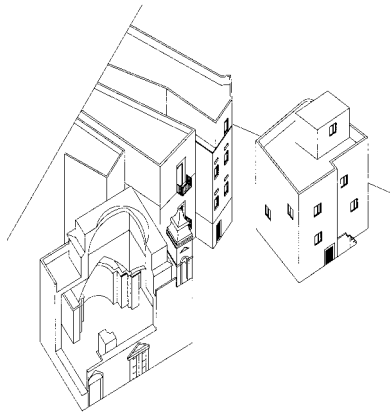
Another curious feature of this synagogue is the complexity of the space beneath its main floor. The subterranean zone was excavated to allow for two additional levels where a network of rooms was constructed. What activities might have taken place in these rooms? A ritual bath (*mikveh*) perhaps, or a room for preparing the dead for burial — activities not carried out at home. The extensive use of underground space in both public and private buildings is a pattern of use that emerges when Trani's architecture is compared with that of Jewish quarters elsewhere in the Mediterranean region.[26]

During his visit to the synagogue in the 1930s, Munkácsi noticed a marble tablet embedded in the southern wall, probably placed there when the synagogue was built **(FIG.10)**.[27] In addition to the impressive dome, the inscription makes note of the mosaic floor — both unusual features that set the building apart from others of its type:

> In the year 5007[28] after the creation
> This sanctuary was built by a minyan[29]
> Of friends, with a lofty and splendid dome and a window
> Open to the sky, and new portals for enclosing it,
> And a pavement on the upper floor, and benches

> For seating the leaders of the prayer, so that their piety
> Would be watched over by the One who dwells in the glorious heavens.[30]

The Great Synagogue is a point of access into Tranesi Jews' vision of themselves. The adoption of the Byzantine style of construction was a statement about their self-perception as a cosmopolitan community having strong ties with the historical centers of Jewish culture further east. The facility with which Byzantine church form was translated into a Jewish idiom speaks of a community at ease in its diversity and open to non-Jewish influences in the building arts. On the larger scale, it also demonstrates how porous were the cultural and aesthetic membranes that separated one group from the other in this part of the Mediterranean during the later Middle Ages.

The *giudecca's* second synagogue was the Scolanova, a simple, unadorned building whose thick limestone walls are pierced by several small windows. Access to the interior is through a door on the south side reached by mounting a tall staircase.[31] Inside, the synagogue is a single, long, nave-like hall with a niche on the eastern wall where the Torah scrolls were stored. An upper story may once have been a women's gallery.

The elongated nave of the Scolanova was a form of synagogue construction found in Islamic Spain and northern Italy. The form was also used in the building of the ancient synagogue of Ostia near Rome. The Scolanova also bears a remarkable similarity to the Tránsito Synagogue of Toledo, a private synagogue built by a court official, Samuel Halevi Abulafia, in 1360 as an addition to his house.[32] Thus, a prototype for this building could have come to Trani from either northern Italy or the Iberian peninsula **(FIG.11)**. The Scolanova was probably built later than the Great Synagogue — as its name suggests. Because of its smaller size, it was not intended as the gathering place for the entire community.

The adjoining house is also noteworthy. The plan shows a division into various sub-units that could support syna-

FIGURE 9. *Doorway to the Great Synagogue. Photo by Susan Gilson Miller.*

FIGURE II.

Axonometric drawing of the Scolanova Synagogue. Drawing by Mauro Bertagnin, Roberto Di Tolla, and Stefania Lanzidei.
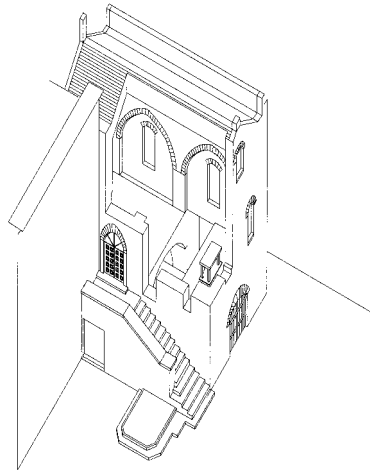
gogue-related activities, such as the baking of *matzot*, rooms for small groups of worshippers, study rooms, and so on. It is even possible that the rabbi or patron of the synagogue lived in this house before the synagogue was constructed. Perhaps it was part of a study complex presided over by a famous rabbi, such as Rabbi Isaiah.

A small synagogue found in a block of residences nearby represents a third type — domestic space converted into religious space. The congregation that met here was very small and probably represented a subset of the community. The sources speak of *tedeschi* (German) Jews in Trani in the late fifteenth and early sixteenth centuries, perhaps arriving from Venice. They followed a ritual different from that of the local Jews, and so had reason to form a separate prayer meeting. This small synagogue is distant from the others, yet enjoys a connection to them via the open *piazza*.

The Streets

The open space near the Great Synagogue was devoted to public use and was integral to communal life. A number of Jewish rituals take place in the open air, such as the celebration of the holiday of *simhat torah* and the procession that accompanies the *bar mitzvah* and the wedding. It could also be used for public prayers, such as those offered in the time of drought or calamity. We have no written evidence of how the *piazza* was used, or even a memory of it. Yet it is clear that the surrounding buildings were designed to relate to it, forming a complex setting for collective activities.

The entry to the quarter was protected at both ends by gates, the southern one of which is still visible. The turning into the gate and the gate itself indicate that one is entering a distinct place in the urban fabric — not isolated, but different (**FIGS.12,13**). The quarter was on the periphery of the larger town, close to the port, which was the center of Jewish business activity. It is worth noting that other major southern Italian coastal towns, such as Naples and Bari, also contain Jewish quarters located adjacent to port facilities.[33]

FIGURE 12. (TOP) *The main gate. Photo by Mauro Bertagnin.*
FIGURE 13. (ABOVE) *The main gate, interior view. Photo by Susan Gilson Miller.*

The fact that the *giudecca* is not walled is significant. Jewish and Christian populations lived side by side, and there was constant exchange between them in shops, streets, and the port. Thus, the streets of the *giudecca* flow naturally into the rest of the urban fabric without interruption (**FIG.14**). Christians came to the Jewish quarter for essential services found only there, and the memory of these activities is preserved in the toponyms (**FIG.15**). Via del Cambio, a small street leading to the port, was the center of operations for Jewish money-changers and bankers. The shops and storehouses of the quarter also specialized in the weaving, dyeing and selling of luxury cloth, and drew their clientele from the entire town. We also know that the Jews of Trani spoke Italian, using it among themselves and with their Christian neighbors. Our reading of the physical space of the quarter underscores the point that the *giudecca* was not a zone apart, but was integrated into the rest of the city.

FIGURE 15. *Sign on a side street in the* giudecca. *Photo by Mauro Bertagnin.*

FIGURE 14. *Houses along the main street of the* giudecca. *Photo by Mauro Bertagnin.*

MASS CONVERSION AND COMMUNAL CONTINUITY: THE FOURTEENTH CENTURY AND AFTER

The century following Frederic's death in 1250 was one of increasing turmoil and disintegration in southern Italy. The takeover of the area by the French Angevins in 1266 had a catastrophic effect on the local population. An absence of authority in rural areas soon led to a return of lawlessness in the countryside. In the cities, on the other hand, the local nobility took over and provided some stability. Heavy taxes imposed on the local population by foreign rulers were the overriding feature of state-societal relations in this period. But much of this wealth flowed out of the region to the absentee Papacy, which continued to confer legitimacy on the temporal rule.

In economic life, the center of gravity shifted to the north, where city-states like Venice and Ferrara had a strong tradition of self-governance and were more successful in weathering the transition to decentralized rule. A major population shift ensued, driven by such factors as the attractiveness of new poles of commercial activity and a desire to flee the political instability of the south. Southern Jews active in banking and money-lending were invited to Ancona, Livorno and Venice to provide the capital needed for commercial expansion, while skilled Jewish workers supplied the manpower for a burgeoning crafts industry.[34] This exodus further frayed the fabric of southern Jewish life. Moreover, after 1290 Apulia experienced violent anti-Jewish revolts that led to a massive conversion of Jews in many localities. As a result, the Jews of Trani disappeared from the historical record for more than a century.[35]

It was not until after 1400 that the Jewish presence reappears in southern Italy, as revealed in documents concerning Jews and Jewish converts, the *cristiani novelli,* who were officially considered part of the Jewish community.[36] Some of these documents relate to individuals, while others concern the *giudecca* as a whole and treat the Jews as a collectivity. Many are concerned

with fiscal matters and written in response to Jewish complaints about oppressive taxation. Others shed light on transactions of a commercial nature, such as disagreements over unpaid loans and failed partnerships. Notarial documents are also in evidence, relating to matters of personal status such as marriage, inheritance and divorce. Often the documents concern Christians as well as Jews, revealing the intricate ties between the two groups. Jews are easily identified by their names, and also by the use of the word *iudeo* (Jew) following the name. It is clear from the language of these documents that little distinction was made between those who converted to Christianity and those who remained as Jews, perhaps because the authorities doubted the sincerity of the conversions.[37]

How is Jewish life in this later period apparent in the physical form of the town? How did Jews inhabit the city, and how did the city shape the life of the Jews? Weaving together fragments of information that were both spatial and textual, we were able to build a partial image of the Jewish presence in Trani post-1400.

The initial question that comes to mind is that of the legal status of the Jewish community and the extent to which it was integrated into the larger framework of urban life. Here the archives indicate that the Jews of Trani continued to enjoy a precise legal status within the formal structures of governance. In the fifteenth century the Jewish community elected representatives (*proti*) who acted on their behalf vis-à-vis the authorities, and who served as the main conduit between the individual and the state. These notables were also charged with supervising the collection of Jewish taxes. Usually only the wealthiest Jews (*giudi facoltosi*) were chosen to act as *proti*, as the following document from state archives indicates:

> . . . *in previous times it has been the habit of the* giudecca *to elect two or three* proti, *the wealthiest and most competent, to govern. . . . But some have been acting against custom, and the* giudecca *has been electing poor and insufficient men with the result that its interests have been harmed. . . . [We] order the Jews of this* giudecca *to choose as* proti *the richest, best and most competent . . . as was the habit in previous times, so that the* giudecca *will be governed well and taxes will be paid . . . according to habits and norms of the* giudecche *of this kingdom. . . .*[38]

The state played a central role in making sure that taxes were fair, setting the amount imposed on the community and reviewing cases of individuals who felt aggrieved. The *giudecca* as a whole had to pay a predetermined sum, leaving it to the individual to complain about the amount of his share. The state authorities would order the notables of the Jewish community to meet with the aggrieved person and look into his financial abilities. The case of the banker Mose Todisco, who arrived in Trani in 1491, provides insight into how this process worked:

> . . . *Mose Todisco, a Jew coming from outside . . . has a good sum of money . . . and we command you [to] meet in Trani*

> *according to your custom . . . and demand that the said Mose give under oath . . . a public declaration of the fortune that he possesses in Trani, and for which he should pay taxes.*[39]

Not only were individuals investigated, but from time to time the fiscal potential of the entire *giudecca* was reexamined. For example, in 1482 the Jews of Trani went through a period of economic hardship, and part of their communal tax was reassigned to the *giudecche* of several neighboring towns.[40]

The centrality of fiscal matters in the life of wealthy Jews is evident in story of Stella Astruc, who lived in the latter half of the fifteenth century. Stella was part of the Jewish aristocracy of Apulia and the wife of Marsilio Astruc, a man of means. The family first appears in the archives in 1463, when Marsilio served as spokesman for the town of Gravina at the court in Naples.[41] Then, 25 years later, the widow Stella was denounced for nonpayment of taxes.[42] Threatened with having her wealth confiscated, Stella tried to leave Gravina for Trani, but the Duke of Gravina refused to let her to go. Not one to submit passively to her fate, Stella took her case to court and won. The court, ruling in her favor, stated that "the Jews of this kingdom are not vassals except to the King . . . and they can come and go as they see fit. . . ."[43]

Stella's troubles did not end there, however, for when she arrived in Trani, the Jews there demanded that she contribute to the communal tax, without being afforded the grace period normally accorded to newcomers. Again she resisted, claiming that her wealth had been greatly diminished by war and the large dowries of her two daughters. We do not know the outcome of her case in Trani, but it is clear that her wealth, its advantages notwithstanding, was a great source of personal anxiety and public debate. The last trace of the family is in the countryside outside Trani, where we found a tombstone embedded in the wall of an old farmhouse that most likely marked the grave of Stella's daughter. The inscription in Hebrew reads: "Here lies Dvora Estrina, daughter of Maestro Astruc, who died on the 24th day of Kislev in the year 5252 (1492 CE). May her soul be released from the chains of life" (**FIG.16**).[44]

From our discussion of taxation, we may draw conclusions about the status of the Jews of Trani between 1400 and 1550. Jews as individuals had rights before the law and could appeal to the civil authorities for redress when they felt mistreated. The authorities in turn placed a value on fairness and tried to constrain local officials who had tended to exploit Jewish vulnerability. Jews as a group had the power to elect officials who could speak for them at the level of the city and the state, although their choice of representatives was limited to a small group of wealthy men. This hierarchical structure allowed Trani's notables to join with the Jewish *proti* from other *giudecche* to form a Jewish representation at the state level. Thus it seems that the Jews of Trani were organized in such a way that they enjoyed a protected legal status, access to power, and the promise of fair governance.

There is a darker side of this historical picture, however, one that became evident at moments when Jews were harassed or attacked. For example, documents from 1494 tell of an incident in which the Jews of Trani were tormented to the point where the state had to intervene. The people of the *giudecca* wrote to the king, complaining that the clergy of Trani were harassing them. The king responded by sending an order "to forbid during Holy Week, or any other days of the year, that Jews be seized and stoned (*presi e sassate*) or in any other way injured."[45] A few days later, again at the request of the *giudecca*, the local bishop received a letter from the court "invit[ing him] to abstain from inciting (*aizzare*) priests and others against the Jews of the city."[46] The language of the letter is unequivocal:

> *. . . it has been a fact . . . that you are still making many*
> *false statements, vile slurs, and other injurious acts that*
> *are causing personal harm to the Jews of this* giudecca*,*
> *against the customary privileges and legal rights of the*
> *Jews of this kingdom . . . hence we . . . command you that*
> *when you receive it [this letter], you should stop causing*
> *injury, and likewise your priests and laymen . . . let [the*
> *Jews] stay at home and go about their business. . . .*[47]

What triggered the attacks against the Jews of Trani in 1494, and how frequently did such incidents occur? In the eighty years spanned by the Napoli archives (1463–1540), such attacks were mentioned only three times.[48] In order to understand the events behind these sudden outbreaks of violence, and the gradual disappearance of Trani's Jews, it is important to look at the situation in Apulia at that time.

In 1494 Aragonese rule was replaced by French, and then by Venetian. Finally, in 1510, the Spanish imposed their authority on the kingdom of Naples. The unceasing political turmoil made life difficult for Trani's Jews, and many sought relief in conversion. Changing one's religion presented an option for the Jew vexed by heavy taxes and ongoing pressure

from a militant church. Rich Jews even more than poor ones were attracted by the possibility for greater personal freedom that conversion implied.[49] Therefore, our image of Jewish life in this period must include the situation of the *cristiani novelli*, or "new Christians."[50] *Cristiani novelli* represented 120 households in Trani at the end of the fifteenth century — that is, roughly 15–20 percent of the total population of 600–700 households, both Jewish and non-Jewish.[51]

Conversion could mean entering an intermediary stage in which one no longer prayed with one's former co-religionists, although one's house of prayer remained the same. And it could mean that one no longer broke bread or married with one's former co-religionists, although it was possible to remain neighbors. In fact, it is clear from their numbers that many converts must have continued to live in the *giudecca*. According to a contemporary Christian view, the reason why these *cristiani novelli* (some of whom were men of high status holding honorific chairs in the Università) continued to live within the Jewish quarter was simple: "once a Jew, always a Jew" (*semper judarizarunt et adhuc judaizant*).[52] We may conclude from this that the borderline between Jew and "new Christian" was a blurred one, at least in the fifteenth century. This ambivalence no doubt affected Jewish behavior, as well as Christian. The resonance of "once a Jew, always a Jew" is that decades, and perhaps even centuries, had to pass before the stigma of a former Jewish identity was completely removed.

Interpersonal relations between Jews and Christians were generally peaceful, apart from the isolated periods of tension already mentioned. They entered into business transactions and contracts, owned property in common, and often lived in adjoining houses. The compact size of the Jewish quarter, its openness to the larger city, and the existence of important commercial services such as banking and money-lending within its limits meant that Christians had to come regularly to the Jewish quarter for their affairs. We must assume that Jews could also enter the Christian part of town with equal ease: they were represented on the important governing bodies of the city, they engaged in crucial trades, and even held lands outside the walls. There is no indication that Jews were forced to live in a separate quarter; most likely, they lived there by choice. It is simply impossible to know how, when or why the Jews came to the *giudecca*, but one fact is certain: for a period of at least two hundred years, and perhaps even longer, it was the center for Jewish life in Trani, where all the services needed to live according to Jewish ritual and law were comfortably at hand. Renata Segre, writing on the interactions between Jews and Christians in Italy during the late Middle Ages and Renaissance, concludes that

> *. . . the relationship established between Jews and*
> *Christians shows how their religious and (in some respect)*
> *ethnic differences, though certainly noticed, did not stand*
> *in the way of habits of civil coexistence. The sheer exis-*
> *tence of such an enormous gap between the letter of the*

*law and the reality of daily life is rich with implications.
In fact, the law defined in extremely rigorous terms the
gulf that ought to separate the Christian faithful from the
people that the church so often called "the killers of
Christ". And yet the very measures that could not help but
have had repercussions on Jewish life — the decrees of the
fourth Lateran Council, the first burnings of the Talmud,
the establishment of the Roman inquisition — seem to
have had little effect on ordinary relations.*[53]

Perhaps the most important common denominator
between Jews and Christians was their shared appreciation
for the richness of Italian culture as it developed in the
southern part of the peninsula. From the period of Frederic
II, the Jews of Trani participated in an intellectual ferment
born from the convergence of Muslim, Christian and Jewish
philosophical currents in this part of Italy. In the thirteenth
century the thinking of Maimonides and Rashi, the new
ideas generated in Spain and Provence based on the transla-
tions of Greek rationalist philosophy, and the influences of
Byzantine and Arabic literati, created a corpus of Jewish
thought that was inclusive and eclectic. The fifteenth century
was another period of excitement in the intellectual sphere,
with the arrival of many new immigrants from Spain,
France, Germany, and other parts of southern Italy. Among
the newcomers to Trani was the scholar and translator
Tanhum ben Moshe from Beaucaire in Provence, who died
in Trani in 1450 and whose tombstone is preserved in the
courtyard of the church of the diocese.[54] Tanhum is said to
have translated Hippocratis's *Prognostica*, completed in 1406.
The presence of such an illustrious figure in Trani suggests
that even in the fifteenth century, Trani still attracted out-
standing scholars. As late as the sixteenth century, when the
community was supposedly in decline, the famous Jewish
intellectual, Rabbi Yitzhak Abarbanel, visited Trani.[55]

Yet the process that eventually led to the disappearance of
Trani's Jews was also slowly gathering momentum. In 1510
the Inquisition was installed in the region of Naples, and
Ferdinand the Catholic, who had ordered the expulsion of the
Jews from Spain in 1492, commanded all Jews and new
Christians to leave the region of Naples as well.[56] However,
the edict was unequally applied, and some remained behind,
especially those who had the wealth and the influence to
acquire protection.[57] But it was a short reprieve, and in 1541
Charles V made a clean sweep, wiping the community out of
existence by forcing those few who remained to convert.

ARCHITECTURE AND JEWISH MEMORY IN SOUTHERN ITALY

The unusual aspect of this story is the extent to which
an awareness of Trani's Jewish past has remained a part of
local memory, coloring the popular perception of urban

space. The *giudecca* is still inhabited by Jewish ghosts, and
the Jewish presence, after the passage of nearly five hundred
years, is still palpable. How does this architectural remnant
influence and shape our understanding of Italian urban his-
tory, and especially, the meaning of Jewish participation in it?

A notion of Jewish separation, and even isolation, has
been central to conceptions of late-medieval and early-
Renaissance cities of Italy — particularly after the sixteenth
century, when the prototype of the *ghetto* was invented in
Venice. Our research provides compelling proof that the
ghetto model was limited in time and space. In Trani, we
find traces of a social reality that speaks clearly of more
extensive interactions between ethnic and religious groups
than the *ghetto* stereotype would allow. We may conclude
that the patterns of peaceful coexistence found by S.D.
Goitein in medieval Cairo extended further east around the
Mediterranean, infusing the life of mixed communities on
both sides of "the Sea" with a "humane broadmindedness"
apparent in commercial relations, social and political interac-
tions, and in the construction of the built environment.[58]

Were Jews merely *gens de passage*, or were they considered
real *tranesi*? Here we must make a qualitative judgment based
on the evidence at hand. If the archives tell us that the Jews
enjoyed a precise legal status, the physical remains show that
they had also acquired significant social capital. In addition to
their leadership in communal affairs, their ownership of shops
and property, their entrepreneurship and tax payments, we also
have the evidence of their contributions to the built environ-
ment. The dimensions and importance of the Great
Synagogue and its architectural claims to permanence are
expressions of an investment in the community that cannot be
ignored. Moreover, the adoption of an eclectic architectural
style reflecting both Eastern and Western influences speaks of
a community definitely not cut from one cloth, but one that
harbored a variety of types, opinions, and aesthetic tendencies.

We can say with confidence that at least some of this
social capital was founded on the diversity that Jewish resi-
dents imparted to the local scene based on their ability to
import new ideas. One of the functions minority groups have
performed throughout history is to provide a mirror in which
the majority can reflect upon itself to achieve greater self-
understanding; indeed, this gift of self-awareness may have
been the most important one made by Trani's Jews to their
non-Jewish neighbors. The elaborate spatial arrangements
documented here allowed for a specific form of coexistence
that endured for half a millennium. They were the result of
complex negotiations between the Jews of Trani and the "oth-
ers," in which each side brought to the table certain strengths
and advantages. In the final analysis, the underlying processes
that contributed to the production of Jewish space are revelato-
ry about the condition of its creators. The material remains of
the *giudecca* are a continuing source of enlightenment about
the past. Their most compelling feature today may be to give
insight into the genius of the people who made them.

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1. S.D. Goitein, *A Mediterranean Society: The Jewish Communities of the Arab World as Portrayed in the Documents of the Cairo Geniza*, 5 Vols. (Berkeley: University of California Press, 1967–1988).
2. Analysis by type gives insight into how the urban morphology has been shaped by a process of genesis that is culturally determined. For a more complete discussion of this methodology, see A. Petruccioli, "Alice's Dilemma," in A. Petruccioli, ed., *Typological Process and Design Theory*, (Cambridge, MA: AKPIA, 1998), p.72.
3. Quoted in J. Bottin and D. Calabi, *Les étrangers dans la ville: minorités et espace urbain du bas Moyen Age a l'époque moderne* (Paris: Editions de la Maison des sciences de l'homme, 1999), p.2.
4. D.B. Ruderman, "At the Intersection of Cultures: The Historical Legacy of Italian Jewry," in V. Mann, ed., *Gardens and Ghettos: The Art of Jewish Life in Italy* (Berkeley: University of California Press, 1989), p.2.
5. C. Colafemmina, "Gli ebrei nel Mezzagiorno d'Italia," in R. La Franca, *Architettura Judaica in Italia: Ebraismo, Sito, Memoria Dei Luoghi* (Palermo: Flaccovio, 1994), pp.248–49.

6. I. Twersky, "The Contribution of Italian Sages to Rabbinic Literature," in *Italia judaica: atti del I Convegno internazionale: Bari 18–22, maggio 1981* (Roma, 1983), p.399.
7. Ibid., p.390. Rashi is the acronym of Rabbi Shlomo Yitzhaqi, medieval commentator on the Bible and Talmud, born in Troyes in northeastern France in 1040, and who died there in 1105.
8. Ruderman, "At the Intersection of Cultures," p.10.
9. J. Larner, *Italy in the Age of Dante and Petrarch: 1216–1380* (London and New York: Longman, 1980), p.24.
10. Ibid., p.22.
11. Ibid., p.27.
12. C. Colafemmina, "Gli Ebrei in Puglia al tempo di Federico II di Svevia," in C. Colafemmina and L. Palmiotti, *Aspetti della storia degli Ebrei in Trani e in Biscelie e vicende tranesi dal secolo IX* (Trani: centro regionale di servizi educativi e culturali, 1999), p.12.
13. Larner, *Italy in the Age of Dante and Petrarch*, pp.28–30.
14. Colafemmina, *Aspetti*, p.12.
15. The blood libel accusation was based on the notion that Jews were responsible for the abduction of Christian children to obtain their blood for ritual purposes. In the case of baptism, the new laws required a three-day waiting period between the time a Jew declared his intention to be baptized and the actual ceremony, in order to assure that the conversion was not a coerced one. Colafemmina, *Aspetti*, pp.12,14.
16. F. De Robertis, *Federico I Di Svevia nel mito e nella realta: notazioni critiche e ricostruttive sulla figura e l'opera, spesso tutt'altro che esaltanti, del maggior dinasta dell'occidente* (Bari: Societa di storia patria per la Puglia, 1998), p.138.
17. Benjamin of Tudela, *The itinerary of Benjamin of Tudela*, M.N. Adler, ed. and trans. (London: Henry Frowde, 1907), p.9. These figures are probably based on heads of families rather than on individuals. If we assume an average of six persons per family, we arrive at a community of about 1,200 in the year 1160.
18. Colafemmina, *Aspetti*, p.17. See also C. Roth, *The History of the Jews of Italy* (Philadelphia: Jewish Publication Society, 1946), pp.87–90.

19. *Documenti per la storia degli Ebrei in Puglia nell' archivio di stato di Napoli* (Bari: regione Puglia — assessorato alla cultura Istituto Ecumenico S. Nicola, 1990), Napoli, March 16, 1475, #9, p.34.
20. Colafemmina, *Aspetti*, p.19.
21. G. Malcangi, "La Giudecca' di Trani," in Malcangi, *Trani: pagine di storia, ricordi di vita e altre divagazioni pugliesi* (Fasano: Schena, 1983), p.16.
22. B. Ronchi, *Indagine sullo sviluppo urbanistico di Trani dall' XI al XVIII secolo* (Fasano: Schena, 1984), p.61.
23. Without the benefit of an analysis of materials, it is impossible to give an approximate date for the construction of these houses.
24. N. Cassuto, "The Italian Synagogue through the Ages," in Rivka and B.-Z. Dorfman, eds., *Synagogues Without Jews and the Communities That Built and Used Them* (Philadelphia, Jewish Publication Society, 2000), p.301.
25. E. Munkácsi, *Der Jude von Neapel* (Zurich: Verlag Die Lica, 1939), p.65. The interior was twice renovated in the nineteenth century, in 1841 and 1888 (p.67). Munkácsi's description of the synagogue is detailed and can be used to understand many of the voids in the semi-ruined edifice one sees today.
26. Jewish builders in urban Morocco also made maximum use of underground space, building into them storage areas and living space. See S.G. Miller, A. Petruccioli, and M. Bertagnin, "Inscribing Minority Space in the Islamic City: The Jewish Quarter of Fez (1438–1912)," *Journal of the Society of Architectural Historians*, Vol.60 No.3 (Sept. 2001), pp.315–16.
27. Munkácsi, *Der Jude von Neapel*, pp.67–69. The plaque has been removed to a nearby church.
28. Corresponding to 1247 CE.
29. *Minyan* is a Hebrew word meaning the quorum of ten males over thirteen years of age required for formal Jewish worship.
30. We have used Colafemmina's Italian translation along with the Hebrew text for this English translation, which is our own. See his *Aspetti*, pp.23–24. For an alternative reading of the inscription, see U. Cassuto,

"Iscrizioni ebraiche a Trani," *Rivista degli studi orientali*, Vol.XIII No.2 (1932), pp.178–79.

31. This synagogue was also converted into a church and is currently used for worship as Santa Maria di Scolanova.

32. C.H. Krinsky, *Synagogues of Europe: Architecture, History, Meaning* (New York: Architectural History Foundation, 1985), p.335.

33. Munkácsi, p.64 note 91.

34. B. Ravid, "A Tale of Three Cities and their Raison d'Etat: Ancona, Venice and Livorno and the Competition for Jewish Merchants in the Sixteenth Century," *Mediterranean Historical Review*, Vol.6 No.2 (1991), pp.139–62.

35. Cassuto argues for the date 1292–93 as the moment of massive conversion, based on fragmentary evidence from the archives of Naples and a manuscript found in the British Museum. In 1306 the Jewish representative body "Universitas Judaeorum" was replaced by that of the "Universitas Neophytorum," or "new Christians." Roth claims that after 1306 the Jews of Trani existed only as converts (*History*, p.269). This interpretation seems extreme. While the community as an entity may have disappeared for a time, individual Jews and families survived, perhaps by secretly practicing their faith, as Cassuto has suggested. See his "Iscrizioni," pp.175–76.

36. The Bari archives consist mainly of notarial documents, while the Naples archives are executive orders from the Sommaria of Naples to local officials. The language of these documents is generally Italian, with formulaic introductions and conclusions in Latin. The documents for Napoli appear in *Documenti per la storia degli Ebrei in Puglia nell' archivio di stato di Napoli* (Bari: regione Puglia — assessorato alla cultura Istituto Ecumenico S. Nicola, 1990), hereafter cited as ASN; and for Bari, *Archivio di Stato di Bari, La Presenza ebraica in Puglia: Fonti Documentarie e bibliografiche* (Bari: De Pascale, n.d.).

37. ASN, 13.

38. ASN, October 1, 1488, #48, 68.

39. ASN, 1491, #76, 89.

40. ASN, July 20, 1482, #17, 42.

41. ASN, November 3, 1463, #2, 26.

42. ASN, 4 March 1488, #41, 62.

43. Colafemmina, *Ebrei*, pp.20–21.

44. The site is described in F. Onesti, *La Campana di Trani* (Trani: CRSEC Trani, 1999), p.105. Parts of Jewish tombstones, the Hebrew letters still visible, are found throughout the old town of Trani, used as lintels, doorsteps, and embedded in walls.

45. ASN, March 11, 1494, # 127, 127.

46. ASN, March 20, 1494, # 129, 129.

47. Ibid.

48. Speaking about the condition of the Jews in northern and central Italy at that time, Renata Segre noted ". . . without pretending that Italian Jews enjoyed "such a tranquil, such a lovely life of citizens . . . it must be admitted that Jewish existence was governed by contractual forms that were generally respected, and only rarely were they shaken by serious episodes of violence." Quoted in C. Vivanti, "The History of the Jews in Italy and the History of Italy," *Journal of Modern History*, Vol.67 No.2 (June 1995), p.340.

49. R. Bonfil, *Jewish life in Renaissance Italy* (University of California Press: Berkeley, 1994), pp.116–19.

50. The difference between "new Christians" and neophytes in the fifteenth century was one of origin. According to Renata Segre, "new Christians" came from the Iberian peninsula, and neophytes were Italian. Both were Jews by birth who were later baptized. For a more extended discussion of this issue in its historical setting, see her "Sephardic Settlements in Sixteenth Century Italy: A Historical and Geographical Survey," *Mediterranean Historical Review*, Vol.6 No.2 (1991), pp.112–37.

51. Quoted in Malcangi, "La Giudecca' di Trani," p.18.

52. S.C. Capozzi, *Guida di Trani* (Trani: ditta tipografica editrice vecchi, 1915), p.239.

53. Vivanti, "The History of the Jews in Italy," p.330.

54. Colafemmina, *Aspetti*, p.39.

55. Malcangi, "La Giudecca' di Trani," p.16.

56. For a discussion of this problem, see D. Iancu, *Les Juifs en Provence (1475–1501); de l'insertion à l'expulsion* (Marseille: Institut historique de Provence, 1981), pp.55–59.

57. An exception was made for two hundred Jewish families to remain in Naples in return for an annual payment of three thousand ducats to the Royal Treasury. The reluctance to seal the fate of the Jews was based not only on their ability to pay bribes, but also on their skills in money-lending, which were essential to the local economy. Iancu, *Les Juifs en Provence*, pp.58–59.

58. Goitein, *Mediterranean Society* 2, p.299.

Bozo-Dogon Bantering: Policing Access to Djenne's Building Trade with Jests and Spells

TREVOR H.J. MARCHAND

Based on research with masons in Djenne, Mali, this article examines the use of interethnic bantering as a means to control access to the building trade. The possibility of becoming a mason is salient in Djenne, where control (traditionally in the hands of the Bozo) over the reproduction of *style-Soudanaise* architecture constitutes an important form of cultural capital. On the construction site, bantering was most prominently displayed between Bozo masons and their Dogon laborers. This article reviews the anthropological literature on the so-called "joking relationship" between these two groups, and then expands a contemporary understanding of this social institution that, importantly, includes issues of power, authority and resistance.

It was my first day on the job, but I immediately identified who the principal clown was on this construction project. Boucari was small and wiry with a mischievous grin, and he had a penchant for winding up his fellow laborers. Periodically, he would leave his station, where he was kneading the thick red mud-mortar with his feet and bare legs, and venture over to where I was working next to the two masons. At these times he badgered me with seemingly inappropriate questions and chided me for my "whiteness."

"All you white men are rich, aren't you!" he bellowed sardonically. "Your people always have medicine, and you're continually popping pills. Don't you have any for me?" He anchored himself firmly in front of me, facing me square on at an uncomfortably close distance, and persisted in an aggressive tone tinged with a cruel playfulness.

Eventually, I could no longer contain my irritation. I growled back at him with an economy of words. But at this point, he instantly retreated and changed tactics. Earnestly, he began explaining that he was only teasing me to demonstrate that he liked me. "You shouldn't get angry. My teasing is an expression of my affection."

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Initially, I couldn't decipher whether he was being sincere or further mocking me. My defenses subsided a little, but not entirely, as I searched for a more appropriate way to respond to his behavior.

This man's ribbing was rather extreme, and its racial overtones seemed rooted in a deep hatred. But Boucari's contention that I should take no real offence to his insults also echoed the textbook formula of African joking relationships. The inventory of Radcliffe-Brown's "disjunctive" attributes that separated us was considerable; they included cultural, religious, racial, linguistic and economic differences, to name the most salient. But our shared work situation was forcing a "conjunction" that demanded cooperation, tolerance, and avoidance of any truly violent or physical conflict.

Indeed, as the day progressed, it did become apparent that Boucari was trying to establish some sort of "friendly" relation with me. But my nagging suspicions that he was a pest were also confirmed. After repeatedly abandoning his post to chitchat and distract the other team members, the masons finally reprimanded Boucari in a serious tone. And the following week he was removed from the site for his continuous shenanigans and sent to quarry stones some distance east in the direction of the Dogon Plateau.[1]

BACKGROUND TO THE STUDY

Over the course of two winter seasons (2001 and 2002) I worked as a building laborer under the direction of various masons in Djenne, Mali, an important historic town situated in the heart of the Inland Niger Delta (FIGS.1,2). My main research objectives were to study the local apprenticeship system and the transfer of expert knowledge among the famous mud masons of this region, and better understand how their expertise fused technical skills, social attitudes and dispositions, and occult practices into a cohesive professional frame-

FIGURE 3. *Construction site of a new house along the Bani River.*

work.[2] During the first season, I worked with a team building a new house outside of town along the banks of the Bani River (**FIG.3**). During the second, I worked with another team on two houses being (re)constructed in the Djoboro and Yobu Kena quarters of town.

The linguistic and ethnic diversity of the team during my first season was quintessentially "Djenne" in character. Its eighteen members included representation from eight different ethnic groups from both Mali and Burkina Faso (**FIG.4**). Five languages were regularly spoken, of which Bambara — and to some extent Djenne Chiini (a local dialect of Songhay) and French — were the *linguas francas*. All of the laborers, excluding the apprentice and a few others, were Qur'anic students. They had come to study with Djenne's renowned *marabouts*, and used their pay to fund their lessons and lodging. During the second season my team was much smaller, consisting mainly of local Djenne residents (*Djenneboro*). In this case, two masons oversaw six semi-permanent laborers

FIGURE 4. *Building laborers being transported in the back of a pickup truck to a building site outside Djenne.*

(none of whom were Qur'anic students). However, our manpower was occasionally supplemented with the addition of one or two Qur'anic students, employed on a temporary basis.

During my two seasons of work I came to understand much about the social relations underlying production of the local *style-Soudanaise* architecture. In Djenne most masons trace their genealogical origins to legendary Bozo families. Many insist that only young men from the town's building families should be admitted to an apprenticeship and be taught the necessary combination of technical skills and trade secrets. Yet, in practice, access to the profession now cuts across ethnic boundaries and social classes. Borders to the trade initially became porous during the drought of the 1970s and 1980s when many local masons went abroad as migrant laborers, and when the *barey ton* (a guild-like organization of masons that regulated practice) nearly dissolved.[3] As a result, there has been more recent representation from the Marka and Bambara, and some Hourso (historically a caste group in a position of servitude).

One important factor does continue to bar individuals of nonbuilding families from the trade. This is the nature of the mason-client relation. A mason is bound to every family in the town, making it difficult, if not impossible, for anyone without arranged or inherited patron connections to find work. Meanwhile, the possibility of usurping someone else's clients is curbed by the dominant discourse on occult practices and knowledge. Master masons are believed to possess powers that can cause harm to those who compete with, or betray them, and that can even make others' buildings fail. Furthermore, on a building site bantering relations are invoked to maintain a defined hierarchy between the masons and their labor team. The most highly developed and historical of these is between the Bozo and Dogon. But banter peppered with nationalist sentiments is also exchanged to a lesser extent between Malian builders and laborers from neighboring Burkina Faso.

Across Africa throughout the twentieth century anthropologists have reported the existence of joking relationships that serve to bind ethnic and socioeconomically differentiated groups, as well as kin by marriage.[4] More than occasional teasing, these relationships exhibit a highly formalized discourse that is regularly (and predictably) engaged in. However, the repertoire of jokes, often in the form of insults, is restricted, and limits of abuse are carefully observed.

Like other anthropologists, I was curious about the function and performance of such joking relationships as a form of (both cooperative and antagonistic) communication and entertainment. The questions I formulated in the context of my field studies were varied. What role did such bantering play in producing and reproducing the social relations between individual members of the Bozo and Dogon communities? When did exchanges occur, what form did they take, and what characterized their performance? What was the content of the banter, and what wider social significances and implications did it have? Who was legitimately entitled to participate in (and control) these exchanges? What were the guiding rules, and how

did novices acquire the necessary skills to pull off a successful bit of banter? And what were the possible limitations of the bantering relation between the Bozo and Dogon (i.e., in what circumstances did members of the two communities cease to regulate their interethnic relations with banter)?

In the end, the results of my study confirmed to a certain extent Radcliffe-Brown's universal conclusion that joking relationships serve to organize and stabilize a system of social behavior.[5] They also confirmed many (but not all) of Griaule's more relativistic observations about the Bozo-Dogon alliance.[6] But my findings also demonstrated specific and highly strategic employments of interethnic banter. And they detailed not only instances when banter worked, but also when it did not. These exceptions are important and demand further consideration in future studies on the topic. This article specifically considers how bantering relations are manipulated in Djenne to control access to the building trade, to maintain professional boundaries and hierarchies that reflect ethnic divisions, and, importantly, to create opportunities for individual resistance and accommodation.

During my fieldwork, the most prominent public displays of teasing and humorous insult I witnessed were between individual Bozos and Dogons, or between small parties of these groups. The Bozo, traditionally the fishermen of the Inland Niger Delta, were the most prominent group in Djenne's building trade at the time of my study. Indeed, they have monopolized membership in the *barey ton* for at least the last century (**FIG.5**).[7] Thus, all eight of the masons I worked with were Bozos, as were two of their three apprentices. The Dogon, on the other hand, have historically inhabited the dry plateau, cliffs and plains of the Bandiagara escarpment (**FIG.6**). Many of the Dogons in Djenne had only come there to acquire an Islamic training, which would both expand their religious knowledge and boost their social standing at home. The laborers I worked with were largely such Dogon Qur'anic students, and all were determined to leave Djenne when they had completed their education.[8]

FIGURE 6. *A Dogon village on the Bandiagara Escarpment.*

FIGURE 5. *A Bozo mason posing next to his family's fishing nets.*

Unlike the blatantly hostile tone of Boucari's teasing, the rallies of insults between Bozos and Dogons on the building sites where I worked were predominantly jovial and aimed to inspire laughter (Boucari was neither ethnically Bozo nor Dogon). The remarks were often of an obscene nature, challenging the other's social status, masculinity, intelligence, or occasionally popular accounts of their group's origins.[9] In 1948 Marcel Griaule proposed the term "cathartic alliance" (*alliance cathartique*) to describe this relationship. His intent was to challenge A.R. Radcliffe-Brown's all-encompassing structural-functionalist theory of "joking relationships," and more accurately describe the specific type of insulting relationship he and Denise Paulme had recorded between Dogons and Bozos in the 1930s and 40s.[10] In particular, Griaule described Dogon stories that related how a portion of the vital force (*nyama*) of each group had passed into the other during events long ago; thus, according to the stories, every Dogon possessed a part of the Bozo, and vice versa, which resided in their livers. In brief, Griaule believed the alliance primarily served a need for mutual purification. He described how exchanges of insults were meant to act on that portion of the self in the other, ridding the livers of both parties of impurities, and restoring balance to the spiritual order. Separate, Bozo and Dogon were thus incomplete; but

face-to-face, acting on that part of themselves in the other, their vital energy became whole.[11]

Following an historic overview of some key anthropological approaches to "joking relations," I will address several specific instances of the Bozo-Dogon insulting relation — or what I would prefer to call a "bantering relation" — on the building sites in Djenne.[12] During my fieldwork it became evident to me that this bantering relation was also colored by the authority of the Bozo masons and the subservience, as well as the resistance, of their Dogon laborers. I will therefore propose that it was used strategically to maintain and police the ethnic borders of the profession. In this sense, the so-called "joking," or insults and banter, were not merely the product of an alliance between equal parties, but were in fact tinged with aggression, and communicated territorial claims to the trade by the masons. Importantly, it might be argued that the effects of bantering contributed to the exclusivity of the profession and protected the status of the masons. This ensured tighter, more privileged control over the reproduction of both local building practices and the characteristic features of the *style-Soudanaise* architecture **(FIG.7)**.

FIGURE 7. *Detail of the roofline crenellations of the Djenne Mosque.*

JOKING RELATIONS AND ANTHROPOLOGY: AN HISTORICAL OVERVIEW

In his article on "La Parenté à Plaisanteries en Afrique Occidentale," published in 1929, Henri Labouret noted how several authors had already observed the existence of "joking relationships" in West Africa, particularly among the Mandingo, Fulani and Toucouleurs populations.[13] His own study of the alliance between the Fulani and the Wolof (and between various Wolof clans), expressed through a reciprocal exchange of insults and joking, suggested that such relationships were based on a former political supremacy, whereby one group was "master" and the other "slave." He also proposed that there was an economic basis to these alliance relations, which was characterized by "l'échange des services et des cadeaux obligatoires et dont l'existence est attestée partout."[14] This, Labouret concluded, supported the notion that "les populations de l'Ouest-africain sont liées entre elles par une chaîne de réciprocités beaucoup plus étroite qu'on ne le soupçonne d'ordinaire."[15]

The issue of highly developed reciprocities between West African alliance groups was further explored ten years later by Denise Paulme in her investigation of Dogon *mangou*. *Mangou*, she claimed, was instantiated when one group rendered a service to another, which might entail one group saving the other from serious danger or sparing the life of one of the other group's members who had committed a grave offence against them.[16] According to Paulme, a typical theme in Dogon oral accounts involved a community either having lost, or being on the verge of losing, one of its members. Then, after the group has sadly resigned itself to the loss, the individual is fully restored through the generosity and care of the other group. As in the classic accounts of *parenté à plaisanteries* (joking relationships), Paulme noted that the existence of *mangou* was manifest through exchanges of (often obscene) insults and jokes between the allied parties and the prohibition of any form of anger, violent retaliation, or serious dispute. More precisely, such exchanges were characterized by an uninhibited familiarity between parties, the deliberate inversion of quotidian rules of polite conduct, and the use of coarse language. According to Paulme, such behavior was most prevalently enacted during mourning ceremonies (*dama*) held in honor of deceased high-ranking members of the Dogon community.[17]

As part of her work, Paulme recorded a popular story about the origins of the alliance between the cliff-dwelling Dogon and the riverine Bozo that recounted how the two ethnic groups came together cooperatively during a great famine. At this time, both groups were living along the banks of the Niger, and it was decided that while the Bozo journeyed along the river to fish, they would leave their children in the care of the Dogon. During their absence, one of the Bozo children came to the brink of starvation. But the Dogon chief revived the child by cutting a piece of flesh from

the calf of his own leg, roasting it, and feeding it to the young Bozo — thereby instantiating a lasting blood tie between the two peoples.[18]

Paulme believed that such a blood pact fulfilled a comparable role to a marriage.[19] Specifically, it created a new alliance and a framework of social relations tempered by a type of joking similar to that a Dogon man might enjoy with his wife's sisters and their daughters. Paulme related how the Dogon considered their alliance with the Bozo to be the most sacred of such relationships. Indeed, it was the model on which other inter-Dogon alliances were based. Additionally, because of the importance of this blood pact, Paulme pointed out that it precluded any intermarriage between the two ethnic groups, in the same way that marriage alliances among the Dogon also implied exogamous relations between succeeding generations.[20]

In response to a published note by F.J. Pedler (of the British Colonial Office) on "Joking Relationships in East Africa," A.R. Radcliffe-Brown then provided a general theoretical discussion of the nature of joking relationships.[21] He wrote that in any alliance between two different groups — be they families, clans or tribes — the issue of "social disjunction . . . implies divergence of interests and therefore the possibility of conflict and hostility, while conjunction requires the avoidance of strife." But how, he asked, could a relationship that combined the two ever be stable and ordered? He suggested two possible, and oppositional-related alternatives: either extreme mutual respect that required a partial or complete avoidance of personal contact, or a joking relationship. He described the latter as a relationship of licensed mutual disrespect that involved joking or teasing, which might be either verbal, or both verbal and performative, and which might include elements of obscenity.[22] "Any serious hostility is prevented by the playful antagonism of teasing, and this in its regular repetition is a constant expression or reminder of that social disjunction which is one of the essential components of the relation, while the social conjunction is maintained by the friendliness that takes no offence at insult."[23] By comparing case studies in Africa to case studies in other parts of the world, Radcliffe-Brown then determined that "the joking relationship which constitutes an alliance between clans or tribes, and that between relatives by marriage, are modes of organising a definite and stable system of social behaviour in which conjunctive and disjunctive components . . . are maintained and combined."[24] His theory further entrenched the term "joking relationship" in anthropological discourse, where it has been used to categorically describe the nature of certain alliances between kin, clans and tribes.

Marcel Griaule initiated his response to this classically structural-functionalist definition of a social function by challenging the category of *parenté à plaisanterie* as a superficial gloss, wrongfully employed to describe institutions and manifestations that were not of the same nature.[25] Retaining the "joking" qualifier as definitive of these relations, he argued,

risked forcing a connection between truly disparate phenomena. Using an analogy, he wrote: "Une cloche sonne le glas et les mariages. Il ne viendrait à l'idée de personne de prétendre que les funérailles et les noces se rencontrent dans une série dites 'cérémonies à cloches'."[26] Instead, Griaule proposed that more detailed studies were required to illuminate the social and cultural particularities underpinning the apparent manifestations of joking and insulting between parties.

Where Radcliffe-Brown had begun with the shared phenomenon of joking, teasing and insulting, as reported by various anthropologists from diverse field locations, and had attempted to find a unified explanation for this occurrence in the laws of social relations, Griaule chose to begin with the specific social and cultural institutions, values, and belief systems of the Dogon people. And from here he sought to render a culturally relative and (what he believed to be) more plausible, explanation for the banter between different Dogon groups — and especially between the Dogon and the Bozo.

In the Sanga region where Griaule conducted much of his work, intra-Dogon and Dogon-Bozo alliances were called *mangou*, a term that also referred to the parties involved. As Paulme had already described them, such alliances required the exchange of hospitality and services and a strict prohibition against intergroup sexual relations, the spilling of blood through violent contest, or murder. Transgressions produced negative consequences thought to be nearly impossible to rectify. Griaule recounted an exemplary legend in which a Bozo man, as a result of becoming intimately involved with a Dogon woman, was turned into a fish. But Griaule also wrote that the alliance between Bozo and Dogon was chiefly one of reciprocal purification. This was manifest most notably in the ritualized exchange of insults meant to purge bad, disruptive forces lurking both within the other and within the self.

According to Griaule, Dogon metaphysics described the two principal elements of a person as being a double soul and a vital force called *nyama*. The power of the insult acted upon the negative components of the *nyama*, and in effect purified, or brought spiritual order to it. In his article "L'Alliance Cathartique," he recorded a fascinating myth about the origin of the Dogon-Bozo alliance that, like the shorter, simpler myth recorded by Paulme, illustrated how the two groups came to share each other's vital force. I include my own translation of it from the French here, since it provides an important glimpse into the alleged thought system of the Dogon as explored in great detail by Griaule and his colleagues. More importantly for my discussion, it clearly demonstrates to what extent the Bozo are integral to Dogon conceptions of self.

At a given moment in the organization of the world, the first in a series of eight Dogon ancestors constructed an edifice in the sky with round foundations (representing the sun) and a square top (representing the sky). This granary-like building was divided into eight compartments that represented man's principal organs, and each contained one of the

eight essential grains. At the center of the granary was a spherical clay pot (the image of the sun and the womb) that contained ornamental stones. On the exterior, four staircases that started at the four sides of the flat roof reached out to connect to the constellations. On the south staircase were the domestic animals; on the eastern one were the birds; and on the western one were the wild animals, plants and insects. On the north staircase there were two Bozo men and three Bozo women. All of the Bozo (except for one of the women) carried a twin-fish attached to their navels by the gills. On the ten stairs of every staircase the beings were represented by categories (for example, the Gallinacés, the Ovins, the Caballins, etc.). Blacksmithing tools and a fragment of the sun stolen from the great original spirits were placed on the roof terrace.

The first ancestor, who would eventually be the blacksmith, let an arrow fly into the vault of the sky. This arrow was connected by a cord to another arrow anchored in the roof terrace, and the force launched the granary into space with the Dogon ancestor standing upright. Following various exciting events, the whole assembly crashed to the earth. On impact, the ancestor's limbs, which until then had been supple and without joints, were broken by the hammer and anvil he had been carrying. This is how he came to have articulated joints, the symbol of human work and creation. At the same time, the animals dispersed, and the five Bozos, carrying their fish, prepared to head to the Niger River where they would make their home.

Before leaving, however, the Bozos insisted on showing their gratitude to the Dogon ancestor. He had already set up his forge north of the primordial field where he had fallen to earth, and had laid out his tools and was ready to begin work. The Bozos came beside him, and in the presence of a group of Dogon who were nearby, they pronounced a solemn oath of alliance over the anvil on which the blacksmith was already pounding, proclaiming that the two peoples were reciprocally *mangou* because they had journeyed to earth together on the celestial vessel. (Griaule enumerated other Dogon myths to explain the significance of the anvil, and the manner in which the vibrations of the anvil carried the Bozo's oath deep into the earth and the cosmos.) The oath was uttered at the same time as the hammer reverberated against the anvil, whereby the ringing of the anvil and the words of the Bozo were harmonized together. Thus, when the Bozo uttered the oath, a part of their vital force (*nyama*) entered via their words, breath, and vapor into the ear of the smith, and by a complex circuit through his body, reached his liver. From that moment onward, it was as if a part of the Bozo had been implanted in the Dogon. And the process was also reversed so that a part of the Dogon was transmitted into his Bozo partner.[27]

Griaule also recorded two less complicated (and more popularly recited) versions of the myth explaining the origins of the Dogon-Bozo alliance, including the one chronicled earlier by Paulme. Both these emphasized an exchange of flesh and blood between the two ethnic groups, and therefore the reciprocal exchange of *nyama*, as the foundation of the alliance. Quoting from interviews with a contingent of wise and elderly males from the Dogon community — notably his key informant Ogotemmêli — Griaule wrote that the insults hurled back and forth between the *mangou* partners were not taken injuriously because it was understood that each was in fact addressing a part of themselves in the other. It was as if each wanted to reclaim himself. Indeed, Ogotemmêli explained that "Lorsqu'un allié insulte son partenaire, c'est comme s'il voulait reprendre la part de lui-même qui est dans l'autre. C'est comme une bataille de paroles où chacun tente de reprendre son bien."[28] But more than this, by penetrating to the liver, where good speech and bad speech resided, the insults, by their violent action, forced the latter to depart. Paraphrasing Griaule, the injurious words replaced the bad speech with a sort of "parody" of bad speech. Additionally, by launching an insult, one could liberate oneself of bad speech. Such a reciprocity of purifications led Griaule to term the relationship between Dogon and Bozo a "cathartic alliance."[29]

Following the appearance of Griaule's article, Radcliffe-Brown published a further note in which he praised Griaule for making a valuable contribution to the understanding of a particular people. But he warned that such particularist explanations were "similar to those of the historian." As a "science," anthropology should aim to arrive at "general theoretical interpretations of social institutions."[30]

For several decades Radcliffe-Brown's staunch position steered the successive research of many British anthropologists. However, other anthropologists dissented. For example, James Howe and Jay Sherzer's approach to understanding humor among the San Blas Kuna of Panama moved away from the macro-analysis of structure to a micro-sociology of action and creativity. They concluded that "humour is not just *about* something but is a way of *dealing with* something," and therefore has a strategic use.[31]

The following section of this article will likewise seek to demonstrate how individual Bozo and Dogon builders in Djenne strategically employ banter to define, shore up, and reproduce not only the ethnic boundary between them, but also a division of labor.[32] This division of labor demarks access to full and professional participation in the building trade. The masons that guard this border effectively wield control over the production and reproduction of Djenne's traditional built environment.

My analysis of Bozo-Dogon bantering is cautious of Radcliffe-Brown's broad kin-based structural approach. But like the majority, as described by Heald, that follow this course of criticism, it nevertheless incorporates an "essential ambivalence" that Radcliffe-Brown emphasized about joking relationships — one that combines "both friendship and antagonism, goodwill and hostility."[33]

A CASE STUDY OF BOZO-DOGON BANTERING ON BUILDING SITES IN DJENNE

Griaule's entire argument hinged heavily on the concept of *nyama*, which seems to be a real and important idea in some Mande cultural groups.[34] But it should be noted that there are contemporary scholars who contest the notion that it is important, or that it even exists, among the Dogon.[35] For example, in a 1991 evaluation of Griaule's work based on his own extensive research with the Dogon population, Walter van Beek claimed "*nyama*, allegedly 'vital force', is irrelevant to Dogon religion." Specifically, he wrote that the etymologies for *nyama* given in "Dieu d'Eau: entretiens avec Ogotemmêli" and "Le Renard Pâle" are "not retraceable and seem highly idiosyncratic."[36] Van Beek noted that "morphologically, the word does not belong to the Dogon lexicon and may be Bambara in origin," and he reported that his informants did not recognize it "in the form given in the text."[37]

My own work with the Bozo masons and the Bozo and Dogon laborers yielded similar findings. Though the special status of their bantering relationship was clearly acknowledged, none of the men I worked with recognized the word *nyama*, nor could they relate any culturally equivalent concept to the explanations I provided for *nyama's* supposed definition. The belief, however, in a spiritual order of things that could in some way be tainted, unbalanced or ruptured by behavioral or verbalized transgressions was universally accepted, as was the belief that such violations necessitated purificatory actions in the form of prayer, secret incantations, ritual procedures, the preparation of *gris gris* (amulets), or the ingestion of African medicines. *Bai bibi* (black or African knowledge) and *bai quaré* (white or Qur'anic knowledge) were regularly combined to shield against prospective negative causal forces in the world, or remedy the effects of existing evils.[38] But the concept of a vital force, and of such a thing being shared interethnically and residing in the livers of one another, did not exist.

Nevertheless, as I stated previously, a special connection between the two populations was recognized, and on occasion my builder-hosts entertained me with extremely similar versions of the alliance myth recorded by Paulme. Ideas of blood brotherhood were implicitly stated therein, and exogamy was also adhered to, although it was more simply explained as a consequence of the blood-based alliance. In relation to maintaining exogamous relations in Djenne, it should be added that the female contingent of the town's Dogon population was extremely small, and the unaccompanied movement of Bozo women outside the home was restricted by the imposition of somewhat conservative Islamic-inspired rules of gender segregation and partial seclusion. These combined factors rendered the possibilities for intimate interethnic heterosexual relationships in the town very difficult. Meanwhile, the development of close friendships between Bozo and Dogon men was often imped-

ed by language barriers, as well as cultural differences marked by such straightforward issues as food preferences and occupational skills (i.e., fishing versus cultivation).

Though they worked exceedingly well together on the building sites, Dogon and Bozo laborers neither shared residence nor spent much social time together outside of working hours and Friday prayers at the mosque. All of the Dogon laborers that I built with were out-of-town Qur'anic-school students, and they congregated primarily with other members of their ethnic group, studying under the tutelage of Dogon *marabouts* and sharing cramped living quarters in their houses (**FIG.8**). Likewise, the many Bozos that I knew tended to maintain their closest ties with other Bozos; and though they considered themselves *Djenneboro* ("true" residents of Djenne), they also regularly spun tales that enumerated critical differences between themselves and the *Djenneboro* "Other." These accounts typically highlighted their own generosity and easy-going approach to life, in contrast to the miserly, calculating ways of Djenne's other main ethnic contingents (mainly the Fulani, Marka and Bambara, who comprise a dominant proportion of the merchant class).

In response, other *Djenneboro* popularly perceived the Bozo as simple-minded. This was exemplified in the saying: "A Bozo who sees far [i.e., who makes plans for his future] is one who sees no further than the end of his nose!"

During his posting as a French colonial administrator, it seems that Charles Monteil adopted similarly slanderous, racist views. In a book on Djenne, he maliciously described the Bozo as "un timide qui ne connaît d'ordinaire que la pêche: partout ailleurs il paraît maladroit et sot. C'est aussi un paisible et un résigné: toutes les tyrannies, toutes les calamites semblent le laisser indifférent. La pêche, pense-t-il, suffisant à tout."[39] Such degrading views continue to circulate among the town's non-Bozo population. And their conde-

FIGURE 8. *Portrait of a Dogon laborer who has come to Djenne to study the Qur'an.*

scension is largely premised on the belief that, despite the Bozo's claims of autochthony and nobility (i.e., neither being a caste group nor former slaves), they have passively submitted to the domination of other groups who have come in successive waves to the Inland Niger Delta. This is seen as being particularly true in relation to the Fulani, who have maintained significant political hegemony in the town and surrounding region since the nineteenth-century *jihads*. Some individuals even chastise the urbanized Bozo for no longer speaking their own language and for adopting Djenne Chiini.

Many Dogons, however, offer another perspective on the Bozos' "simple" qualities. While sipping tea with a group of Dogon friends in the vestibule of the house where they studied, one complained to me about the tight-fisted attitude of the *Djenneboro* and their impenetrable social barriers. "The Bozo, by contrast, are very generous," he said with affection. "If a Bozo has money, they don't think of tomorrow. They enjoy what pleasure they can today, and will spend their money and eat well." The others nodded in agreement. Although the favorable nature of this remark contradicted the insulting, confrontational nature of the banter they exchange with one another, it in fact honored the special alliance they have with their partners, which is characterized by hospitality, assistance and tolerance.

Bantering is the most prominent public expression of the Bozo-Dogon alliance. The exchanges I was witness to in Djenne were predominantly conducted in Bambara, and occasionally in French, both of which served as *linguas francas* between the two communities.[40] On the construction sites, exchanges between builders were typically initiated when a member of one group fumbled with their tasks, causing an obvious disruption in the team's working rhythm, and thus inviting ridicule or reprimand (**FIG.9**). Also, spectacles of bravado such as moving very heavy stones or carrying exceptionally large loads of building materials were read as a chal-

lenge to others, often resulting in amusing competitions involving feats of strength and verbal banter. The content of the bantering and the nature of the performances I witnessed were almost identical to that recorded by Griaule more than fifty years ago. And the insult themes included all three categories of obscenities described by Edmund Leach in his discussion of taboo: "dirty words — usually referring to sex and excretion; blasphemy and profanity; animal abuse — in which a human being is equated with an animal of another species."[41]

Griaule noted that following normal greetings, a barrage of obscenities was unleashed that usually identified the sexual organs of the other's parents: "The penis of your father!"; "The vagina of your mother!" — to which the other responded in turn with analogous statements. The rallies turned to mockeries, breaching the borders of the other's sacred beliefs and practices. Bozo ridiculed the principal foods of Dogon — namely, millet and crocodile meat — as being fodder for horses; and Dogon retorted that the Bozo was a fish that walked on land (alluding to the vulnerability of a species forced outside of its normal habitat). Bozo accused the other's spiritual chief of never washing and being licked by a snake (referring to the Lebé cult); Dogon cursed the Bozo as being that "dirty thing of the water" that has made the water *djinn* (spirits or genies) impure.[42]

One morning, while helping to haul stones by hand from a delivery pile to where the masons were laying new house foundations, Sulayman Guindo, a young, well-built Dogon, playfully challenged some of us to lift heavier and heavier stones (**FIG.10**). Strength and muscle mass were regularly associated with consuming meat, and discussions about diet often emphasized eating the heads of animals — especially those of sheep, cows and fish — thought to be an ideal breakfast to fuel up for a hard day's work.

"Leave that big one [stone] for the Canadian to carry. He eats meat with every meal!" someone proclaimed, flattering

FIGURE 9. *A coordinated arrangement of laborers who pass materials onto an apprentice setting brick courses for a new wall.*

FIGURE 10.
Portrait of a young Dogon laborer.

me for my vigor, while simultaneously underscoring a gaping disparity between our respective economic positions. When I protested that I didn't eat meat, and that I was a vegetarian, they doubted my claims. A second Burkinian laborer complained that his arms were so scrawny because, since arriving in Djenne, he had only eaten rice with a little sauce and some tiny, bony fish.

I shifted the focus back onto Sulayman, loudly praising his strength so that the masons could hear, and I provocatively suggested that he was the best worker on the site. Sulayman enjoyed this, but was a bit bashful.

"No, no!" objected Konamadou Djennepo, one of the younger Bozo masons, shaking his finger, "the Dogon are 'petit'. The Dogons are the sons of the Bozo!" (referring to their status, not their physical size, and thereby asserting a hierarchical ranking that necessitates kin-like respect, as a son pays to his parents).[43]

A great burst of laughter issued from those standing nearby listening. Sulayman, waving his finger back toward the mason and shaking his head, looked to me with a broad smile, protesting that this was a lie. "The Bozo are the sons of the Dogon!" he said.

But Konamadou continued, "The Dogon don't know how to achieve anything by themselves, and we Bozo must teach them everything."

There were more protests from Sulayman and from his Dogon colleagues, who were terribly outnumbered and out-ranked.

"Dogons didn't come from Allah," said Konamadou. "They fell directly from the sky like stones" (alluding to the celestial ark and the Dogon myth of origin).

A more vocal Dogon laborer, Youssuf, chimed in: "Yes, well, the Bozo were born from fish!"

Konamadou retorted, "When Dogons see a car coming on the road, they run and hide among the rocks. They might even stay there hidden for three or four weeks without emerging or even eating!" (The reference was to the geographical seclusion of the Dogon villages on the Bandiagara escarpment — which has historically provided shelter against outside intervention, including slave traders, Christianity, Islam, and globalizing market forces.)

Typically, the exchange then petered out and we all resumed our tasks.

A great deal of teasing was also exchanged between the Malian and Burkinian workers, who accused one another of having "une tête noire" or "une pensée africaine."[44] Such racially loaded allegations suggested "thickness" or "slowness" in thinking and actions, and implied that the other was stifled by pre-Islamic black-African traditions. Builders who wore what was deemed to be an excess of *gris gris*, or protective amulets, took the brunt of this sort of teasing, which overtly challenged the faith they had in Allah to do the protecting, and thus played an effective role in coercing a narrow vision of religious conformity.[45]

Laborers launched similar jocular attacks on the Bozo masons as being "black" (the Bozo are regarded as the darkest-skinned people of the region) and dim-witted. But Bamoi Kouroumanse, one of the masons, occasionally pulled rank by reminding them with a stern look that he was the mason and they were just "petit." However, moments later, his face would soften, and the playful exchange of insults would resume.

In such banter it was always clear, however, that limits were to be observed, as both parties steered clear of making truly offensive remarks. Remarks that did go overboard fell flat, and at these times the chorus of laughter would fade to a few nervous giggles — or, worse yet, complete silence. In this sense, the rules of conduct and the limits for bantering were unofficially negotiated between the various parties by the online responses they issued and received. As members of the audience, and by occasionally coming forth to participate directly in the banter, younger men learned what was appropriate and tolerable, what successfully provoked the best laughter, and how best to time their interjections.

Ibrahim Sao, popularly known as "Tonton" (which translates to "uncle" and is a term of respect), was the most senior in age of the masons that I worked with during the first year. He had begun a new wall one morning and was steadily building up the courses of brickwork with the assistance of Boubacar, a burly young Bozo apprentice on loan from the famous master mason, Mama Kourani. A young Dogon laborer, Sekou, was positioned nearby and was passing materials on to them as they required. But as Tonton spread a thick layer of mud plaster along the top of the wall with his trowel, Sekou paused for a rest and leaned heavily with his elbow on a recently laid section of brickwork, causing individual bricks to slide out of place and the fresh mortar to ooze from between the joints. Tonton turned toward Sekou, visibly annoyed, and the boy moved back. But the mason's reproach quickly cooled from a serious tone to one tinged with playfulness, and he theatrically exaggerated the damage by transforming the resetting of a few bricks into an amusing performance for all.

Later, while spreading more mortar, he plucked a small hard, round ball of earth out of the smooth mixture with the point of his trowel, audibly proclaiming that it was "le caca de Dogon." "Non, non," cried Sekou, "C'est la tête de Bozo!"[46]

As the day progressed, the *harmattan* winds picked up, blowing up great quantities of dust from the north and east in a way that reduced visibility and hampered breathing. Tonton was standing on top of a wall, looking out across the Bani River with his face to the wind: "C'est encore le caca des Dogons!" Bending forward and lifting his backside into the air, he gestured a fart with his hand. This provoked a good deal of laughter.

Boubacar joined in immediately, exclaiming "If Dogons drink *garsi* [a millet-based drink consumed throughout the workday], their stomachs bloat and they fart." And, like that of Tonton, his insult was accompanied by full gesturing. His

attempt, however, failed miserably. Tonton glanced blankly at him and turned back to his bricks and mortar, and the other laborers continued with their work.

It was not entirely clear to me why his joke was such a flop, but I suspected it may have had to do with his youth and inexperience. His attempt, as a mere apprentice, to engage in banter on a par with his more senior colleague may have been deemed inappropriate (the majority of the Dogon laborers were also senior to him in age). Additionally, the comment eclipsed the enjoyment of Tonton's jest and was therefore neither well timed nor an original contribution to the banter. Essentially, the joke had already been done.

Insults and provocative comments issued by one group about the other were not always made in each other's presence, nor were they always of a bantering, or ultimately gentle, nature. One hot afternoon while digging shallow trenches for new wall foundations, Sulayman Guindo let loose some of his pent-up frustration on the soil. Both the Dogon and Bambara people are noted for their agricultural expertise, and the masons conveniently relegated most of the backbreaking tasks to them, such as digging foundations, smoothing out lumps in the piles of soil, and mixing the mud mortar. Sulayman was weary of the masons' relentless demands, and his patience was further strained by the heat and blowing dust. He turned to me from his hunched position and said fiendishly "Ça c'est la tête d'un Bozo." He then proceeded to claw powerfully into the earth with the iron blade of his hoe.

Another Dogon laborer nearby laughed with appreciation. If there was any "cathartic" experience in all of this it wasn't acting on bad *nyama* in the other. Rather, it was directly associated with venting anger semi-privately to a sympathetic audience. This "hidden transcript" that expressed resistance to the figures of authority was not intended for the masons' ears, nor for those of the other Bozo on site.[47] If it had been public, this violent enactment, even though carried out on a metaphorical substitute, would have dangerously risked transgressing the tolerable limits of the alliance, which stipulated nonaggression and no spilling of blood. More directly, Sulayman might have also jeopardized his job. There were no Dogon masons in Djenne to whom he could appeal, and the transience of the Dogon Qur'anic students meant that their individual labor was easily replaceable.

There were, however, other ways in which their transient status worked in their favor. For example, the student-laborers regularly manipulated their status as scholars and supposedly versed Muslims to differentiate themselves from the Bozo (of whom many were illiterate and had attained only rudimentary religious education).[48] It was also important that they harbored no long-term objectives to remain within the trade. In fact, they considered the building profession to be beneath their dignity as up-and-coming religious scholars. They maintained that they bore the physical hardships for a short while so that they could earn a little money to pay their *marabout*-teachers.

Abdulahi Guindo, whom I encountered during my second season, was an extreme example. One morning while passing by the building site, he made his way to the rooftop where we were working and stood for a long time watching and making small talk in his limited Bambara. No one knew who he was; nor was it immediately apparent what he wanted. Predictably, no one questioned him directly, and the issue was left to unfold in its own due course. After half an hour or so, he removed his freshly pressed, buttoned shirt and, on his own accord, positioned himself at the end of the chain of laborers that conveyed materials to the masons.

Abdulahi was a wiry and energetic man in his mid-thirties, and like many other Dogon Qur'anic students he sought only short-term employment. But he was eager to demonstrate his strength and willingness to work. And his mildly over-rambunctious performance had to be quelled from time to time with subtle cues from the masons and the apprentice. More conspicuous was his nearly incessant rhythmic recitation of Qur'anic *suras* and the manner in which he punctuated his remarks and responses with religious expressions. Nearly every utterance began with "*b'ism Allah*" (in the name of God), and ended with "*in sha'Allah*" (God willing), or "*alhamdulilleh*" (praise be to God). When the midday call to prayer was broadcast over the rooftops from the mosque, Abdulahi would immediately rub the excess mud from his hands and feet, perform ablutions with water from the supply kept in an old oil drum, and disappear below into one of the rooms of the house to pray. Not only did this behavior differentiate him from the masons and his fellow workers (most of whom, on this particular team, were permanent residents of Djenne and not Qur'anic students), but it also rendered him immune to the Bozo-Dogon bantering. He neither participated in, nor was subject to, the typical exchange of insults.

Abdulahi exercised the religious component of his identity to effectively transcend his ethnic Dogon-ness (and, by association, its myths of origin and traditional "African" cultural practices) and be recognized primarily as a member of the Islamic community. This was the community to which all members of the building team supposedly belonged, and one that was grounded (at least ideologically) in a conception of brotherly unity that exceeded ethnic, racial, national and economic boundaries. It would have been highly controversial for any of the men to challenge Abdulahi's carefully constructed presentation, and coerce his identity into the "traditional" Dogon mold by taunting him about Dogon non-Islamic practices and beliefs. Confronting exemplary Islamic conduct with such teasing would have been viewed as ignorant and uncharitable, and may have brought the builders' own affinity to the Faith into question. Abdulahi's case, therefore, presented the classic interethnic banter, and its function to simultaneously differentiate and unify, with an interesting obstacle. With the progressive Islamicization of the two populations, and their incorporation into a broader (global) community, this obstacle may become more perva-

sive and eventually erode the underlying ethnic premise of the Bozo-Dogon bantering relation.

A second temporary Dogon laborer who worked with this team cultivated a very different relation with his Bozo superiors. Belco was pompous, boisterous, and very strong. He was also a Qur'anic student in Djenne, but had acquired previous experience in the building trades as a migrant laborer in the Ivory Coast. He was quite exceptional among both the students and laborers for having not only one, but three wives and six children. By necessity, his wages were funding more than his studies. Belco regularly chided the other laborers for being single and living together in rooming arrangements, and he bragged constantly about his virile potency and the fact that he had a wife here in Djenne to cook his meals.

There was nothing remotely charitable about this demeanor, and the men soon began addressing him as "*kado*," an ethnically derogatory term for the Dogon taken from Fulfulde, the Fulani language.[49] This ambiguous term, which could be read as either an insult or a jocular term of endearment, was suitably employed by the other builders to express their dislike for Belco without being entirely candid about it.

The little familiarity he had with construction work sometimes made Belco cocky with the senior builders. At one stage, while one of the masons, Bamoi Sao, and an apprentice were plastering the interior walls of the house, Belco picked up the mason's trowel from where it had been set down and applied a splotch of plaster onto the wall. If this bold act had been executed by any other laborer, Bamoi would not have taken too much notice, but he was plainly irritated by Belco's lack of reverence for his tools (**FIG.11**). A mason's tools were almost sacred, and new tools were presented to apprentices when they succeeded in various stages of his training. Bamoi cursed him firmly: "If you handle the masons' tools again without permission, your genitals will swell enormously!" At the same time Bamoi gestured with both hands at his crotch. I initially thought this might be a sought-after curse. Indeed, if larger genitals were an undesirable attribute, here perhaps I

FIGURE 11. *Portrait of Bamoi Sao, a Bozo mason.*

had stumbled upon some fascinating cross-cultural difference in male perceptions of their bodies. I soon understood, however, that the mason meant Belco would be struck with elephantiasis, a truly debilitating and potentially fatal disease. Clearly, this was not just banter; the mason was clearly threatening to exercise his power to punish.

As I have discussed elsewhere, Djenne's masons are alleged to possess the power of speech associated with *bai bibi* and *bai quaré* (traditional black African knowledge and white Islamic-based knowledge, respectively).[50] Their daily incantations, usually performed privately or at nearly inaudible levels on site, protected the building team from accidents and injuries, and guaranteed structural stability as well as prosperity and protection for those who would live there. Blessed grains and other artifacts including animal bones, stones, and amulets were buried at the base of foundations to ensure the integrity of the edifices they erected.

However, a mason's words could also be used destructively. Thus, powerful masons could put curses on those who interfered with their established patronage, "stole" commissions, or illicitly engaged in the trade. These curses might cause such debilitating injuries as cutting oneself on a shard of glass while hand-plastering a surface. Or they might trigger a structure to collapse. It was believed that even the simple greetings issued by the older, master masons as they passed one's work site concealed the possibility to bring down a wall. Consequently, small gifts of money (*"le prix de thé"*) or kola nuts were frequently offered to them by junior masons in order to appease and counteract the power of their words.[51]

Though he was not a master mason, Bamoi Sao was regarded as a potent healer, and his capacity to mend was presumably equaled by that to contaminate. It was with this possibility that he threatened Belco. Unlike Abdulahi, whose future was unquestionably committed to a religious vocation, Belco posed a threat. He bullied the laborers, competed for attention with the apprentices, and took liberties with the masons' tools, and so he needed to be put in his place. By forbidding him to touch the tools, the narrow limits to which he was permitted to participate in this profession were fixed, and this boundary line was defended by a curse.

ETHNIC RELATIONS AND THE FUTURE OF THE *STYLE-SOUDANAISE*

By way of ethnographic examples, I have tried to demonstrate that the bantering relationship between Bozo and Dogon (considered a "joking relationship" by Radcliffe-Brown, and a "cathartic alliance" by Griaule), still thrives on the building construction sites in Djenne, where the majority of masons are Bozo and the labor corps comprises a diverse ethnic mix, including representation from both groups. More importantly, I have tried to confirm that this relationship is not simply about a reciprocal exchange of cathartic

services; nor is it in a structural relation of oppositions, with avoidance relationships, or underpinned by a deep-rooted hostility between these two ethnic groups. Though there are arguably real social and cultural "disjunctions" between Bozo and Dogon, it would be difficult to construct a convincing contemporary argument that they are in serious competition with one another for material or political resources — especially given their extreme geographical separation and their very different modes of life. Therefore, the idea that an alliance or friendship was formed that imposed a "conjunction" and necessitated tolerance is ill-conceived in this case.

It is true, however, that the Bozo and Dogon do recognize a special bond, that is illustrated in their myths, and that obligates them to exogamous relations and peaceful accord. From a more practical and functional standpoint, this alliance may be seen to have emerged not from a need to diffuse a latent hostility, but from common interests. As briefly described in this text, the histories of both groups have been riddled with invasions: by other West African populations, by the French, and by all the religions, ideas and technologies that have accompanied them. It may not be far-fetched to suggest that an alliance of "friendship" has offered a united protection against outside incursions, even if only in the form of an emotional and psychological defense that has shielded them against the erosion of their respective identities. This special relationship is publicly "performed," not only so that it will be recognized by others, but in order to exclude the "Other" from it.

Additionally, it became apparent to me that the insult and banter introduce a playfully competitive element that effectively serves to individuate Bozo from Dogon, and vice versa, while the two are simultaneously engaged in an activity that unites them. Rules of exogamy merely reinforce this. It seems that, ultimately, Bozo-Dogon bantering may be a way of communicating a message that makes a combined claim to territory and identity: something along the lines of "We, the Bozo and the Dogon, belong here in the Niger Delta and along the Bandiagara Escarpment, but you, the 'Other', came after us."

In relation to my field site examples, I have illustrated that the content of the insults and banter was neither rigid nor static, and the style of the exchange was not of a single genre. Rather, contextual factors on site (including professional hierarchy), as well as individual aspirations and emotions, shaped the form and content of the dialogue. As noted by Brennies in his study of "Language and Disputing": "Language is not an epiphenomenal reflex of other relations; indeed it often creates and shapes those relations."[52] The exchange of insults and banter must therefore be understood, at least partially, as a means of "dealing with something," as well as manipulating outcomes, relations and identities.

In terms of content, the banter contained some themes from the time of Paulme and Griaule's studies: for example, imputing hierarchy and claims over the "other" with the employment of kinship metaphors; the use of obscenities, blasphemies, and animal categories; and attacks on myths of origin and other sacred institutions. However, on the building sites, attacks on salient issues such as intelligence, adeptness and masculinity were integrated in the jocular exchanges, as well as comments as to degrees of "blackness," implications of adhering to "backward" traditions, and the questioning of one's Islamic commitment and faith. In addition, the content of the banter, and the style of its delivery, clearly reflected, acted upon, and disseminated newly emerging ideas within Malian society. Such exchanges, Parkin suggested, "present opportunities to those who are creative enough to articulate such meanings into new combinations, and so, through what is culturally interpreted as licensed abuse, to defy the existing restraints."[53] However, players must carefully navigate from a position as spectator to one of participant. The individual's creativity is honed through practice, and the limits of abuse are negotiated online in response, and responding to, audience reception.

Bantering on construction sites could also bring underlying tensions to the surface. As illustrated by the examples, the bantering was not uniquely a competition of Bozo and Dogon identities, but encoded a stark hierarchical division of labor that was closely entwined with ethnic politics. Dogon builders could not move beyond the lowly status of laborers, and ambitions to do so were curtailed primarily with jests and ultimately with the threat of spells, all woven into the bantering discourse. Dogon laborers vented their frustrations with the (at times) oppressive work conditions, and they expressed resistance against the authority of the Bozo masons and apprentices through "backstage" commentaries made to non-Bozo audiences. Dogon (as well as other) Qur'anic students also capitalized on their religious training and literacy to mark a separation from (the majority of) their Bozo employers and to communicate disinterest in any long-term commitment to the profession. In an extreme case, one student's fervent performance of his religious identity effectively omitted him from the traditional Bozo-Dogon relationship.

Bozo masons integrated the bantering as part of their own expert discourse. To an outsider it might have appeared that a certain degree of equality (as described by Griaule) was expressed in the bantering exchanges that set these occasions apart from the normal hierarchical relations on site. In fact, the senior Bozo builders reserved the last word for themselves, and regularly used their authority to draw things to a close. When trade-status boundaries were threatened, obscenities and blasphemies changed to curses. The Bozo's hospitably offered employment to the Dogon, which enabled them to make a living and finance their studies and activities while resident in Djenne. But the Bozo also had a vested interest in keeping them off the higher rungs of their time-honored profession. Control over the reproduction of the town's famous *style-Soudanaise* architecture constitutes an important form of cultural capital. And this issue has

become more poignant since UNESCO added Djenne to its prestigious roster of World Heritage Sites in 1988.

Containment of the profession within a fairly homogenous socio-linguistic and ethnic community has arguably contributed to a degree of stability in the professional hierarchy, the format of the apprenticeship training, the execution of trade practices, and the reproduction of built forms over the last century.[54] The distinctive architectural expression of Djenne's monumental houses is evident in the earliest photographs taken of the town by Rousseau in 1893. It is clear from his documentation that many houses were of an already considerable age. Two of his photographs depict building activities that evoke comparisons with my own experiences on site in terms of the paucity of tools and the division of manual labor.[55]

The later adoption of Djenne's architectural style by colonial administrators resulted in its proliferation throughout the French Sudan. Likewise, the *style-Soudanaise* has become a salient issue in Mali's post-Independence discourse on national identity.

Bantering and other border-preserving strategies employed by the masons have enabled the Bozo to monopolize public associations between this cultural heritage and themselves as its principal agents of production. As mentioned earlier, however, the borders were brutally tested during the periods of drought and severe economic hardship in the 1970s and 1980s. During this time the *barey ton* (builders association) nearly disintegrated, while other ethnic groups not traditionally associated with the building trade worked their way in. Today the recurrence of such destabilizing conditions seems likely, and the ethnicity-based demographics of the trade may once again change.

The more pressing question is whether the guild-like structure of the trade organization, the status and prestige of its members, and the apprenticeship system (as the primary means for the transmission of specialized knowledge) will survive. Reports of drought and meager crops throughout the Sahel in early 2003, compounded by a massive return of Malian migrant laborers fleeing the political strife in the Ivory Coast, are exasperating an already weak economy. Economic uncertainty translates into diminished commissions for new

building works and repairs. Ultimately, repeated and lengthy periods of such conditions may threaten the maintenance and (re-) production of Djenne's *style-Soudanaise* mud architecture and put the political unity of the *barey ton* to the test.

Defending professional trade borders will arguably also remain crucial to the maintenance of group identities in this region, since vocational specialization has historically been an integral component of ethnic identity.[56] In this regard, bantering fulfils the dual, and seemingly contradictory function of wedging two groups apart while keeping them together. Thus, jocular expressions of competition and aggression have produced and reproduced the dividing lines between Bozo and Dogon, while the special status of the bantering relationship has defined a unity that excludes all others. Bantering, therefore, is not a straightforward "border-making language" in the sense of performatively bringing into being places (and identities) where commonality abruptly ends.[57] Bozo-Dogon bantering draws, and is enacted upon, ethnic and professional borders, while simultaneously creating spaces along those borders that accommodate communion between members of the two groups moderated by hospitality and tolerance (**FIG.12**).

FIGURE 12. *Masons and laborers perform ablutions at the edge of the Bani River before praying together at midday.*

NOTES AND
ACKNOWLEDGEMENT

1. In her discussion of Djenne-Djeno's ancient trade history, Susan Keech McIntosh included stone as an imported commodity. See McIntosh, *Excavations at Jenné-Jeno, Hambarketelo, and Kaniana (Inland Niger Delta, Mali), the 1981 Season* (Berkeley: University of California Press, 1995), p.391.

Stone for contemporary construction (used primarily for foundation footings) was imported mainly from quarry sites located in the direction of Dogon Country.
2. T. Marchand, *The Masons of Djenne* (forthcoming monograph).
3. During my last visit to Djenne in January

2003, it appeared that West Africa's Sahel region was being seriously affected by a new drought cycle. Following more than a decade of sufficient rains, 2002 recorded scant precipitation. Crop yields were low, and there was little to be fished from the Bani and Niger Rivers. People in Djenne complained of food scarcities, and the Dogon region appeared to be especially hard hit. It can be safely predicted that Mali's poor economic prospects will be further exacerbated by the return of the migrant labor population from the Ivory Coast, which was plunged into political turmoil at the end of 2002. The masons I spoke with reported a drop in Djenne's building activity this season, primarily blaming the dismal harvest for the equally dismal cash flow within the local economy. The continuation of this situation over the next few years could once again pose a serious threat to the existence of the masons organization and the conservation of Djenne's architectural heritage.

4. For example, in chronological order: H. Labouret, "La Parenté à Plaisanteries en Afrique Occidentale," *Africa*, Vol.2 No.3 (1929), pp.244–54; E.E. Evans-Pritchard, "Zande Blood-brotherhood," *Africa*, Vol.6 (1933), pp.369–401; D. Paulme, "Parenté à Plaisanteries et Alliance par le Sang en Afrique Occidentale," *Africa*, Vol.12 No.4 (1939), pp.433–44; F.J. Pedler, "Joking Relationship in East Africa," *Africa*, Vol.13 No.2 (1940), pp.170–73; A.R. Radcliffe-Brown, "On Joking Relationships," *Africa*, Vol.13 No.3 (1940), pp.195–210; M. Griaule, "L'Alliance Cathartique," *Africa*, Vol.18 (1948), pp.242–58; A.R. Radcliffe-Brown, "A Further Note on Joking Relationships," *Africa*, Vol.19 (1949) pp.133–40; J. Irvine, "Strategies of Status Manipulation in the Wolof Greeting," in R. Bauman and J. Sherzer, eds., *Explorations in the Ethnography of Speaking* (Cambridge: Cambridge University Press, 1974), pp.167–89; J. Freedman, "Joking, Affinity and the Exchange of Ritual Services among the Kiga of Northern Rwanda: An Essay on Joking Relationship Theory," *Man*, Vol.12 No.1 (1977), pp.154–65; P. Stevens, "Bachama Joking Categories: Toward New Perspectives in the Study of Joking Relationships," *The Journal of Anthropological Research*, Vol.34 (1978), pp.47–71; S. Drucker-Brown, "Joking

at Death: The Mamprusi Grandparent-Grandchild Joking Relationship," *Man*, Vol.17 No.4 (1982), pp.714–27; and S. Heald, "Joking and Avoidance, Hostility and Incest: An Essay on Gisu Moral Categories," *Man* (N.S.) Vol.25 No.3 (1990), pp.377–92.

5. See Radcliffe-Brown, "On Joking Relationships."

6. See Griaule, "L'Alliance Cathartique."

7. Because the Bozo have historically been nomadic fisherman, following shoals along the banks of the Bani and Niger Rivers in the Inland Niger Delta region, it is improbable that they would have been the original ethnic group engaged in, and controlling the masons trade. It would seem more likely that they progressively adopted this trade from another, sedentarized group which moved into the region. The building season does correspond with the winter months, when rains have ceased and low river levels expose the banks for the quarrying of mud and the production of bricks. It thus provides the Bozo with suitable employment outside the fishing season, when fish stocks move northward toward Lac Debo.

8. Phillips Stevens's investigation of Bachama joking categories in northeastern Nigeria also considers relations of "privileged familiarity" between ecologically determined groups, including those who reside along the riverbanks (*Ji-zane*) and those who reside inland (*Ji-bawe*). See Stevens, "Bachama Joking Categories."

9. I take note of Mary Douglas's differentiation between an obscenity and a joke in "The Social Control of Cognition: Some Factors in Joke Perception," *Man* (N.S.), Vol.3 (1968), pp.371–72. Though I agree that labeling a gesture, action or remark "obscene" implies that it is "offensive," and that this may be cross-culturally problematic, I would nevertheless maintain that the nature of the insults exchanged between Bozo and Dogon are meant to shock and offend, and therefore "obscene" is an apt description. It is arguably this effect that continually, and productively, puts their nonviolent alliance to the test, and thereby reproduces and strengthens it.

10. See Griaule, "L'Alliance Cathartique"; and Paulme, "Parenté à Plaisanteries," pp.441–44.

11. Griaule, "L'Alliance Cathartique,"

pp.242–58.

12. In his study of the Bachama, Phillips Stevens makes a distinction between insult (*dasoto*) and banter (*ozoto*), whereby the nature and content of behavior and language in banter-type exchanges is not personally abusive. I would contend that the exchange between Bozo and Dogon contains both insults and banter, but, as the latter is a more pervasive trademark in the exchanges than the former, I am more inclined to qualify the relationship as "bantering" (whereby banter is defined as good-humored teasing). See Stevens, "Bachama Joking Categories."

13. Labouret, "La Parenté à Plaisanteries en Afrique Occidentale," p.244.

14. Ibid., pp.252–53. Translation from the French: "the exchange of services and obligatory gifts, hence the existence is universally certified."

15. Ibid., p.253. Translation from the French: "West African populations are bound to each other by a much stricter chain of reciprocities than we had customarily suspected."

16. Paulme, "Parenté à Plaisanteries et Alliance par le Sang en Afrique Occidentale," p.434.

17. Ibid., pp.435–36.

18. Ibid., p.441. See also D. Paulme, *Organisation Sociale des Dogons* (Paris: Jean-Michel Place, 1940, 1988), pp.22–23. During my field studies with the masons in Djenne, several Bozos told me nearly identical versions of this story, but with the roles of the ethnic groups reversed, so that a Bozo chief saved a Dogon child. Griaule also noted that the Bozo-Dogon identities may be reversed depending on the identity of the storyteller. See Griaule, "L'Alliance Cathartique," p.252.

19. Note that Evans-Pritchard's (1933) study of the Zande also demonstrated the coexistence of a blood-brotherhood form of alliance and a joking relationship. See Evans-Pritchard, "Zande Blood-brotherhood," pp.369–401. A.R. Radcliffe-Brown suggested "four modes of alliance or consociation, (1) through intermarriage, (2) by exchange of goods or services, (3) by blood-brotherhood or exchange of names or sacra, and (4) by the joking relationship," which he wrote "may exist separately or combined in several different ways." See Radcliffe-

Brown, "On Joking Relationships," p.208.

20. Paulme, "Parenté à Plaisanteries," pp.441–44.

21. See Pedler, "Joking Relationship in East Africa"; and Radcliffe-Brown, "On Joking Relationships."

22. Radcliffe-Brown, "On Joking Relationships," pp.195,197.

23. Ibid., pp.197–98.

24. Ibid., p.200.

25. Griaule, "L'Alliance Cathartique."

26. Ibid., p.242. Translation from the French: "A bell rings for the salvo of guns at a funeral and for weddings. Yet it does not occur to anyone to claim that funerals and weddings are connected in a series [of rituals] called 'bell ceremonies'."

27. My translation from the French of various passages contained in Griaule, "L'Alliance Cathartique," pp.249–52.

28. Ibid., p.253. Translation from the French: "When an ally insults his partner, it is as if he wants to reclaim that part of himself that is in the other. It is like a battle of words in which each attempts to reclaim his own."

29. Ibid., p.254.

30. Radcliffe-Brown, "A Further Note on Joking Relationships," pp.138–139.

31. J. Howe and J. Sherzer, "Friend Hairyfish and Friend Rattlesnake or Keeping Anthropologists in their Place," *Man* (N.S.), Vol. 21 No.4 (1986), p.691.

32. See Stevens, "Bachama Joking Categories."

33. Heald, "Joking and Avoidance, Hostility and Incest," p.384.

34. For example, see discussions about *nyama* in Mande societies in S.C. Brett-Smith, *The Making of Bamana Sculpture: Creativity and Gender* (Cambridge: Cambridge University Press, 1994); P.J. Imperato, "Bamana and Maninka Twin Figures," *African Arts*, Vol.8 No.4 (1975), pp.52–60; R.J. McIntosh, *The Peoples of the Middle Niger: the Island of Gold* (Oxford: Blackwell Publishers, 1998), pp.27–28; P. McNaughton, *The Mande Blacksmith: Knowledge, Power and Art in West Africa* (Bloomington: Indiana University Press, 1988); and C. Monteil, *Une Cité Soudanaise, Djénné: Métropole du Delta Central du Niger* (Paris: Éditions Anthropos, 1932, 1971), pp.29–30.

35. For example, Jan Jansen, noted that several contemporary (European) scholars working in the Mande region have critically questioned the importance of nyama that has been perpetrated (by mainly American scholars). See Jansen, *Les Secrets du Manding* (Leiden: CNWS Publications, 2002), p.30, fn.40.

36. W.E.A. van Beek, "Dogon Restudied: A Field Evaluation of the Work of Marcel Griaule," *Current Anthropology*, Vol.32 No.2 (1991), p.148. "Dieu d'Eau: entretiens avec Ogotemmêli" is from Griaule, "L'Alliance Cathartique"; "Le Renard Pâle" is from M. Griaule and G. Dieterlin, 1965.

37. Van Beek, "Dogon Restudied," p.151. A few pages later (p.153) van Beek suggested that Griaule's concept of *nyama* as being some sort of vital force was part of his French anthropological baggage, influenced heavily by Mauss's discussions of *mana*.

38. Note that Arabs, associated with the coming of Islam to West Africa, are considered "white," and Caucasian Westerners, or *toubabs*, are perceived as "red."

39. C. Monteil, *Une Cité Soudanaise, Djénné*, p.125. Translation from the French: "a timid people who typically only know about fishing: in everything else they appear to be clumsy and stupid. They are also pacifists and have a resigned nature: all tyrannies, all calamities seem to leave the Bozo indifferent. Fishing, they think, suffices for everything."

40. French is the official language of Mali, and Bambara is the *lingua franca* of business and administration in the country. Griaule noted that Fulfulde (the Fulani language) was used as the *lingua franca* between Dogon and Bozo where he conducted fieldwork. See Griaule, "L'Alliance Cathartique," p.246. It remains an important language for interethnic communication throughout the Inland Niger Delta region.

41. E. Leach, "Anthropological Aspects of Language: Animal Categories and Verbal Abuse," in P. Maranda, ed., *Mythology: Selected Readings* (Harmondsworth: Penguin Books, 1972), p.42.

42. Griaule, "L'Alliance Cathartique," pp.246–47. Also note the similarity in the content of the insults expressed here with those exchanged between by the Bachama *Ji-zane* (people of the river banks) and *Ji-bawe* (people of the bush) studied by Stevens, "Bachama Joking Categories," p.63.

43. This is similar to the kin-like hierarchy echoed in the joking relationship between the Diop and Ndiaye families described by Judith Irvine, whereby the Diops are supposedly the mothers of the Ndiayes. Wolof informants claim, however, that what is really going on in the exchange of insults is that each person is claiming "It is I who own him"; or "I am the master and the other is my slave." See Irvine, "Strategies of Status Manipulation in the Wolof Greeting," p.181.

44. Translation from the French: "a black-man's mind," and "an African mentality," respectively.

45. Historically, Islam and so-called traditional African knowledge have been tightly interwoven, but, as in the rest of the country (and throughout West Africa more generally), this symbiotic relation has coexisted with a vocal current of religious conservatism and imagined orthodoxy within the religious discourse. Many *marabouts* continue to be prominent suppliers of protective amulets and incantations that blend Islam and animism, while other religious leaders and Muslim spokespersons denounce such practices as pagan.

46. Translation from the French: "Dogon faeces," and "It's a Bozo's head," respectively.

47. J. Scott, *Domination and the Arts of Resistance* (New Haven: Yale University Press, 1990).

48. There were notable exceptions to this rule, and some Bozo masons closely integrated Qur'anic verses into the oral incantations and written amulets that they produced to protect their building works.

49. It is said that long ago a group of Fulani came across a group of Dogon. The Dogon could not make themselves understood, nor did they understand Fulfulde (which is widely spoken across West Africa because of the enormous geographic spread of the pastoral Fulani). The Fulani became frustrated with these stubborn people and proclaimed that "Les Dogons sont méchants comme le potasse" (The Dogon are nasty like potash). The Fulfulde word for potash is "*kad*," which was transformed into "*kado*" to refer to the Dogon. The reason that potash might be considered "nasty" is that it is very acidic and bitter to the tongue. It is interesting that the Dogon add potash to their staple dish, *Tô* (considered to be a notoriously bad-tasting meal by other ethnic groups).

50. T. Marchand, "Process Over Product: Inverting the Emphasis in Sustainable Conservation with Reference to Case Studies of Traditional Building Practices in Djenne, Mali, and San'a', Yemen," in *Managing Change: Sustainable Approaches to the Conservation of the Built Environment* (Los Angeles: The Getty Conservation Institute, forthcoming); and "Transforming Sweat Into Status: Becoming a Master Mason in Djenne," in R. Bedaux, P. Maas, and B. Diaby, eds., volume *Djenne* (forthcoming).

51. The Mande tradition of "splashing" the *griot* (or *jeli*) with money while they praise one's lineage in song has analogous effects.
52. D. Brennies, "Language and Disputing," *Annual Review of Anthropology* 17 (1988), p.229.
53. D. Parkin, "The Creativity of Abuse," *Man* (N.S.), Vol.15 No.1 (1980) p.57.
54. See G. Mommersteeg and P. Maas, "La Ville de Djenné autour de 1900," in B. Gardi, P. Maas, and G. Mommersteeg, eds., *Djenné, il y a cent ans* (Eindhoven: Lecturis, 1995), pp.36–37.
55. See "L'album d'Albert Rousseau," in Gardi, Maas, and Mommersteeg, eds., *Djenné, il y a cent ans*, pp.49–94. See especially photos 5 and 10 depicting building activity.
56. McIntosh, *The Peoples of the Middle Niger*, p.105.
57. B. Urciuoli, "Language and Borders," *Annual Review of Anthropology* 24 (1995), pp.525–46.

All photos are by the author.

On Design

The Dance of a Summer Day: Le Corbusier's Sarabhai House in Ahmedabad, India

M. SUSAN UBBELOHDE

Le Corbusier's Sarabhai house in Ahmedabad, India, is a remarkable example of an architecture that "reveals the world" to the occupants. Tracking the performance of the house through one summer day, this article demonstrates how it employs an overlay of climatic response, cultural understanding, and architectural design to support both body and psyche during this highly stressful season. From the cool moments of the early morning, through the furnace of afternoon heat, and into the slow cooling of the evening and dark relief of the night, the house is an active participant in the daily rituals of its inhabitants.

> [T]his is the task of the house: to reveal the world, not as essence but as presence, that is, as material and color, topography and vegetation, seasons, weather and light.
> —Christian Norberg-Shulz[1]

In 1951 the French architect Le Corbusier was commissioned to lead the design work for Chandigarh, the new capital city for the Indian Punjab. That winter, while busy with this project in Simla, he received inquiries from Gira Sarabhai, once a student of Frank Lloyd Wright, about the possibility of designing a house for her sister-in-law, Manorama Sarabhai, in Ahmedabad. Demanding a sufficient number of commissions to make his time and travels worthwhile, Le Corbusier eventually agreed to design a house for Sarabhai and her two sons — as well as four other projects in the city (FIG.1).

Representing Le Corbusier, in May 1953 a young architect, Jean-Louis Véret, arrived in Ahmedabad with schematic design drawings in hand to live on site at the Sarabhai compound. His charge was to supervise construction of the Ahmedabad projects then underway: the Sarabhai house, the Shodhan house, the Millowners Association building, and the Municipal Museum. After his arrival, letters flew weekly between Ahmedabad

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and Paris to decide construction details. Then, when Véret was recalled to France for military duty, the job of construction supervision was completed by B.V. Doshi. During this period Le Corbusier visited Chandigarh twice a year, and often stopped over in Ahmedabad to check on his projects there.

It was a potent time for Le Corbusier. The architect was just completing the Unité d'Habitation in Marseille, and he had started his commission at Ronchamp. In Chandigarh, after years of professional frustration implementing his urban design strategies, he had been given an entire city to design. His architecture, too, was changing, beginning to engage in a greater exploration of mass and shadow, as well as aspects of design he described as "female," "nonrational," and "primitive." India was a propitious setting for such work. It was a new country, just a few years beyond independence and partition, and its leader, Jawaharlal Nehru, was looking with vigor toward the future.

Manorama Sarabhai was also an extraordinary client. Before marrying into the Sarabhai family she had been a Lalbhai. Both families belonged to the textile-mill-owning elite of Ahmedabad, described by William Curtis as "modern Medicis."[2] The Sarabhai family, in particular, was known for its patronage and contributions to the arts and sciences, including the establishment of major research and educational institutions. The site for the new house was deep within the Sarabhai family compound, in the residential area of Shahibagh north of the old walled city. Its program called for approximately 5,000 sq.ft. of space in two semi-detached structures — one for the older boy, the other for the mother and younger son.[3] Among other elements, it specifically mentioned terraces for sleeping, a library, and a swimming pool (**FIG.2**).

This article describes the experience of a typical summer day in the Sarabhai house. Using this approach, I argue it is possible to "dwell" in the Sarabhai house, profoundly connected to place and culture.[4]

Although Le Corbusier's architecture in Ahmedabad was not formally based on traditional or local precedents, he did notice much around him and draw avidly in his sketch-

books, attempting to understand how and why things were made as they were. His design work was also profoundly concerned with nature, perception, light, the movement of the body, and the positioning of the occupant philosophically and phenomenologically in the world.

As a modern architect, Le Corbusier cared about the influence of climate on architectural form and materials. In taking care to incorporate these values into the design of the Sarabhai house, he provided a family of deep cultural traditions with a modern house in which, in the words of Norberg-Shulz, the world is revealed as presence (**FIG.3A,B**).

THE SUMMER SEASON

Vishnu becomes the wind, the cosmic life-breath, and pulls out of all creatures the enlivening air. Like desiccated leaves the sear substance of the universe leaps to the cyclone. Friction ignites the whirling tumult of highly inflammable matter; the god has turned into fire. All goes up in a gigantic conflagration. . . .[5]

FIGURE 2. *Sarabhai house site plan, illustrating the entry court to the north east of the house and private garden to the southwest.*
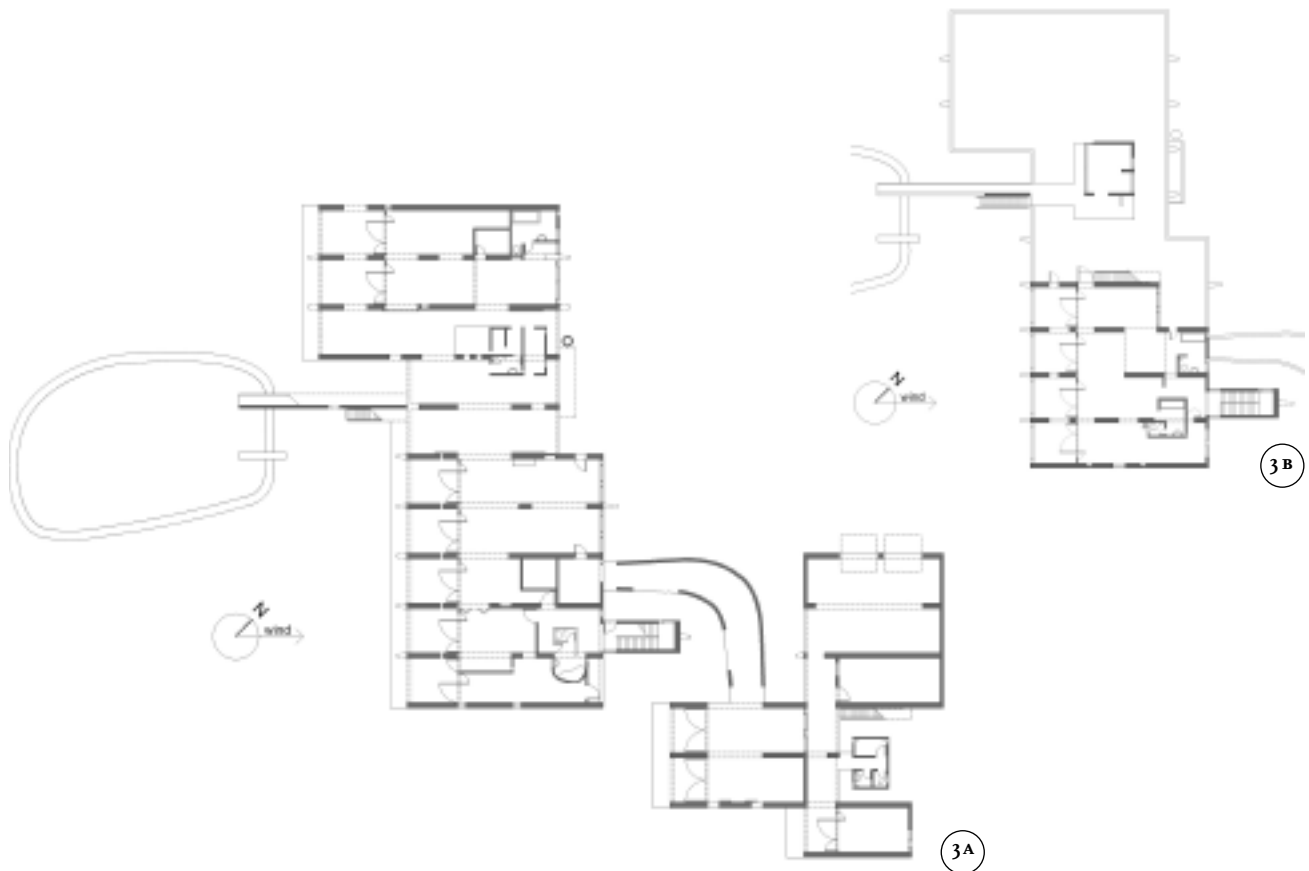
FIGURE 3. *A) Sarabhai house first-floor plan. B) Sarabhai house second-floor plan. Drawn from as-built measurements.*

As Hindu mythology describes the successive cycles of creation and destruction of the world, so too do the seasons in the Indian year seem magnified. In such a parallel, the phase of destruction caused by the fires of Vishnu equates to summer, the season by which its residents define the city of Ahmedabad. Ahmedabad sits just below the Tropic of Cancer, south of the Great Thar Desert, and the difficulties of its summer have been well recorded through history. Thus, during a visit in 1617, the Mughal Emperor Jahangir is said to have found the hot weather so awful, he ". . . described the city as 'gardabad', the abode of dust, and other less complimentary names."[6]

In mid-summer, through the center of Ahmedabad the wide Sabarmati River becomes a trickle of water connecting stagnant pools, orphaned in a trench of sand. Water buffaloes visit from all over the city to cool off in the shrinking pools, and an unending sequence of men and women load their small donkeys with river sand for building sites. On the city streets, vendors offer hats for shade, fresh watermelons are cut and readied with salt and pepper, and coconuts are beheaded and fitted with straws to reach the liquid within. Mangoes are piled on carts, while *pani wala* stands advertise drinks of water with blocks of ice and a single glass.

Arriving anywhere — a store, a house, a friend's garden — a glass of cool water is offered in welcome.

Throughout the area, summer clothes are of the thinnest cotton, designed to offer the lightest possible covering against the sun while letting a bit of breeze pass through. European travelers have remarked on this for centuries. As François Bernier, physician to Emperor Aurangzeb in the seventeenth century, related: "The heat is so intense in Hindoustan, that no one, not even the King, wears stockings."[7] On city streets, only the slightest sandals cover bare feet. On entering a house, footwear is removed at the door so that bare feet may take pleasure in cool floors. In private, clothes are also quickly optional. As Marco Polo reported in the thirteenth century: "The climate is amazingly hot, which explains why they go naked."[8]

The fundamental rhythm of an Ahmedabadi summer is twelve hours of day, twelve hours of night. This cycle of light and dark, heat and coolness, becomes the dominant framework of life and behavior, human and animal. As the season advances, the repetition, invariable and absolute, becomes imprisoning. Day and night. Day and night. The cycle becomes as maddening as the call of the brain-fever bird, whose cries greet each day until everyone is convinced they've lost their mind.

Le Corbusier captured this diurnal rhythm in his *Poem to the Right Angle*. Here, the sun takes on a mythic role, much as in a Vedic song or prayer, boldly structuring the universe and declaring the rules of existence.

> The Sun master of our lives
> far off, indifferent
> He is the visitor — an overlord
> he enters our house . . .
> Punctual machine turning
> since time immemorial
> engenders every instant of the
> Twenty-four hours cycle the gradation
> the nuance the imperceptible
> almost providing a rhythm. Yet brutally
> he breaks it twice —
> morning and evening. Continuity
> is his but he
> imposes an alternative —
> night and day — these two phases rule our destiny:
> a sun rises
> a sun sets
> a sun rises anew.[9]

During a north Indian summer, in a profound way "these two phases rule our destiny." This structuring of the summer world, this pulse of day and night, also rules the traditional relationship between people and buildings. During the days of summer, the harsh sun requires escape, a burrowing into the coolness of a darkened room, windows closed, shades drawn. All possible barriers must be raised between the vulnerable body and the scorching afternoon heat. Yet once the sun has set, buildings must be opened to exhaust both heat and occupants to the cooler evening. Buildings shelter and protect during the day, but at night the outside is gentle and welcoming.

The Sarabhai house performs an especially elegant dance with these realities of summer living: dawn — awakening to the world; afternoon — a protective refuge from the oppressive heat; dusk — opening to the slow cooling of the garden; night — cool terraces and roofs under the moonlight and stars. The dance of the house is experienced in the changing spatial order, the tectonic making, the thermal, haptic, visual, and aural sensations of being human. Over the course of a summer day, the house reinforces and then transforms our understanding of public and private, inside and out, repose and activity, the cave and the pavilion. Though modern in terms of form, the house recapitulates this daily traditional performance from late March until the rains arrive in June.

THE LUMINOUS MORNING

In the Sarabhai house, summer beds are set on the terrace, in garden bays, and on the lawn of the roof garden. It is outdoors that one wakens to the quickening of the day. India rises early, and in Ahmedabad the sweetest hour of summer is dawn, when the night's coolness mingles with the early light. Surfaces have cooled overnight and a light breeze brings freshness to the air. Bird calls, filtered sun, and the sounds of bathing stir one's attention.

Dawn is an intensely personal and vulnerable time. Awakening involves passage from the unconscious, private realm of sleep and dreams to the conscious world. A journey through sleep and arrival with the dawn is a reappearing theme in myth — the new day bringing rebirth. As we become conscious and reinhabit our more public selves, we rejoin the material and social worlds.

Waking in the garden, the morning path first leads into the dim interior of the Sarabhai house (**FIG.4**). Large pivoting doors on the southwest, in concert with windows in the northeast wall, have been open throughout the night to exhaust yesterday's heat from the massive brick piers, tiled vaults, and stone floors. The coolness of the summer morning is experienced as a layering of sensations. Touch, inevitable as bare feet move across the floor, is a powerful part of morning in this season. Although the air inside is just perceptibly warmer than in the garden, surfaces — smooth stone floors and tiled baths — are cooler than the body. Exposed skin also loses radiant heat to its cooler surroundings.

Baths and showers followed by prayers begin the day in Ahmedabad. There are five bathrooms in the house. In early studies, these were all held coincident with its field of vaults.[10] In the final design three were juxtaposed, breaking the powerful order of the parallel brick walls to create extremely private interior spaces. Most provocatively, one ground-floor bath is figurally associated with the swimming pool in the garden. By challenging the rhythm of the vaults, these rooms create a powerful exception to the collective

FIGURE 4. *Sarabhai house interior view through living room to entry passage. This photograph was taken during the late morning hours just before the house was closed for the afternoon.*

order of the house, emphasizing the privacy of these rooms. Cool water pulled from the rooftop tank on a summer morning washes heat from the skin and cools the air within the these tiled ritual chambers, offering a pleasing chill that remains in the memory through the day.

Following the privacy of bath and prayers, breakfast is eaten in the dining room on the northeast side of the ground floor (**FIG.5**). Throughout the summer season, from spring equinox to the summer solstice, the sun rises in the northeast, flooding this side of the house with light. The windows here pivot to connect inside and out. Beyond the sunlit entry court, this northeast side of the house provides the family's connection with the larger public world. It is here where the morning's business is transacted, visitors are received, and the bustle of comings and goings can be watched and directed.

By allowing the northeast wall to be thrown open and letting the sun enter the rooms here, Le Corbusier dematerialized the absolute threshold of the house. Entry court, interior rooms, vaulted passages, and garden are fully connected to each other. This is the setting where the quiet privacies of dawn are superceded by the day, and where occupants of the house complete the transition from the unconsciousness of sleep to full public engagement (**FIG.6**).

AFTERNOON SHADE

As the morning lengthens, the ferocity of the sun can turn life-threatening, challenging the body and mind to seek

FIGURE 5. *Sarabhai house dining room with large northeast windows.*

FIGURE 6. *The entry court on the northeast side of the house.*

shade. By midday, the temperature reaches 100 degrees, and the relative humidity plummets. Le Corbusier understood these conditions well: "Noon: The sun is in its glory. Its arrows strike vertically down into the earth; and they light furnaces upon it. . . . The giant of heat is now stretched to his full height, his feet crushing the hot ground: he gesticulates, walks up and down in the land, and waves his arms."[11]

Summer in Ahmedabad is an overheated world in which shadow affords a boundary between comfort and distress. Like the snake cooling beneath the peacock in Kalidasa's verse, the Sarabhai house first offers relief in the shade of its garden:

> *Fatigued by sun's rays, like a sacrificial flame,*
> *The peacocks stand, drained both in body and in mind;*
> *They will not strike snakes who come winding near at hand,*
> *To thrust a hot head in their feathers' cooling shade.*[12]

Tucked into the far corner of the compound, the garden of the Sarabhai house is an oasis of green coolness and shade. Here, the exuberance and height of its trees create a filtered light that successfully establishes a first veil of shelter between house occupants and the rising heat of the day. Yet, however pleasant, no garden can provide enough shelter through the middle of the day. It is to buildings that the inhabitants of the region, and the subcontinent, have traditionally turned for protection.

Escape from the sun is an essential feature of the built environment of Ahmedabad. The *pol* houses which constitute the medieval city fabric feature a deep, shaded courtyard, the *chowk*.[13] The architecture of the early sultanates and the Mughal period introduced a vocabulary of shaded arcades and porticoes throughout the palaces and mosques in the city. The mosque and courtyards of the nearby fifteenth-century retreat at Sarkejh used a similar strategy of shaded arcades at the edges of sunlit courts. Mughal palaces and forts throughout the region continued this pattern, extending it to include shaded pavilions for public and private audiences.

FIGURE 7. *The arcade edge of the courtyard at Fatehpur Sikri.*

Elsewhere in northern India, there are many other examples of a rich vocabulary of shade. The sixteenth-century courtyard edge in the Jami' Masjid at Fatehpur Sikri was elegantly reflected and expanded into the *diwan-i-am* and *diwan-i-khas* pavilions in the palace-forts of Agra and Delhi (**FIG.7**). In the Rajput forts and palaces of Rajasthan, the Mughal style of shaded bays and arcades was given further intricacy as part of additions and alterations to earlier Hindu structures. In Amber, the palace is exposed high on a ridge, and shade is provided by columned pavilions and cool arcades added by Jai Singh I in the seventeenth century. In the desert city of Jaiselmer — where the buildings are constructed of cut golden sandstone and the narrow streets shade themselves — the eighteenth-century Salim Singh ki Haveli pushes a room far into the sky and then protects its edge with a shaded arcade (**FIG.8**).

British houses in India continued this vocabulary of shaded rooms at the edges of a house (**FIG.9**). Although

vegetation was minimized immediately adjacent the house (to prevent the possibility of rot and "bad air," which were believed to cause malaria), grounds and gardens away from the house were well planted with shade trees that were considered "antagonistic" to the disease.[14] This house type, which has come to be known as the bungalow, grew from an amalgamation of South and Southeast Asian building types, each of which emphasized a heavily shaded layer of space between the interior rooms and the garden.[15] Over time the British adapted a Mediterranean Neoclassical vocabulary to their bungalow designs. According to Nilsson, "The porticos were usually placed on the shady northern front of the house, while the south facade was occupied by a loggia."[16]

On his first visit to India in 1951, Le Corbusier noted in his sketchbooks for Chandigarh: "do not hesitate to make grand empty naves [full] of shadow and air currents."[17] He also paid attention to the shading strategies of residential buildings, noting the relationship between roof and shadow, sun and depth of penetration.[18] But in New Delhi, he was dismissive of the British Neoclassical verandas, describing them with his most damning adjectives: "the fronts of the verandas are composed of walls and not of pillars. All of this is vague and Vignola." With the Sarabhai house, he concluded: "The plan attempts to realise the best possible conditions of shade and natural ventilation. The orientation of the building is strongly dictated by the prevailing winds — particularly at Ahmedabad. The other necessity is to make shade everywhere."[19]

At 23 degrees north latitude, Ahmedabad is on the same geographic parallel as Hong Kong, Dhaka, Havana, and the tip of Mexico's Baja Peninsula. During the summer months, after rising in the northeast, the sun climbs overhead through the morning hours, nearly reaching the zenith by noon. Le Corbusier originally oriented the Sarabhai house at 45 degrees off cardinal to open its vaults to the southwest monsoon winds. In summer this also allows the early morn-

FIGURE 8. *Salim Singh ki Haveli in Jaiselmer, Rajasthan.*

FIGURE 9. *Former residential bungalow in Ahmedabad now used for commercial offices.*

FIGURE 10.
Northeast dining room and living room windows receive early morning sun in May.

However, for the Sarabhai house the architect used the term brise-soleil to make a statement about the fundamental order of family life. This would be expressed in a proper relationship between architecture and the natural world:

> . . . the living room is opened to the sun, the space, and the greenery by means of a loggia which is really a brise-soleil, a portico, such as Socrates advocated, which allows the inhabitants of the house to savor the good things which a Bountiful God dispenses to men. It gives coolness in summer and warmth in winter. This portico, this loggia, this brise-soleil, links modern architecture with the most ancient traditions. Positioned according to the sun, it helps to bring rule into architecture.[21]

In the Sarabhai House, Le Corbusier designed a place for the life of the family that was responsive to winter and summer seasons, between public and private, between court and garden, safely held within brick walls and a vaulted ceiling. In this sense, the southwest garden rooms link the house to its proximate cultural and historical setting. With its deeply shaded bays, Le Corbusier connected the Sarabhai house to the collective Indian tradition in which alcoves of shade form the layer between inside and out.

ing sun to light the entry court and slip into the house through the northeast windows (**FIG.10**). This thin northeastern wall doesn't have to repel the sun. However, as the day heats up and the sun becomes unwelcome, it moves overhead, where it bears down on the roof garden, leaving the rooms below in full shade. Then, as afternoon progresses and the sun declines toward its setting point in the northwest, the deep recesses of the southwest garden rooms hold both heat and light at bay (**FIG.11**).

Le Corbusier conceived of this shaded southwest garden edge of the Sarabhai house as a brise-soleil, or "sun breaker."[20] He first designed brise-soleil for projects in North Africa during the thirties, but they also came to define most of his buildings in India. In Ahmedabad, Le Corbusier's designs for the Millowners Association building and the Shodhan house made expressive use of concrete brise-soleil (**FIG.12**).

THE CLOSED SHELL

Summer afternoons in Ahmedabad are too harsh to be mitigated with shade alone. In April, the afternoon temperature in the Sarabhai house garden will reach 104 degrees, while in May it reaches 115 degrees or more. Survival in such an environment demands a barrier to the heat itself. The outdoor world, so generously welcomed into the house during the morning, is now unbearably hot and bright. As the Sarabhai house mounts a defense, the building envelope

FIGURE 11. *Southwest garden rooms in shade during early summer afternoon.*

FIGURE 12. *Millowners Association Building, Ahmedabad, India, 1951–54. West elevation.*

FIGURE 13. *Detail of first floor plan, showing house closed for the summer afternoon.*

becomes the "theater where the interaction between outdoor forces and indoor conditions can be watched."[22] Ranks of pivoting windows and doors, which linked the morning interior to the court and garden, are now closed against the day (**FIG.13**). The house retracts itself to form a closed shell against the hot, dry air which would otherwise surge in.

Le Corbusier never fully realized the necessity of closing the house to the hot, dry air of afternoon. Writing about his Ahmedabad designs, he emphasized the coupling of shade and air movement as the critical response to the climate: "Comfort is coolness, it is the current of air, it is the shade."[23] Although he visited India often, his travels were timed so that he never actually experienced Ahmedabad's oppressively hot summer weather.[24] He discussed the Ahmedabad climate with Gira Sarabhai, and his office in Paris created a table of climatic data for the city. However, Le Corbusier seems to have based his climatic understanding more on his own experiences.[25] His August vacations at Cap Martin on the Côte d'Azur were likely a more powerful source of climatic understanding than the temperatures recorded in the table. Ahmedabad delivers a far more brutal summer heat than the French Mediterranean. The design of the Sarabhai house is flexible enough to accommodate summer conditions of which the architect seemed ignorant.

By noon the threshold between inside and out is clearly drawn. The sliding panels are closed, bounding the rooms within as a separate realm. By closing off connection to the outside world, the rooms become redefined and connected transversely beneath the roof vaults. The ambiguous and open spatial definitions of morning are overwritten with clear

boundaries. The space of the house becomes private and individualized, a refuge for the afternoon hours (**FIG.14**).

Such sharply bounded interior spaces, which hold the outside distant, are a marked contrast to the traditional spatial order of desert houses. There, a courtyard — "an open to sky space," as Correa has called it — is normally located within the house.[26] The many variations of the courtyard all open the interior of a house to light and air, the direct opposite of the Sarabhai strategy. In many such houses, a single deep courtyard also traps a reservoir of cooler air at its bottom. This well of coolness is typically shaded and further cooled with water. John Reynolds has used the phrase "thermal sailing" to describe the process by which shade, water and vegetation coordinate with migratory occupancy patterns to cool both the courtyard, the house, and the people in such a setting over the course of a day-night cycle.[27] In houses with two courtyards, one can be opened to the sun to pull air from a cooler shaded courtyard, perhaps with a fountain or trees, through the connecting rooms of the house.[28]

The Sarabhai house, in contrast, keeps the interior mass isolated and the cave-like interior remains distanced from the hot, dry air of the afternoon.

FIGURE 14. *The large pivoting doors on the southwest are closed between the interior and the garden.*

The Roof Garden

If a closed tin box with deep brise-soleil were built in the beautiful Sarabhai garden, it would be uninhabitable on a summer afternoon. The materials of the house are crucial to isolating its interior from the heat. The soil of the Sarabhai house roof garden shields the rooms below, the effect enhanced by transpiration and evaporation from its vegetation (FIG.15). The floor slab is in direct contact with the cool soil beneath. Working together with the brick walls and tiled vaults, as a protective surround, these massive materials create a thermal flywheel, storing the great heat of the afternoon and releasing it during the cooler hours of the night.

Jane Drew and Maxwell Fry, colleagues who championed the choice of Le Corbusier for Chandigarh, worked at length in tropical countries, both hot-humid and hot-arid. They have written that the challenge of a roof on a summer afternoon is primarily one of rejecting solar radiation.[29] Le Corbusier was well aware of this problem, and the sod roof of the Sarabhai house was intended to intercept the sun's heat before it could reach the more massive materials below. In structural terms, the roof is formed over Catalonian vaults of tile and brick. These first support a layer of rubble covered with a watertight membrane, which is then topped with soil, and planted with vegetation (FIG.16). Grass and plants are watered daily through the summer season.

Such a roof engages a complex of thermal mechanisms to keep the interior cool. The planted layer reflects up to a third of all direct solar radiation, and absorbs the remainder. The grass and other vegetation further cool the roof through transpiration. As much as 80 percent of the heat received during a day never penetrates beneath this layer. What heat does reach the massive layer of soil, rubble, brick, concrete and tile is absorbed before it can reach the rooms below. It is then reradiated to the night sky at the end of the daily cycle.[30]

While the closed shell of the house below presents a thin barrier between the hot air outside and whatever rem-

FIGURE 15. *View of the roof garden, showing grass roof and large trees beyond.*
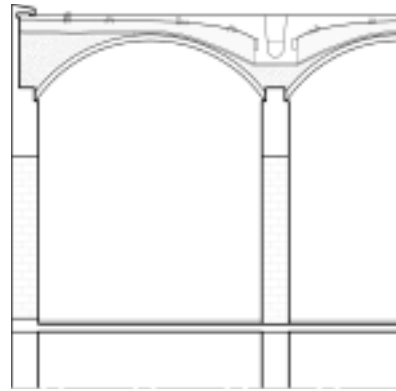

FIGURE 16. *Section through the roof garden showing construction with scupper beyond.*

nants of the early morning coolness are left inside, the roof assembly mediates the impact of the sun above. Such a combination works surprisingly well. The rooms inside peak at 96 degrees Fahrenheit, while the garden outside is nearly twenty degrees hotter by late afternoon.

Interior Comfort

Protection by a sod roof is not the same as being in an underground chamber, however. The roof garden is not capable of keeping the house interior below 80 degrees on a hot summer day. But how comfortable is the inside of the Sarabhai house at 96 degrees? Studies have found that air temperatures in the low 90s Fahrenheit are above any empirical measure of comfort, even in the tropics. And while it is definitely cooler inside than out, the air inside is also more humid. Relative humidity inside the Sarabhai house may range from 30–50 percent over the course of an afternoon. The additional moisture is welcome in the desert environment, but it also means that perspiration is more noticeable than outside, where the relative humidity may be as low as 10 percent.

If room surfaces were cooler than the air, radiant heat loss could provide an important degree of comfort; indeed, this is the effect that everyone dreams of on an Indian summer afternoon. Yet while the Sarabhai house excels at blocking heat gain through the roof, its interior surfaces are not quite the cool stone of our imagination. During early afternoon, the stone floor, brick walls and tiled ceilings remain only two or three degrees cooler than the air, and do not seem perceptibly cool to the touch. By late afternoon, even the roof assembly has reached the same temperature as the air inside.

If our touch tells us that surface temperatures are about as hot or cool as we are, then the surrounding environment feels thermally neutral. At 96 degrees, the interior surfaces of the Sarabhai house are still slightly cooler than body temperature. In such an environment, bare skin will still radiate heat to its surroundings, and the floors, walls and ceiling of the house have great capacity to accept such transfers. Protected from the sun and losing a bit of heat to surfaces around us, we are held in a delicate thermal balance. If we experience any increase in activity beyond resting quietly, we perspire freely and feel overheat-

ed. However, on summer afternoons the only reasonable activity is a nap, naked, under a ceiling fan in the privacy of a darkened room. Noel Coward once commented wryly:

In tropical climes there are certain times of day
When all the citizens retire
To tear their clothes off and perspire.
It's one of those rules that the greatest fools obey,
Because the sun is much too sultry
and one must avoid its ultry-violet ray. . . .[31]

Moving Air

Coupled with a quiet activity, moving air is an absolute necessity in a closed house on a summer afternoon, especially for the mid-range levels of relative humidity found in the Sarabhai house. At 90–96 degrees, air movement can make the difference between tentative comfort and certain torture. Moving air around a closed room does not cool it. Rather, it cools the body by increasing convective heat loss, and by assisting evaporative cooling from the skin. Experimental data indicate that temperatures as high as 92 degrees Fahrenheit are considered comfortable if the air is really moving.[32] For this reason, ceiling fans find a place in nearly every house and apartment in Ahmedabad. Directly under a ceiling fan it is possible to experience a brisk but cooling 500–600 fpm at about two feet above the floor, exactly the position one might take for an afternoon nap.

Le Corbusier was aesthetically opposed to ceiling fans, conceiving of the Catalonian vaults as an architecture of calm.[33] His client, however, was experienced with the Ahmedabad summer, and demanded that the vaults of the house be fitted with fans.[34] Through the years, these fans have been painted by visiting artists such as Robert Rauschenberg, creating art pieces that celebrate this most functional aspect of the house. The fans move the air throughout the house just enough to keep the edge of comfort within reach.

Above and beyond air movement, in the very dry Ahmedabad's summer it is also possible to evaporate water to cool and humidify the air. Desert coolers that do just this are locally made and relatively inexpensive to buy and run. By contrast, an air conditioner is a much more expensive option, costing from five to eight times more to buy, and proportionately even more to run. In Ahmedabad, those families who can afford to purchase and run air conditioners tend to have the window-box variety. In their houses, one room, often the parents' bedroom or sitting room, will be kept cool for the family to enjoy, while the servants and the rest of the household must make do with shade and cool drinks.

The Sarabhai house was originally constructed with dual air-conditioning plants, one for each side of the house. The library was the top priority, with the living room and bedrooms also included. Complete with ductwork, such central air conditioning indicates how little was spared for reasons of cost or technology in this house. Yet, astonishingly, these air condi-

tioners have rarely been used — not for lack of money, but for lack of need. While being in the closed house under a ceiling fan is not really the same as having a "normal" day in an office at 78 degrees, it has long been an integral part of Ahmedabad custom and culture to hide away for the summer afternoon.[35]

Air conditioning is also not necessarily an unmitigated good. Many in Ahmedabad feel that becoming used to an air-conditioned environment substantially decreases your ability to conduct business outside your house — or even walk down the street. Moving in and out of air-conditioned rooms also makes one susceptible to colds and sinus problems. Moreover, the failure mode of a house that relies on air conditioning can only be catastrophic. As Nirad Chaudhuri writes, "I dislike the perpetual air-conditioned simper of all Westerners in India today. I do not trust it either, for I have seen the look of ferocity which comes into their eyes if the cooler fails for even a few minutes."[36]

SHELTERING THE SOUL

The Sarabhai house shelters the family from the heat of the afternoon, but the house is far more than a set of thermal mechanisms. With enough money and resources, machines can deliver exactly the air temperature desired, and in Ahmedabad, many commercial buildings use air conditioners to keep their occupants cool during the summer. But air conditioning alone is not capable of offering such a profound refuge from the summer afternoon. To accomplish that, architecture must provide a retreat as well as a defense against the stress of the season. According to Karsten Harries, what we require of a house "certainly cannot be reduced to being protected from a threatening outside: we need to be sheltered not only physically but psychologically. The soul, too, needs a house."[37] The Sarabhai house delivers, par excellence, a house for the overheated soul.

To inhabit this house during a summer afternoon is to retreat into a dark and restful place. In contrast to the painfully bright afternoon, the inside of the Sarabhai house is surprisingly dark. The green garden has some capacity to subdue the brightness of the afternoon sun. But inside, the ubiquitous black floor, red brick walls, and rust-colored ceiling tiles absorb almost all the remaining daylight. Small panels on the parallel walls are painted in bright hues — red, green, yellow, blue and gray. But, although vivid against the natural brick and stone, these colors are highly saturated and relatively dark in value, adding little reflected light to the interior. The dimness of the interior is welcome during the hours of retreat.

Such a darkened interior can also be understood to offer refuge in a biological sense. Appleton has made the case that we are as biologically wired to find pleasure in refuge as we are in prospect. He wrote that "aesthetic pleasure in landscape derives from the observer experiencing an environ-

ment favorable to the satisfaction of his biological needs. . . . There is therefore a very direct functional association between darkness and concealment and a prima facie case for symbolically equating darkness with the refuge."[38]

Less than one percent of the light outside the Sarabhai house on a summer afternoon can be measured indoors next to the large northeast windows. And the daylight level continues to fall off as you move to the center of the house. This contrast between inside and out, sensed by both skin and eyes, is crucial to the making of a refuge. Much as the trees and water of an oasis create a realm of comfort and pleasure within the vastness of a desert, the half-light of the Sarabhai interior emphasizes the distance between the refuge and the garden. Inside, the relative coolness, dimness, and calm make a place of respite, a pause or suspension in the increasing urgency and discomfort of the summer day.

But the barrier between inside and out is not complete. Cutouts in the pivoting wooden doors reveal shockingly bright glimpses of sun and garden. By giving a presence to the possibility of sun and heat, these "decorative" windows operate in the tradition of the *jali* and cut stone screens, containing and yet offering glimpses of the world without.[39] Stunning examples of this tradition can be found in and near Ahmedabad. In the Sarkejh retreat, the tomb of Mahmud Shah presents the quintessential sanctuary, with droplets of western sun falling onto the cool dark stones of the tomb through cut stone walls (**FIG.17**).

Thus, being inside the Sarabhai house is not the same as being in a vault or underground. Instead, the interior rooms present a more sophisticated condition of boundary — and as a result, of refuge. According to R.D. Dripps: "To a considerable degree this opposition of inside and outside is a construed rather than a received phenomenon . . . [the] edge therefore is a rather paradoxical construct, both separating and connecting the two realms it has revealed. This is as much a critical action as it is a protective one."[40] This "critical" relationship between inside and out serves the refuge as

profoundly as the protection offered by the house. As Louis Kahn believed, "Even a room which must be dark needs at least a crack of light to know how dark it is."[41]

THE CAVE IN THE GARDEN

Deep in the shadows and under the trees, the refuge of the Sarabhai house is fundamentally a cave. Situated in the suburbs on unrelievedly flat ground, the house is not cut from a rock cliff nor a chasm cleft into the earth. Yet, just as the Hindu temple becomes a sacred mountain, so the house is a cave bearing earth above and touching the earth below (**FIG.18**). Penetrations offered to the garden lead to a dim, vaulted interior of rough brick and smooth stone. Inside, the rooms are irregular and unexpected, with bearing walls slipped open to create an extended and perceptually indeterminate plan, rather than a set of clearly defined rooms.

A cave presents a fundamental phenomenological condition. Harries has characterized this as a "natural symbol," one which we understand and experience by virtue of being human. "The symbolism is not limited to any particular tradition nor projected into the world. It can be called natural in that it has its foundation in the nature of human being in the world, in . . . experiences of the opposition of earth and sky, darkness and light, matter and spirit."[42] By entering into the earth, one enters a separate realm. Space is configured in volume rather than plan, the sky and horizon are replaced by ceiling and floor. The space is interiorized, our relationship to the exterior world singularly defined and controlled by the mouth. Such caverns are a place of withdrawal from the larger world both physically and mentally.

The natural symbol of the cave also has, as Jung described it, an "almost unbounded fullness of reference."[43] Being inside the cave on a hot afternoon offers both simple physical relief and layers of resonance, symbol and allegory entirely appropriate to the exigencies of an Ahmedabad sum-

FIGURE 17. *The tomb of Mahmud Shah at Sarkejh near Ahmedabad.*

FIGURE 18. *Southwest side of house with deeply shaded bays.*

mer season. The cave as refuge shares the concept of *locus
ameonus*, a safe-haven where all physical wants are answered,
a sanctuary in which psychic and physical well-being reign.[44]

In India, caves have served as religious retreats and
places of pilgrimage for thousands of years, playing an
important role in the development of art and sculpture.
(FIG.19). As Lannoy noted, "For a thousand years almost all
the most important sculptural monuments were caves. This
is the most singular fact about Indian art, and distinguishes
it from that of other civilizations."[45] The early Buddhist caves
from the time of Emperor Ashoka (third century BC) were
considered to house female earth spirits.[46] For monastic
communities, the caves served many necessities above and
beyond that of a naturally sacred space. According to Evans:
"The way of retreat asserts the right to retire from the arbi-
trary assaults of a cacophonous and disarrayed world. . . .
[I]t has the advantage at least of creating a precinct within
whose boundaries there exists a topology, a causal sequence,
and a purposiveness of some salient significance."[47]

Most Hindu temples in India are constructed on flat
ground rather than cut into a rock cliff. But they nevertheless re-
create the procession of the cave from outside to inner core,
from light to dark, from air to earth. The innermost sacred
space, the goal of the entire processional path, is where "the
interaction of shakti and deity, the gestation of grace, takes
place," and is known as the womb-chamber or *garbha-griha*.[48]
While the Hindu temple is explicit in its labeling of the womb-
chamber, and Buddhist shrine caves were known as "wombs of
grace," in Western thought there is no less a tradition of cave as
womb. Entering the cave has long been recognized as a return
to the shelter and protection of the womb, a rejoining with

Mother Earth. Such a fundamental understanding was identi-
fied by Jung: "The descent into the earth is also the symbol of
the mother's womb, and was a widespread conception under the
form of cave worship."[49] In her study of the cave as metaphor,
Weinberg noted that "The sexual or uterine aspect of sacred grot-
toes is of great importance and probably always has been."[50]

However, in *The Experience of Landscape*, Appleton
warned that once a landscape or environment is labeled with
sexual symbols, there seems little room for equally convinc-
ing understandings of that same form or place. "Once we
have made up our minds that sexual symbolism lies at the
root of the aesthetic pleasure we take . . . every dark cavern,
partially concealed by foliage, . . . every cleft and chasm, can
as certainly be recognized as a vagina." It would thus seem
dangerous to imagine that the Sarabhai house is first and
foremost a "womb-chamber."

However, Appleton also asserted, "It is, after all, the
imagination which is principally involved in experiencing the
environment aesthetically."[51] And in inhabiting the Sarabhai
house, the house for the body and the house for the soul can-
not be separated from the house of the imagination. Just as
we recognize the coolness and calm spirituality of the cave,
we also recognize the return to the womb — consciously or
unconsciously. While waiting out the overheated hours, the
most common activity is to sleep. When the pleasure of the
morning's freshness is depleted, sleep will carry you uncon-
scious through the hours of exhaustion and heat. The house
as a cave is exactly appropriate for these hours of limbo.
Caves have long served as the place of respite, of waiting, of
sleep. Jung wrote that "The cave represents the darkness and
seclusion of the unconscious."[52]

Ultimately, this is what an Ahmedabad summer afternoon demands — an escape from consciousness, an escape from the day itself. In the heat of the afternoon, the Sarabhai house is a proposition of shelter and protection, escape and refuge, cave and womb. The house demands our engagement with metaphor and symbol, just as it stimulates us experientially and phenomenologically. The house is a cave is a womb. We are profoundly sheltered through the heat of the afternoon, awaiting rebirth when dusk arrives.

THE NIGHT GARDEN

Eventually, every scorched summer afternoon in Ahmedabad gives way to evening, the welcome pause between day and night. At this point, the sun is low, a deep yellow glow filtering through the trees. The richly colored Sarabhai house garden again takes form in the growing shadows. In these moments comes the second dawn of the summer day. Birds reannounce their presence. As Le Corbusier's "giant of heat" puts away his arrows and retreats, people wake slowly from the stillness of their afternoon naps.

Even before sunset, as the sun drops lower in the sky, the garden begins to cool perceptibly. At the same time the house begins to feel less like a refuge than a prison. The mass of the building has been collecting heat all day, and the air inside has become stuffy; it is mentally, as well as physically, claustrophobic. The promise of a more humane world arrives gently at the edges of the house. Awakening from an afternoon nap, movement is from the darkness of the interior out to the garden.

In these hours of transition, the relation between house and garden is yet again transformed. As soon as the white hot light of afternoon gives way to deepening shadows, the first window is cracked open. A bit of hot air floods in, but it is isn't much hotter than the interior has grown to be. Then, quickly, the large wooden doors are swung open; the cave is opened, exposing the interior to the garden — the two now profoundly continuous in the disappearing daylight (**FIG.20**). House and garden are a continuity, a spatial analogy to the sensation of limbo that characterizes dusk.

Shortly after sunset, the 100-degree excesses of the afternoon drop to the just-bearable nineties. Unlike waking into the freshness of the morning, dusk sustains a slow and gentle reconnection to consciousness and the exterior world. With inside and out seamlessly the same, there is a pause, a stillness in the day on the verge of becoming evening. The last streaks of sunlight the greenery and catch the turquoise pool. The tranquility of the hour is expressed in the sedate and caressing character of ragas played at sunset.

The swimming pool comes into its own in the early evening. The concrete fascia of the house establishes a strong edge to the space of the garden. Playing against this datum, the toboggan and pool are potently figured and posi-

FIGURE 20. *Detail of first floor plan of the house opened up for the night.*

tioned, conjuring delicious thermal relief. Slipping gently into the cool water or sliding joyously down the wetted toboggan to splash into the pool is a refreshing transition from day to evening. Skin hot from sleep is quickly cooled by the water and emerges wet into the warm evening air. Echoing the morning, the swim is a rebirth, an awakening to the possibilities of the evening and night ahead.

The light fades and darkness arrives, day turning to night. Dusk is a reflection of dawn, sunset a cousin of the sunrise, and yet charged with profoundly different resonance. The purpose of the evening is pleasure with family and friends. Evenings are enjoyed on the garden side of the house, exterior and yet still private. Below the fascia, the house becomes an elegant garden pavilion, with small bays for conversation and drinks open to the evening sky, the terrace, and the lawn. In these garden bays, the large house is scaled to the small and intimate. Here the stone floor pushes out to meet the edge of the lawn, extending beyond the vaults to stitch garden and pavilion together. Held in the bays between warm brick walls, one sits within the threshold of both the dark interior and the fading light of the garden. In these spaces one occupies a border zone between in and out, house and garden, day and night.

According to Harries, "Human being belongs to both body and spirit, to the earth and to the light. An adequate understanding of dwelling must do justice to this twofold belonging, which is never without tension. . . . Our building must acknowledge both the sheltering power of place and the indefinite promise of open space."[53] In the material tension between the two, the Sarabhai house holds us in an extraor-

dinary moment and place. This edge and these rooms contain us, ". . . as a fringe of overlapping possibilities . . . [in] an extraordinarily deep kind of ambiguity."[54] To sit in these bays is to hold a sensory memory of the day past and knowledge of the day to come, while experiencing the gradual relief of an evening in the garden. This moment forms a profound understanding of the Indian summer.

Out on the terrace, on the roof, and in the garden, paved areas are washed of their dust and heat. The lawn is watered, and the air feels fresh and moist. As Anita Desai recalled: ". . . in the evening, when it was cooler, and twilight fell, and one could venture out in fresh cottons, with flowers in one's hair — jasmine, *chameli, champa, bela*, all white and fragrant. . . . The sound of water being sprayed across the lawn, of taps gurgling generously, of crickets stirring into life, drinks, sherbets, fruits on trees, on ice."[55] The coolness of the terraces and lawn are matched by the night sky, draining away the heat of the day from skin as well as earth. No clouds impede the action of the sky, infinitely cold and black in comparison to the fires of afternoon.

The Sarabhai house offers a landscape of possibilities for the summer evening. The garden bays, pool, and terrace on the ground level continue upward to the lawns and terrace of the first roof which inhabit the level of leaves and sky. Balconies, too, overlook the pool and garden. And on the roof water channels echo those in the Persian gardens of the Mughal courts. Linked by slim concrete stairways built against the walls, these green roofs easily join the garden below to make a striking tableau for a summer evening. The Sarabhai house is linked not only with contemporary life in Ahmedabad, but with grand historic traditions of summer entertainments and pleasures.

Mughal palaces and Rajput forts made special observance of evening pleasure, architecturally recognizing the sensual and sensory possibilities of the night garden. Paintings from the same courts, including miniatures from which Le Corbusier drew as he worked on the Ahmedabad designs, celebrated night life on the terraces and in the gardens of the palaces. As Michell has written,

> *Royal architecture had to provide suitable settings for private pleasures where monarchs could meet with their queens and concubines. Miniature paintings executed at the Mughal and Rajput courts give a good idea of the erotic life of the court. An often repeated scene shows the royal figure at night accompanied by one or more female consorts seated in an upper pavilion of the palace, or lying on a terrace beneath an awning.*[56]

The garden for the ladies of the court at Amber in Rajasthan provides an especially revealing glimpse into the nature of a summer garden in the desert:

> *Maunbari garden is a night garden, and it is ingeniously designed for this destination. Obviously, in a night garden there is no need for trees, since there is no need for shade, and it would hence be similarly senseless to grow colourful flowers, as it would be impossible to admire them in the moonlight which veils all colours behind a shading of light and dark. . . . [T]he individual flower beds [are] planted with white or very light flowers which seemed to be luminescent under the moon. Moreover, most flowers belonged to highly aromatic species, filling the night air with their sweet smelling perfume.*[57]

As the night grows cooler, the warmth of the brick and concrete within the house confirms the day's heat, languidly giving it up to the small breezes that move through it vaults. Heat will also move upward through the soil of the roof garden to be reradiated to the night sky.

Retained heat is a real challenge for house designs in Ahmedabad. In their recommendations for roof designs in such climates, Fry and Drew advised against a massive roof such as that of the Sarabhai house. Instead, they proposed a double-skinned, lightweight roof to shade with little thermal mass.[58] The soil of the roof garden of the Sarabhai house does retain a great deal of heat during the night, and before it can begin transferring heat from the house interior to the night sky, it must lose its own heat. While temperatures in the garden continue to cool to a comfortable 85 degrees by midnight, it will remain warmer inside than out until dawn.

Chaudhuri once confessed, "Even I, in spite of my climatological philosophy, go half mad. What exasperates me most is that for a month or two no object feels cool to the touch even at night. Every material substance, if not hot, is above the temperature of blood."[59] The sensation of being surrounded by warm surfaces is especially oppressive when the alternative is a clear black sky of infinite coolness. Hence, just as Bernier noted in the seventeenth century: "For more than six successive months, everybody lies in the open air without covering — the common people in the streets, the merchants and persons of good condition sometimes in their courts or gardens, and sometimes on their terraces, which are first carefully watered."[60]

If the family slept indoors on summer nights, the planted roof garden would be a great liability, no matter how well it managed to isolate the interior during the hot afternoons. However, the house offers a range of options for sleeping during the clear nights of the season. Since its southwest walls allow easy connection to the outside, garden rooms on both the first and second floors may serve as sleeping porches. More traditionally, after the paving has been thoroughly rinsed, beds may be pulled out to the freshness of the night terrace. As the summer season grows long and nights grow warmer, desert coolers may also be used. Air conditioners require enclosed spaces to be effective, but the desert cooler can be used at the edge of the house, and even outdoors. Thus, one can sleep outside under the clear sky with a veil of cool, humid air moving across one's body and dissipating into the garden.

While everyone sleeps, the long sides of the house remain open, doors and windows pivoted to erase the walls. Even the slightest breeze moves through the vaults, exhausting the heat from the interior to the cooler night. This process takes all night, and the interior does not finish cooling until nearly an hour after sunrise. By then, the mass of the house, so protective during the hot afternoons, is recharged, cool to the touch and ready to accept the heat of the day. Bare feet, such a critical part of experience in this country, will tomorrow ground the body with the coolness of touch.

In the Sarabhai house, as everywhere in Ahmedabad during the summer, day is the time of containment, of a cloistered withdrawal into the privacy and detachment. The world is held at a remove, the house providing a shelter and refuge for each individual as they escape into sleep. It is at night that the connection is restruck, tentative and delicate. One sleeps lightly within the garden, open to the night world through dreams and the subliminal pleasure of coolness and dark. As was Akbar's pavilion at Fatehpur Sikri, the Sarabhai garden could be called the Khwabgah, the House of Dreams.

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4. Today the house is still in the family. Manorama Sarabhai lived in it until she passed away in 1993. For decades she opened her doors to those who traveled to Ahmedabad to see Le Corbusier's work.
5. H. Zimmer, *Myths and Symbols in Indian Art and Civilization* (Princeton: Princeton University Press, Bollingen Series VI, 1946), pp.36–37.
6. J. Burton-Page, "Historical Context," in G. Michell and S. Shah, ed., *Ahmadabad* (Bombay: Marg Publications, 1988), p.14.
7. F. Bernier, *Travels in the Mogul Empire*, 1934, as quoted in B. Palling, *India, a Literary Companion* (London: John Murray, 1992), p.33.

8. *The Travels of Marco Polo*, as quoted in Palling, *India, a Literary Companion*, p.32.
9. Le Corbusier, *Le Poeme de L'Angle Droit* (Paris: Fondation Le Corbusier/Editions Connivences, 1989), Part A.1.
10. See AMS 4400 p.114 in *The Garland Archives: Le Corbusier Ahmedabad, 1953–60* Vol. 26 (New York and London: Garland Publishing, Inc. and Fondation Le Corbusier, 1983).
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12. Kalidasa, *The Seasons: Kalidasa's Ritusamhara*, J.T. Roberts, trans. and intro. (Tempe, AZ: Center for Asian Studies, Arizona State University, 1990), p.34.
13. See K. Jain, "Wooden Houses," in G. Michell and S. Shah, ed., *Ahmadabad*; and M.S. Ubbelohde and G.A. Loisos, "The Ahmedabadi Pol House," *Fifteenth National Passive Solar Conference Proceedings*, American Solar Energy Society, 1990.
14. A.D. King, *The Bungalow: The Production of a Global Culture* (London: Routledge and Kegan Paul, 1984), pp.108,135.
15. *Vistara: The Architecture of India*, C. Kagal, ed. (Bombay: Tata Press Limited for The Festival of India, October 1986), pp.100–1.
16. S. Nilsson, *European Architecture in India 1750–1850* (London: Faber and Faber, 1968), p.178–79.
17. *Le Corbusier Sketchbooks Volume 2, 1950–54* (Cambridge, MA: MIT Press, 1981), No.403.
18. Ibid., nos. 337, 343, 358, and 652.
19. Le Corbusier and P. Jeanneret, *Oeuvre Complete de 1952–1957* (Zurich: Les Editions D'Architecture, Edition Girsberger, 1964), p.160; also *Le Corbusier Sketchbooks Volume 2 No. 405*. Note that all the drawings of the

house (both archival and published) indicate the north arrow in relation to the arrow of "vent" coming from the southwest.
20. Le Corbusier, *Oeuvre Complete de 1952–1957*, p.115.
21. Ibid., p.95 and figure on p.91.
22. B. Stein and J.S. Reynolds, *Mechanical and Electrical Equipment for Buildings* (8th edition) (New York: John Wiley & Sons, 1992), p.53.
23. Le Corbusier, *Oeuvre Complete de 1952–1957*, p.114. See also his early discussion of the Sarabhai House in Le Corbusier *Oeuvre Complete de 1946–1952*, p.160.
24. Letter from Le Corbusier to Kasturbhai, President of Ahmedabad Millowners Association, May 3, 1955. Fondation Le Corbusier Archives [P3-5-490].
25. Letter from Gira Sarabhai to Le Corbusier in Paris, October 1, 1951. Fondation Le Corbusier Archives [P3-5-163].
26. H. Khan, *Charles Correa* (Singapore: Concept Media, with Mapin Publishing, Ahmedabad, India, 1987) p.167.
27. J.S. Reynolds, *Courtyards: Aesthetic, Social and Thermal Delight* (New York: John Wiley & Sons, Inc., 2002), pp.146–53.
28. A clear description of courtyard thermal mechanisms can be found in G.Z. Brown, *Sun, Wind and Light* (New York: John Wiley & Sons, 1985), pp.114–17.
29. M. Fry and J. Drew, *Tropical Architecture in the Dry and Humid Zones* (New York: Reinhold Publishing Corp, 1964), p.31.
30. D. Watson and K. Labs, *Climatic Design: Energy Efficient Building Principles and Practices* (New York: McGraw-Hill, 1983), p.157.
31. Noel Coward, *Collected Stories and Lyrics* (London: Hutchinsonn & Co. Publishers, 1931), p.286. From the song "Mad Dogs

and Englishmen."

32. Stein and Reynolds, *Mechanical and Electrical Equipment for Buildings*, p.376, quoted from ASHRAE Fundamentals. Also see E. Arens and Z. Hui, "Comfort and Health: Design Criteria and Guidelines for Air Movement and Humidity in Ventilated and Evaporatively Cooled Houses," CEDR Research Report, UC Berkeley, January 25, 1995.

33. Le Corbusier, *Oeuvre Complete de 1952–1957*, p.115.

34. Letter from Manorama Sarabhai to Le Corbusier in Paris, October 6, 1953. Fondation Le Corbusier Archives [P3-5-195].

35. Recently, a new central air conditioning system was installed as a strategy for increased privacy as much as increased thermal comfort. An eight-story apartment building has risen to the south of the property, with the result that the garden is no longer the private extension of the house that it was for nearly forty years.

36. N.C. Chaudhuri, *The Continent of Circe* (London: Chatto & Windus, 1965), p.136.

37. K. Harries, *The Ethical Function of Architecture* (Cambridge, MA: MIT Press, 1997), p.95.

38. J. Appleton, *The Experience of Landscape* (London: John Wiley & Sons, 1975), pp.73,112. The essential statement of the prospect-refuge premise can be found on pp.69–70: "'Habitat theory' thus asserts that the relationship between the human observer and the perceived environment is basically the same as the relationship of a creature to its habitat. It asserts further that the satisfac-

tion which we derive from the contemplation of this environment, and which we call 'aesthetic', arises from a spontaneous reaction to that environment as a habitat, that is to say as a place which affords the opportunity for achieving our simple biological needs."

39. "Jali, jhilmil, verandah, chhattri . . . ," *Lotus International* 34, Vol.I (1982), pp.104–5. See also the photographic essay by B. Rudofsky, "the Optical Distillers," *Interior Design*, August 1985, pp.230–35.

40. R.D. Dripps, *The First House: Myth, Paradigm, and the Task of Architecture* (Cambridge, MA: The MIT Press,1997), pp.52–53.

41. A. Latour, ed., *Louis I. Kahn: Writings, Lectures, Interviews* (New York: Rizzoli, 1991), p.252.

42. Harries, *The Ethical Function of Architecture*, pp.130,187.

43. C.G. Jung, *The Integration of the Personality*, S. Dell, trans. (New York: Farrar & Rinehart, 1939), p.89.

44. F.M. Weinberg, *The Cave: The Evolution of a Metaphoric Field* (New York: Peter Lang, 1986), p.4.

45. R. Lannoy, *The Speaking Tree: A Study of Indian Culture and Society* (London: Oxford University Press, 1971), p.31.

46. Ibid., p.39.

47. R. Evans, "The Rights of Retreat and the Rites of Exclusion: Notes Towards the Definition of Wall," in *Translations from Drawing to Building and Other Essays* (Cambridge, MA: The MIT Press, 1997), p.38–39.

48. C. Tadgell, *The History of Architecture in India* (London: Phaidon, 1990), p.40.

49. C.G. Jung, *Psychology of the Unconscious*, B.M. Hinkle, trans. (New York: Moffat, Yard and Company, 1916), p.375.

50. Weinberg, *The Cave*, p.114.

51. Appleton, *The Experience of Landscape*, pp.81,84,105.

52. Jung, *Integration*, p.158.

53. Harries, *The Ethical Function of Architecture*, p.175.

54. H. Plummer, "Prismatic Space," *Architecture and Urbanism*, Vol.91, No.5 (May 1991), p.26.

55. A. Desai, *Cry, the Peacock* (Delhi: Vision Books, 1983), p.130.

56. G. Michell, *The Royal Palaces of India* (London: Thames and Hudson, 1994), p.56.

57. J. Pieper, "Ein Nachtgarden in Rajasthan" ("A Nightgarden in Rajasthan"), *Daidalos* 27 (March 15, 1988), p.114.

58. Fry and Drew, *Tropical Architecture in the Dry and Humid Zones*, p.32.

59. Chaudhuri, *The Continent of Circe*, p.136.

60. Bernier, *Travels*, pp.240–41, quoted in Palling, *India, a Literary Companion*, p.33.

Book Reviews
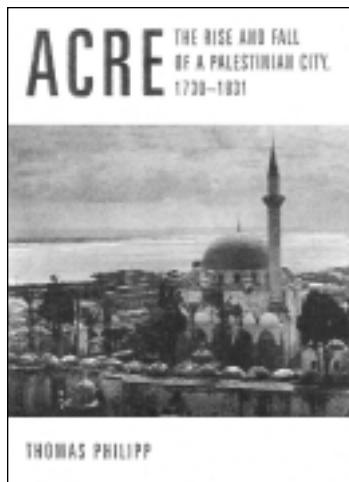
Acre: The Rise and Fall of a Palestinian City, 1730–1831. Thomas Philipp.
New York: Columbia University Press, 2001. 299 pp., illus.

Capitalist formations in regions such as the Middle East and South Asia have until recently been conceived of as imports. In general, they were thought to be connected to the initial commercial forays undertaken by European capital to meet the needs of industrializing economies for increasing amounts of raw material. But by examining mercantilist formations and the development of commercial agriculture in Palestine during the eighteenth century, Thomas Philipp focuses on the intersection of local commercial and agricultural interests and the world economy. Thus, he succeeds in presenting a more nuanced picture of the historical relations between the local and the global.

This is not the first historical study of the intersection of local capitalist formations and the global economy in regions outside Europe. For example, in *Rediscovering Palestine: Merchants and Peasants in Jabal Nablus, 1700–1900* (Berkeley: University of California Press, 1995) Beshara Doumani examined commercial formations and the development of commercial agriculture around Nablus in the nineteenth century. Doumani described such regions as part of the "material core and political periphery of the Ottoman empire." Also, Chris Bayly's *Rulers, Townsmen and Bazaars: North Indian Society in the Age of British Expansionism* (Oxford: Oxford University Press, 1983) focused on similar developments in South Asia.

Philipp focuses on the city of Acre and its "realm" over a period of a hundred years (1730–1831). He interprets Acre's realm to be its political, geographical and commercial sphere of influence, a sphere that was almost always changing. This entity was unique because it did not correspond to the borders of any officially demarcated Ottoman province. It also did not correspond to the borders of any of the British Mandate territories. Nor was it a unit for the rise of later nationalisms.

Philipp focuses on a period dominated by three personalities: Zahir al-Umar (1690–1775), Ahmad Pasha al-Jazzar (1730–1804), and Sulayman Pasha (1750–1819). He describes how Acre's realm was originally expanded by Zahir al-Umar from Tiberias, with Acre eventually becoming its political, administrative and commercial center. Thus, the Galilee, the Jabal Amil region (controlled by the Metualis), and at times (through alliances) the region controlled by the Druze to the north were almost always a part of its territory. But Philipp tells how Acre also had control over a coastal area extending from the city itself to Haifa and Sidon — and, at its greatest extent, from Gaza to Latakia. On occasion, official sanction from Istanbul would also extend its power over the provinces of Damascus and Tripoli.

Philipp explains how Acre's autonomy was situated within a period of declining central control by the Ottoman administration in Istanbul and increased trade with European (principally French) markets. Thus, he tells how the formation of a state independent of the "ideological and physical authority of the Ottoman empire" through involvement in global commerce gave the region its relative autonomy (p.2). In particular, it was in its *khans*, a

combination of artisan workshop and residence, that Acre's trade was institutionalized. Among other things, the monolithic organization of the *khan* allowed the government of Acre to control cotton purchases. Philipp relates how contemporary French accounts were rife with complaints about not being able to purchase cotton directly from peasants.

Individual chapters in this book examine themes such as "Politics," "Trade," "Government," and "Society and its Structure." Among other things, Philipp contends that Acre was reinvigorated by immigrants, who constituted the bulk of its population. The existing ruins (from the age of the Crusades) provided sufficient building materials for construction. European merchants from Marseilles were allowed to organize themselves in the form of nations, which were treated as a cohesive entity, with a leader who would negotiate on their behalf. Philipp explains how this was consistent with the Ottoman policy of *millet* — religious or ethnic groups constituted as cohesive entities and represented by a leader recognized by the imperial authority. Social mobility for an individual was therefore usually dependent on the mobility of the group.

Since Philipp views the society of eighteenth-century Acre as consisting largely of immigrant populations who occupied portions of an empty city already under tight political control, neither the analogy of a "traditional Middle Eastern society" nor of a "frontier society" can be applied to it. Instead, the absence of a well-entrenched Muslim elite and strict political control prevented the formation of new classes that could usher in an era of "modernity," and so deal with a changing political and economic environment. Thus, the author concludes that in the final equation, Acre lost out to Beirut and Damascus for preeminence in the region. While this argument is plausible, the author may be overly attached to the notion that a "traditional" society was needed for a city in the Middle East to make a transition to modernity.

While the book does fall back on older accepted categories of analysis, luckily, the very real richness of historical data here allows the reader to bypass the author's assumptions and form his or her own impressions. The city itself, according to the author, conforms to a hierarchical street pattern, "as it does in many other pre-modern Middle Eastern cities" (p.172). Given the problematic nature of such categorizations, one wishes that the author had stuck to his description of the particularities of Acre, rather than depend on

such generalizations. However, spatial formations are not the focus of Philipp's book, and he does present the reader with a very place-specific and particular history.

Readers receive a clear picture of the role of a state in Acre that promoted, managed and controlled agricultural production and export. However, we get little idea of the actual practices of mercantile and peasant classes who were participants in commercial agriculture — and, consequently, participants in a global economy. The author also does not give us a picture of how agricultural production itself was transformed as a result of capitalist production. And while capitalist production and export-oriented agriculture were not new to the region, the author does not tell us how it changed within this period.

The author's sources are contemporary local histories and life histories of Zahir-al-Umma and Sulayman Pasha. He also uses regional histories written by members of Greek Orthodox merchant families that document changes in the region. And he uses French consular correspondences from Acre, Sidon, Tripoli, Aleppo and Rosetta to deduce the pattern of agriculture and commerce. The author is to be commended for being critical of his sources and avoiding "exotic, superficial impressions," and "personal viewpoints" (p.7). Local court records for Acre are unavailable, and it is presumed that they have been destroyed. Hence, they do not feature as a dominant source in his research.

On the whole, the book is to be commended for investigating the changing nature of a region's participation in the global economy. It does valuable work in contributing to a historical explanation of developments in a region outside Europe by focusing on its participation in commercial agriculture and capitalist production. The author gives us a comprehensive picture of the creation of a mercantilist political entity against the backdrop of weakening Ottoman imperial authority and nascent European colonial forays.

This book also breaks new ground in one other important sense. Most other studies of Palestine have focused either on the Biblical and Crusader periods, or on the Modern period, bypassing the years in between. Philipp's book begins to correct a major historiographical oversight — the virtual bypassing by scholars of the Arab history of the region.   ∎

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Building Community, Keeping the Faith: German Catholic Vernacular Architecture in a Rural Minnesota Parish. Fred W. Peterson. St. Paul: Minnesota Historical Society Press, 1998. 202 pages, 109 illus.

While examining balloon-frame, vernacular farmhouses in central Minnesota over a period of several years, Fred Peterson found himself drawn to an unmistakable feature of Stearns County's landscape — the substantial number of brick farmhouses — and to the core of this landscape, St. John the Baptist parish centered on the village of Meire Grove. *Building Community* is a fine study, rich in historical research, interviews, and fieldwork, of this small ethnic parish, settled almost exclusively by German Catholics. Peterson covers, in a general way, migration from Europe and German-American settlements, religious belief and community values, the role of the local Catholic diocese in promoting settlement and local church construction, agricultural change, and ethnic assimilation. His exploration of the parish landscape includes a look at the village plan and structures, the prominent church, and farmsteads.

Despite the book's more general title, Peterson concentrates on the domestic architecture of 32 brick farmhouses, about a third of the total number of farm dwellings built in the parish. In three of the book's seven chapters — "Making Bricks and Building Houses," "Distinctive Parish Farmhouses," and "Big, Beautiful Brick Houses: A Local Aesthetic" — he addresses building styles and materials, methods of construction, the influence of pattern books and style guides, and (most significantly, given what he found with exterior house design) the arrangement of interior spaces. These brick farmhouses reflected ways in which ". . . parishioners accommodated their aesthetic preferences and traditional ways of doing things to the necessities and possibilities of the new environment as well as to the influences and models of the dominant Anglo-American culture" (p.33). They thus stand as examples of ethnic values and traditions confronting Americanizing influences.

The first settlers to Meire Grove, brothers Herman and Henry Meyer, came from Holdorf, in the Oldenburg province of Germany — after first spending several years in New Vienna, a German colony in Iowa. They were soon joined by other settlers from Oldenburg, as well as from Westphalia and Bremen. Early wheat farming shifted to dairying after the railroad reached nearby Melrose in 1871, and as the territory filled in by 1880. However, Peterson deals primarily with a second phase of landscape development, which began in the early 1880s with rising incomes and construction of a local brickworks, and ended in 1915, the date of the last brick farmhouse.

Herman and Joseph Imdieke came to Meire Grove around 1870 from Holdorf by way of Cincinnati. With experience working in brick factories in Germany and Cincinnati, they first attempted to make brick in the parish in 1881-82. By 1885, they had perfected local manufacture — just in time for the building of the brick Church of St. John the Baptist. Local, affordable brick made possible a German building aesthetic seen elsewhere in Stearns and neighboring counties. Brick was soon in use for commercial buildings and several dozen farmhouses.

The dwellings, much like the balloon-frame farmhouses, were basic, Anglo-American styles: a "consolidated" type, all of one rectangular or square mass; and "cross-wing" types with some form of building wing. There is nothing visibly "German" about the exteriors, other than the use of brick (and, as Peterson notes and illustrates, brick houses built in that time period were not exclusively German). The house exteriors are less adorned than some "style and show" non-German brick houses that Peterson illustrates and describes, including the St. Patrick's Parish House in nearby Melrose that Meire Grove residents would likely have seen but rejected as a model. These German builders favored what the author describes as "vernacular simplicity."

While outward appearance is standard, the German farm families adapted traditional ethnic floor plans and uses of interior space, and, in some examples, the relationship of the house to other farmstead buildings. The main distinguishing feature of the German-American Catholic farmhouses is that the houses lack halls and formal parlors. Instead, the main entrance is often to an all-purpose kitchen — the central hearth of the house — notable for both its size and its orientation (along with the houses' main porches) toward the farmyard. This interior arrangement was carried through from early log houses to frame houses built before and during the brick construction period. Peterson contrasts these German-American farmhouses with antecedents in Germany and with non-German houses in the Midwest. Few of the American illustrations of contrasting houses are from close-by locations

(one, for example, is in Miami County, Ohio), perhaps because the Meire Grove area was so dominantly German.

Peterson briefly addresses many aspects of community life — village businesses, foodways, and religious festivals, for example — and describes the development and operation of the brickyard in some detail. One wants to learn more about some topics. In the socioeconomic context, why did Meire Grove reject Soo Line Railroad plans to build through the village, and what effect did this decision have? Despite its more diverse German origins, why did the community cultivate the belief of predominantly Oldenburg settlement? What has been the relationship over time between parish identity and religious control exercised from the diocese? And what happened in house construction after 1915 when the brick factory closed? When, if ever, did Meire Grove's German Americans abandon traditional dwelling interiors?

In an informal biography, a son of the brick factory's co-founder, stated: "In retrospect, the demand for bricks was probably never that great. Some of the settlers believed that because they had brick houses in Germany, they needed brick houses and churches here. However, had nobody made bricks in the area, the churches would have bought the brick somewhere else, and the houses built of bricks would have been built of logs" (p.176). The Meire Grove parish is one of several distinctively German-American landscapes in central Minnesota — landscapes marked by brick. *Building Community* is a valuable contribution to our understanding of that region. A question for those of us who study traditional landscapes is "if they had not built with brick, would we have noticed or been interested?" While a more quantitative analysis — one that looked at frame houses as well as brick dwellings and that was more rigorous in its comparisons — would have added to the study, Peterson's well-researched and well-written analysis of community history, house types, building materials, plans, and the use of interior space is convincing nonetheless. ∎

Thomas Harvey
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The Unfinished City: New York and the Metropolitan Idea.
Thomas Bender. New York: The New Press, 2002.

"Most current urban theory is trapped in the past," writes Thomas Bender. Instead, the "current challenge for urbanists is . . . to represent the city in a way that captures its present and possible spatial meaning, social experience, and political obligations." Throughout his long career writing about urban history, Bender, a professor of Humanities at New York University, has attempted to find the deeper complexities of urban history. With his newest book, *The Unfinished City*, he is back at it, through a collection of essays, mostly from the 1990s, rewritten as chapters.

While on one level Bender's book is about New York as an "unfinished city," and while the events he examines are mostly from New York in the 1890s to the 1920s, this is not really a historical tour. Indeed, Bender is concerned with bigger questions about urbanism's relationship to democracy. His expressed task is to "mobilize urban history to confront the present and reinvent a metropolitan public that will sustain a vital culture of creativity and a politics of justice." In this regard, he is looking at New York's history, but he is making an argument about urbanism and democracy globally. The progression of essays in the book, starting with Washington Square and ending with the global city, reflects this underlying concept.

These are a series of enjoyable, well-written essays, full of ideas, historical nuggets, and beliefs that run counter to prevailing conceptions (such as the suggestion that New York's grid plan encourages architectural experimentation). And although the essays range widely across time and place, they echo with certain broader themes.

A first and most beloved theme of the author's is the importance of cities in sustaining and enlarging democracy's politics and culture. For example, Bender looks at how the arguments of early American anti-urbanists extended into a "long-standing American habit." Thus, when cities failed to provide a platform for nineteenth-century reform, early-twentieth-century progressives turned to the federal government. In Bender's view, this was a mistake, for if democracy is to be reinvigorated and improved, that movement must begin with cities.

A second theme concerns how perceptions of the city often become reality. Here Bender is after a linkage between social change and the "architectural expressions of the new

social order." Thus, he traces how horizontal perceptions of the nineteenth-century city, based on a Beaux Arts tradition emphasizing civic and public institutions, were transformed into the vertical city of the twentieth century. He also traces the rise of a new social order in the late nineteenth century (a trend that increased throughout the twentieth) in which residence was separated from work, and so required a transportation system between the two. To Bender, Washington Square was an early example of such a suburban movement, just as the change from red brick to brownstone represented a change in urban perception. In terms of perception becoming reality, Bender also argues that the modernist paintings and photographs of Alfred Steiglitz and Georgia O'Keefe directly influenced New York's 1929–1932 Regional Plan. The view of the city in their art was devoid of the particularities and textures of place and people. And this city of highways and office towers was exactly that Robert Moses subsequently created.

A third theme of Bender's is that urban development and city-making are not the same, but that individual groups, artists, intellectuals, and social reformers influence urban growth and architectural form as much as urban planners and real estate developers. Thus, the making of the modern metropolis was not linear; instead, "diversities, complexities, and alternatives were woven into the modern city." On occasion, Bender uses this theme of urban complexity to attack the New Urbanism. Yet, even though New Urbanism certainly deserves such criticism, I found the random nature of the attacks here to be biased and unfairly judgmental. One wonders if Bender has considered the positive effects of New Urbanism on the older urban environment. For example, there certainly has been a sort of "trickle down" effect, in which New Urbanist arguments for increased public participation in urban design, smaller, more livable structures, and increased urban infill rather than urban renewal have benefited urban democracy.

Which brings us to Bender's fourth theme: that we can use history to create a deeper understanding of the complex reality of the city. Bender argues that "history resists abstraction" — in contrast to urban planning, which is based on geometric or quantitative abstractions. Until we can understand the city as a sum of micro-histories, we will never grasp urbanity's greater complexity. Bender here is approaching what he has described in other work as "synthe-

sis." Historiography, Bender has written, has in recent decades concentrated on valuable studies of those individual cultures and groups that history has ignored in past studies. Now is the time to begin to put the puzzle pieces back together and understand the overarching relationships. Perhaps a similar argument can be made for the more specific field of architectural history.

Bender's final theme, which ties all the other themes together, is that we must find new ways of representing the city and the myriad interdependencies that make it a collectivity. We must *reimagine* urban life to change it. One way to reimagine the city is to move beyond our current preoccupation with the city/suburban dichotomy. In this regard, the present concern of urban studies on individual buildings, on high-profile, idiosyncratic locations such as Potsdamer Platz, or on the center/suburban dichotomy does not enable us to build a more enriched democracy. Bender also argues that our concern for the new overhomogenized, globalized city misses the historical context of previous waves of globalization — for instance, the spread of similar architecture from Western Europe to Eastern Europe and North and South America in the late nineteenth century. However, here Bender underestimates the differences between an exported architectural style and the vast changes being wrought by modern globalization. McDonalds, for example, does not just reproduce a similar architectural entity, but it brings about whole changes in formerly distinct means of food production and diet. Nevertheless, his overall point that we must find a better representation of the globalized city to improve it is overwhelmingly valid.

Using these and other themes, Bender argues for a new, more powerful, metropolitan politics. This would be based on the urban region, yet forged out of the multiple local publics. But to be powerful, to lead the way to enriched democracy, the new metropolitan idea requires an image of itself. It is this image that Bender has begun to develop so admirably, once again using history to push us to improve democracy. ∎

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Ruins and Rivals: The Making of Southwest Archaeology. James Snead. Tucson: University of Arizona Press, 2001. 290 pp., 19 illus.

Casas Grandes and Its Hinterland: Prehistoric Regional Organization in Northwest Mexico. Michael E. Whalen and Paul E. Minnis. Tucson: University of Arizona Press, 2001. 250 pp., 61 illus.

In the nineteenth century the prehistoric remains of the ancient inhabitants of the American Southwest were a mighty lure to avocational antiquarians, museum curators, and relic hunters. The results of their research and expeditions have filled countless glass cases and bound volumes. But little has been written about the men themselves who in the late nineteenth and early twentieth centuries had their imaginations, curiosity, and sometimes greed lit by the artifacts and ruins left behind by Ancestral Puebloans. In *Ruins and Rivals*, anthropologist James Snead tells their stories, and sheds light on how Southwest archaeology is presented to the public today.

Snead weaves his accounts of men like Fredric Ward Putnam, Earl Morris, and A.V. Kidder on a tight, scholarly loom. He places their work in the social context in which it took place, and by so doing makes their actions understandable, providing a fascinating and delightfully readable account of the events, communities and animosities that colored their archaeological endeavors. These were colorful and hardy men (Charles Fletcher Lummis once walked from Ohio to the West Coast as a publicity stunt), each of whom had a distinct vision of the roles that Southwest archaeology should and would play in both cultural scholarship and the popular imagination of the United States. Snead unflinchingly describes the roles that venerable institutions played in ethically precarious actions. The connections between respected museum curators, such as Harvard's Putnam, and the relic hunters who looted Ancestral Puebloan graves for artifacts are clearly drawn and given their due credit as the origins of Southwestern archaeology. It was a world, Snead tells us, in which white men constructed heritage according to their own needs.

Three competing elements provide the framework for Snead's history of the progression of Southwest archaeology. *Patronage*, the circumstances through which early researchers acquired funding, is depicted with a warts-and-all honesty that makes clear that the researcher's motives and the motives of the institutions and private individuals that supported them were not always the same. Snead's second element, *professionalism*, examines the process by which archaeologists in the Southwest claimed their ground, protecting their research priorities in the face of opposition from landowners, relic hunters, and other groups. Third, Snead examines *rationale* as a historical variable, revealing motives that are sometimes surprising. He rightly depicts them with sensitivity to their complexity. For example, those whose belief in the moral value of archaeological investigations pre-

dictably went head-to-head with those whose interest was pecuniary. But conflict was also based on regional alliance, as researchers aligned with small, more local archaeological societies grappled for control of sites with representatives of more established eastern institutions like the American Museum of Natural History in New York.

Ruins and Rivals is a deftly written account, and Snead's storytelling ability makes it an enjoyable read. His anecdotal material is especially vivid and intriguing. A more exhaustive work might have shed more light on the connections between the researchers and their subjects' Native American descendants, but that is not Snead's aim. He has set out to tell the complex story of one brief and crucial period in the history of a science, and he has done it well. For that reason, this book will be of enormous value to anyone interested in the history of science, the performance of Southwestern prehistoric archaeology, or both.

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Contemporary archaeologists have methods and techniques that enable them to gather and analyze data to ends that Kidder and Morris could only dream of. As with most scientific endeavor, each generation builds on the works of its predecessors, with results that sometimes differ widely from previously accepted paradigms. In *Casas Grandes and its Hinterland: Prehistoric Regional Organization in Northwest Mexico*, Michael E. Whalen and Paul E. Minnis take a giant step forward in the understanding of this site and the regional system in which they believe it occupied a primary place. Located near the international border in northwestern Mexico, Casas Grandes has long been a center of controversy. In the 1970s Charles Di Peso put forth a model that located it on the periphery of Mesoamerica. More recently, archaeologist Stephen Lekson has aligned it with the Pueblo culture area, placing it on his "Chaco Meridian." Yet the gap in hard data has made solid conclusions impossible.

With a decade of research and vastly improved techniques (current dendrochronology has allowed the site to be dated to a century and a half later than it was previously believed to have been inhabited), Whalen and Minnis go a long way toward placing better conclusions within reach. Also new to the scholarship surrounding Casas Grandes are the authors' settlement pattern surveys, which allow them to place it in a regional context and assess the extent and nature of its influence and integration in that context. Departing from Di Peso, they contend that Casas Grandes was "a local development, whose elite made use of some Mesoamerican building styles, design motifs, and, perhaps, ritual and ceremonial concepts for their own purposes" (p.187).

Whalen and Minnis provide a detailed and careful review of current archaeological scholarship concerning both Casas Grandes. To their credit, they are realistic about the limitations of their interpretation. Decades of research must follow at this site and in this region before a picture of Casas Grandes can

emerge that is as clear as that of Chaco Canyon or many of the other sites in the southwestern United States. In their final chapter, they place Casas Grandes within the larger region. Their argument for reconsidering old interpretations regarding the social organization and chronology of Casas Grades is compelling, and the model they present is solid.

Whalen and Minnis are careful to give credit to their scientific predecessors — in particular, Di Peso. As a result of Di Peso's and his colleagues' efforts, the authors note, Casas Grandes is now a World Heritage Site. Because of this, and because of the work of scholars like Whalen and Minnis, research at Casas Grandes seems certain to continue. Far from definitive (as the authors repeatedly admit), yet long awaited in the archaeological community of the Southwest, *Casas Grandes and its Hinterland* is a strong step toward understanding the complexities of the world in which Casas Grades was a central settlement. ■

Kathleen Corbett
University of California, Berkeley

Conferences and Events

UPCOMING CONFERENCES AND SYMPOSIA

"Enhancing Urban Quality, The Green Dimension," London/Letchworth: June 1–4, 2003. The IFHP (International Federation for Housing and Planning) Spring Conference marks the centenary of the founding of Letchworth Garden City by IFHP founder Ebenezer Howard. This conference will bring together leading experts and eminent speakers from around the world to discuss the actual state of urban developments in relation to the function of urban green spaces. For more information, contact: IFHP Secretariat, Mrs. Joke Bierhuys, congress@ifhp.org. Tel.: +31-70-3244557. Or contact TCPA: tcpa@tcpa.org.uk. Tel.: +44-20-7930 8903.

"Sustainable Environment: Quality Urban Living," Hong Kong, China: July 3–5, 2003. The third conference of the Center for Housing Innovations will be hosted by the Department of Architecture at the Chinese University of Hong Kong and will feature a variety of presentations from the disciplines of planning, design, construction, materials, management, and information technology. The conference will be held at the Chinese University of Hong Kong. For more information, please consult the conference Web site: http://innovations.arch.cuhk.edu.hk/CHI2003/. Or write to: Conference Secretariat, The Third China Urban Housing Conference, 608, Wong Foo Yuan Building, The Chinese University of Hong Kong, Shatin, NT, Hong Kong. Tel.: +852–2603–7716; Fax: +852–2603–6515; Email: innovations@cuhk.edu.hk.

ISUF International Conference, "The Planned City?" Trani, Italy: July 3–6, 2003. While addressing the full complexity of contemporary urban phenomena, will question a return to unified notions of the city. The conference will be held at the medieval Castello Svevo. For information about the history, constitution, aims and activities of ISUF, consult the conference Web site: http://odin.let.rug.nl/isuf/. For further information, contact Attilio Petruccioli at Petruccioli@yahoo.com.

Joint Meeting of ISAMA (International Society of the Arts, Mathematics, and Architecture) and the 6th Annual Bridges Conference, University of Granada, Granada, Spain: July 23–25, 2003. The conference will be followed by a one-day special tour on July 26 entitled "The Beauty and Mathematics of the Alhambra." For more information, contact: Prof. Javier Barrallo, University of the Basque Country, ETS Arquitectura, Plaza Onati 2, 20018 San Sebastian, Spain. Fax: +34-943-219727; E-mail: mapbacaj@sa.ehu.es.

"Contribution and Confusion: Architecture and the Influence of Other Fields of Inquiry," Helsinki, Finland: July 27–30, 2003. The 2003 ACSA International Conference explores the ways in which investigations in other fields have resolved questions or clarified situations essential to the specific nature of architecture. For more information, refer to the Web site: http://www.acsa-arch.org/. This conference will coordinate with the Ninth Annual Alvar Aalto Symposium, to be held in Jyvaskyla, Finland, August 1–3, 2003. For more information on that event, refer to the Web site: www.alvaraalto.fi/conferences/symposium2003

"Cities & Markets: Shifts in Urban Development," Vienna, Austria: October 5–8, 2003. The 47th IFHP International Federation for Housing and Planning World Congress will discuss the effects of rapid globalization and the influence of liberalization and deregulation on urban governance and management. For more information, contact: IFHP Congress, Department 43, Wassenaarseweg, 2596 CG The Hague, The Netherlands. Tel.: +31-70-328-1504; Fax: +31-70-328-2085; Web: www.ifhp.org; E-mail: congress@IFHP.org

"The Future of Historic Farm Buildings in a Changing Society," Amersfoot, Netherlands: October 21–25, 2003. The ICOMOS-CIAV conference focuses on the conservation and revitalization of vernacular architecture. For more information, contact: ICOMOS-CIAV Conference 2003, c/o Stichting 2003 Jaar van de Boerderij, Herengracht 474, 1017 CA Amsterdam, The Netherlands. Tel.: +31-20-420-92-67; Fax: +31-20-472-08-15; Email: 2003@erfgoedhuis.nl

Hawaii International Conference on Arts and Humanities, Honolulu, Hawaii: January 8–11, 2004. Call for papers/abstracts/submissions by August 18, 2003. The conference will provide many opportunities for academicians and professionals from arts and humanities and related fields to interact with members inside and outside their particular disciplines. For more information, see www.hichumanities.org/cfp_artshumanities.htm. Hawaii International Conference on Arts and Humanities, P.O. Box 75036, Honolulu, HI, 96836. Tel.: (808) 949-1456; Fax: (808) 947-2420; Email: humanities@hichumanities.org.

RECENT CONFERENCES AND SEMINARS

"Local Sites of Global Practice: Modernism in the Middle East," New Haven, CT: April 4–5, 2003. The focus of the symposium at Yale University was the impact of modernism in the Middle East, where rapid modernization has met with deep traditions. It explored the challenges facing architects who work in the region today within the context of nationalism, regionalism, and the current debate of globalization. For more information, contact jennifer.castellon@yale.edu. Or write to Jennifer Castellon, Yale University, School of Architecture, 180 York St., New Haven, CT. Tel.: 201-432-2889.

"New Global History and the City," St. Petersburg, Russia: January 9–12, 2003. The conference was organized by the European University, St. Petersburg and the Kennan Institute of the Woodrow Wilson Center. It focused on global histories and the relations of space and place to the concepts of modernity and tradition. Conference proceedings and papers may be accessed at http://www.eu.spb.ru/newglobalhistory/en/links.html.

COMPETITIONS AND GRANTS

Architectural Competition: Malama Learning Center Competition. Registration and submission deadline: July 1, 2003. This is an open, one-stage, international competition to design a unique structure that advances conservation and celebrates the natural and cultural heritage of Hawai`i via the performing and visual arts. The jury will consist of notable architects such as Billie Tsien, Patricia Patkau, Robert Mangurian, Stephen Meder, and W.H. Raymond Yeh. For more information, or to register, visit the Web site: http://www.malamalearningcenter.org. Tel.: 808-621-2008; Fax: 808-621-2110; Email: info@malamalearningcenter.org.

Arnold W. Brunner Grant, New York Foundation for Architecture. Registration and submission deadline: November 3, 2003. The grant is applicable for advanced study in any area of architectural investigation which will effectively contribute to the knowledge, teaching or practice of the art and science of architecture. The proposed investigation must result in a final written work, design project, research paper or other form of presentation. The total grant amount is US$15,000. For more information, contact: Arnold W. Brunner Grant, AIA New York Chapter, 200 Lexington Avenue, Suite 600, New York, New York 10016.

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Please divide the main body of the paper with a single progression of subheadings. There need be no more than four or five of these, but they should describe the paper's main sections and reinforce the reader's sense of progress through the text.
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Do not use any numbering system in subheadings. Use secondary subheadings only when absolutely essential for format or clarity.

6. REFERENCES
Do not use a general bibliography format. Use a system of numbered reference notes as indicated below.

A condensed section of text might read as follows:
>   In his study of vernacular dwellings in Egypt, Edgar Regis asserted that climate was a major factor in the shaping of roof forms. Henri Lacompte, on the other hand, has argued that in the case of Upper Egypt this deterministic view is irrelevant.[1]
>   An eminent architectural historian once wrote, "The roof form in general is the most indicative feature of the housing styles of North Africa."[2] Clearly, however, the matter of how these forms have evolved is a complex subject. A thorough analysis is beyond the scope of this paper.[3]
>   In my research I discovered that local people have differing notions about the origins of the roof forms on the dwellings they inhabit.[4]

The reference notes, collected at the end of the text (not at the bottom of each page), would read as follows:
>   1. E. Regis, *Egyptian Dwellings* (Cairo: University Press, 1979), p.179; and H. Lacompte, "New Study Stirs Old Debate," *Smithsonian* 11 (December 1983), pp.24–34.
>   2. B. Smithson, "Characteristic Roof Forms," in H. Jones, ed., *Architecture of North Africa* (New York: Harper and Row, 1980), p.123.
>   3. For a detailed discussion of this issue, see J. Idris, *Roofs and Man* (Cambridge, MA: MIT Press, 1984).
>   4. In my interviews I found that the local people understood the full meaning of my question only when I used a more formal Egyptian word for "roof" than that in common usage.

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