

Gourna: The Dream Continued

Hassan Fathy of Egypt, the champion of indigenous architecture, has inspired many young architects of today through his writings — his classic Architecture for the Poor — lectures and teaching. MIMAR is proud to have just published the first complete book on his architecture entitled: Hassan Fathy by J M Richards, Ismail Serageldin and Darl Rastorfer.

This article by Ali Moustaafer, a young Moroccan architect who studied and worked

Architect and Philosopher

For nearly half a century, Hassan Fathy has persevered relentlessly to defend his ideas, propagate them and present solutions to the housing problem in the world. As the forerunner of a new conception in architecture, he has achieved international fame.

His life is one continuous struggle. Born in 1900, he studied architecture in Cairo. After having extensively travelled through every corner of Egypt as an architect, he was the first to draw attention to the wealth of indigenous Islamic architecture. Initially as professor of urban studies at the School of Fine Arts, he worked towards the revival of Islamic architecture, and then as field-worker, he dedicated a part of his life to the creation of the village of New Gourna in Luxor. The creation of this village made him the architectural sage of the poor, since by making the villagers his own collaborators he ensured the success of the project. The Gourna project attracted the attention and the interest of renowned institutions: the Athens Institute of Technology, the Royal Institute of British Architects, the Architectural Association in London and the University of Arizona in the United States incorporated and accepted the project as an example of what rural housing could possibly evolve into.

Meeting this man was a dream for us young students and architects since Hassan Fathy, or Hassan Bey, is a school unto himself. We organised a long trip in order to see and communicate with this sage. In fact, given all the importance and the respect we hold for him, from the first days and the first tests he did on building technology, he did not hesitate to send us, as part of his team, on an assignment that was particularly significant: the restoration of the Gourna Theatre.

Our team consisted of young, enthusiastic and congenial architects from Egypt, Lebanon and Morocco, with

recently with Fathy, tells the tale of Fathy's return to New Gourna some thirty-five years after its building. It is a very personal account of an encounter with the master, participation in an international team to restore a Fathy-designed building, and his involvement in teaching young Egyptian apprentices to carry on the age-old techniques of mud-brick construction.

— Editors



Visit by Hassan Fathy and Ibrahim Jaafar to New Gourna Theatre to determine the necessary repairs.

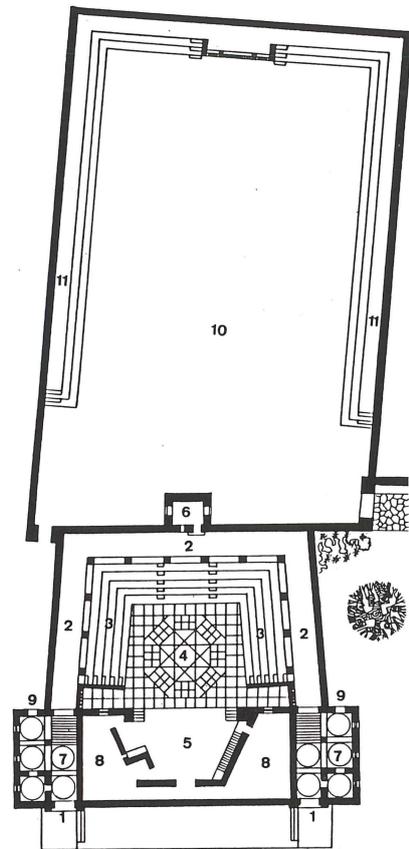
whom we gained a better understanding of Pharaonic, Coptic and Islamic Egypt as well as all of Hassan Fathy's projects in Cairo, Luxor, Alexandria, Fayoum, etc.

We conducted research at the Institute of Appropriate Technology (IAT)¹, which Hassan Fathy had dreamt of creating for years, and which had only been realised in 1977. Prince Sheik Sadra Edin Assabah, the vice president, is the main financier of this Institute. The Institute is set up to find solutions for the complex problems of housing for the poor. This is done by supplying those who are unable to obtain lodging under the current prevailing conditions with our scientific knowledge. To solve this problem, the Institute launched a new methodology: with the help of science and the poor themselves (the "economically untouchables") to once again become capable of producing their own homes — that is once they have been retrained in their ancient methods. (The Industrial Revolution has brought about a rupture in the transmission of traditional methods and know-how and some countries have gone as far as preventing such methods of construction.)

The IAT would offer training to architects, engineers, sociologists, environmentalists and administrators as

¹ Institute of Appropriate Technology 4, darb Labana, Cairo.

*Text and photographs by
Ali Moustaafer.*



well as to masons and artisans, who would work together on existing projects, applying effective and vigorous methods rooted in their tradition and making use of the abundant labour available in the localities and spending a minimum amount of capital.

The Restoration of the Gourna Theatre

The Gourna Theatre is a unique building in Egypt conceived by Hassan Fathy for the use of the villagers. While constructing the village, Hassan Bey had foreseen the need for a theatre to be used for festivities and plays — events which to that day were only able to take place at weddings. This theatre owes nothing to the Pharaonic civilizations nor to the Islamic one. It is a cross between the Ancient Greek and the Elizabethan theatre. Hassan Bey derived the open-air stepped-row of seats from Antiquity, whereas the stage and its permanent decor is an Elizabethan characteristic. No modifications were needed to be made to the theatre in order to convert it into a cinema; it was fully equipped and there was also a projector room. However the poor quality of the maintenance — or rather the total lack of maintenance — since 1948 made

the building look old especially the stage (*skēnē*), the halls and the surrounding south-west and north-east walls. The cupola shaped roof had become structurally dangerous.

It was therefore decided to concentrate on these parts of the building, restore them and at the same time consolidate them. This was one of the works carried out on the training session that lasted five months, the other being the vocational education which took place in the training centre set up for the rebuilding of this project.

It is difficult to separate the building-site from the training centre, because both activities happened at the same time, on the same spot and the apprentice masons participated in some of the works on the site of the theatre.

The making of the bricks out of mud, dried out in the sun, is special and it's with the help of the children at the training centre that we carried out our research. This allowed us to watch closely the way in which the material was put to use in construction.

The Training Centre

Hassan Fathy had created many training centres alongside his building sites for

Left, top: Theatre, New Gourna, Egypt. The scene: state of deterioration in 1982 before restoration work began.

Left, above: Theatre, main facade in 1982, before restoration.

Above: Plan of New Gourna theatre and gymnasium.

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| 1. entry | 6. projection booth |
| 2. pergola | 7. vestibule |
| 3. seating | 8. backstage |
| 4. orchestra | 9. secondary entry |
| 5. stage | 10. playing field |
| | 11. seating |

artisans, masons, carpenters, glaziers etc. There had been a training centre at Gourna in 1948. One of the apprentices, now turned mason, who has worked under Hassan Bey called Hajaj was the trainer for the 1982-83 training session. It was his job to lead, explain and with our assistance keep an eye on 28 apprentices — children of an average age of 14, who nevertheless considered themselves grown up. They received a token salary while they were learning at the centre and a full salary — one equal to the adults — once they worked on the theatre site. The apprentices came from the village of Gourna El Gedida (or New Gourna). Some came from the old village situated a little higher in the region of the Pharaonic

tombs; the other children came from neighbouring villages and one came from Luxor on the other side of the Nile.

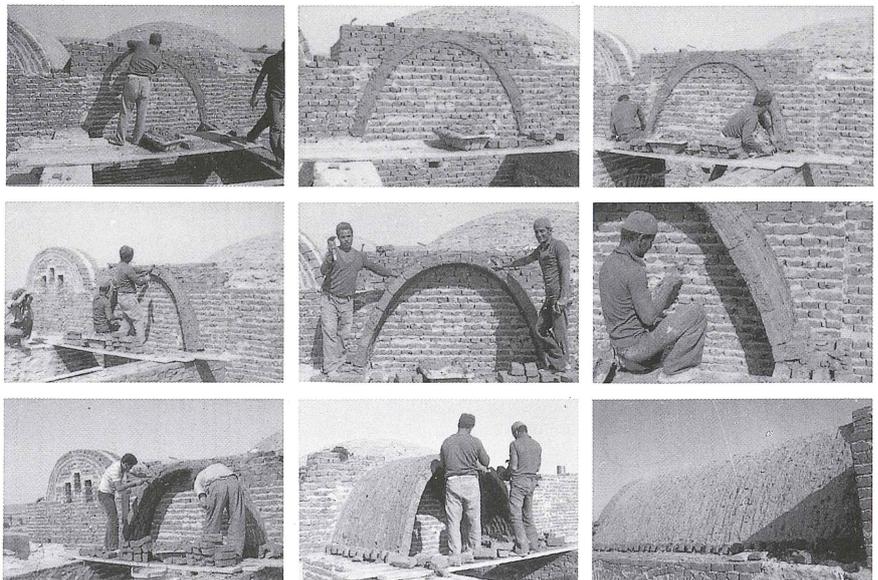
The training centre started in November 1982. Hassan Fathy, who had arrived two days earlier, gathered up the children and told them about the things they were going to learn and the possibilities open to them to become good masons later on. It was on the following day that the training started.

Behind the mosque, on a large esplanade running along the edge of the village, the children came into contact with the mud bricks. These were stored in a disused school. Their first introduction to masonry was to build a wall. This needs no foundation or mortar. What is essential in order to prevent 'sabre cuts' (clefts) and the collapse of the wall is the correct positioning of the bricks.

As with ordinary burnt clay bricks, there are also many possible ways of building a wall using mud bricks. After working on the walls, which they built over and over again until they reached perfection, the children then took an examination, that was marked by two architects belonging to Hassan Fathy's team. The ones with good results were sent to the theatre to help and to watch the masons at work.

Following the work on walls, the children learned to build arches. The exercise is different from that of erecting walls because it is closer to reality; they used both bricks and mortar. It is against the back wall of the mosque that the apprentices set up an arch. To do this they used a wooden template shaped in the form of a parabola. They placed the parabola on the wall, then picked up some mortar in their hands, which they spread on the wall following through the shape of the parabola. Once the laying of the mortar was finished they removed the template and placed the first brick at an angle, which was kept in position by a rock. They then added more mortar, whereupon lay the second row of two bricks, still placed at an angle. For an arch measuring three metres wide, it is on the sixth row that the circle is completed.

The mortar had been prepared by the



Right, top: Youngsters learning how to build mud-brick arches under supervision.

Right, centre: Young apprentices learning the technique for constructing mud-brick vaults.

Right: Pictorial description to the various stages in constructing a mud-brick vault utilised by Hassan Fathy at New Gourma.



Above: Apprenticeship school area for teaching building techniques.

Left: A group of young Egyptian apprentices having participated in the project.



where they were stacked in batches of 1000.

The Works Site at the Theatre

On November 4th, 1982, Hassan Fathy arrived at Gourná, accompanied by Ibrahim Jaafar, engineer of the TP structure, who had come to survey the state of the theatre. According to him, there was no need to be alarmed at the clefts and the walls. He considered the job easy; all that needed to be done was to fill in the clefts and leave the walls as they stood. The visit was extended to the old boys' school and some dilapidated houses in New Gourná. Once the engineer had left, there were meetings where we decided with Hassan Fathy to demolish the north-east walls and the four cupolas in the east entrance and to clear up the south-west sections that were practically demolished.

On November 9th, the demolition works started. These were carried out by the local villagers. The operation cost 350 Egyptians Pounds (approximately US\$300). It was finished on November 20th.

On November 22nd, with the help of four labourers, we dug the foundations for the buttresses of the east walls. There were four buttresses, each estimated to have a 2 metre \times 1 metre base. The foundations were 0.80 metres deep. On November 25th, the foundations were completed.

In the meantime, the western sections were starting to be demolished and

cleared away. On November 29th, after the arrival of the four Nubian masons, we are able to start building the buttresses. The buttresses rise up to 1.50 metres and are made of burnt-clay bricks. Out of the four buttresses, the two middle ones continue to be built with mud bricks, whereas the two exterior ones are completely made up of burnt-clay bricks. After the first 1.50 metres the mortar used for the four buttresses is a mortar made up of mud. These buttresses were built at the same time as the walls, to which they were to provide support. The operation of the western side was identical and took up another week. Then around the middle of December we completed the reconstruction of the interior walls, the arches that lead onto the stage, as well as the permanent decor that Hassan Fathy had in mind ever since the conception of the theatre. Then came the cupolas — nine in number — raised on a squinch. These works and the two interior buttresses took us up to the end of January, 1983.

Hassan Fathy called us up to Cairo. By this time the Nubian workers had returned to their homes and labourers waited our return to finish the works. (In Cairo we worked at Hassan Fathy's studio until February 17th on a project on Minya (a town 120 kilometres south of Cairo). The project was to build 10 houses, using ashlar, for UN experts. These houses were to be used for a fixed period of time and once the experts' assignments were over, they would leave the houses for the peasants in the region.)

On our return to Gourná we found the finishing works under way. These were being supervised by the master mason, Mustafa Aladin, a long-time companion of Hassan Fathy's, who had accompanied him on his journey to the USA, and also to many other countries.

The finishing touches took another month — these were the pebble-dash, the electric wiring, the joinery and the clearing up. And on March 16th, a reception was held at the Theatre given by the officials of Luxor, to mark the completion of the work.

The Learning Continues

While we were waiting for the works to start, we had made good use of our free time and carried out an in depth study — from door to door — of the village, through surveys, photographs, sketches and by speaking to the villagers themselves. This proved to be very effective in

children the day before. It consisted of earth, water, straw and sand. Before learning to build a cupola, the children each took turns in the theatre at working with one of the masons.

Having watched the masons build the cupolas of the theatre, the children set about building their own cupolas at the training centre under the supervision of the trainers and ourselves.

To do this, they started by building walls without foundation but using mortar in order to obtain the necessary firmness needed to support a cupola. The walls measured 0.80 metres high (approximately 1 foot). The children set the span there and learned to build an arch. The cupolas start from a square base and are built on a squinch with the help of a compass.

With the construction of these cupolas, the training school came to an end. Will these children become masons later on, or will they follow their parents' steps and end up as peasants or watchmen of the tombs? The future holds the answer.

From the day we arrived at Gourná, we joined and supervised the work of transferring the bricks from the old boys' school to the area behind the mosque,



Above: Main stage of Theatre after restoration.
 Right: Main facade of New Gourma Theatre receiving new coating of mud plaster.

the long run, because we had gained the people's confidence. After finishing our work on the building site, we spent a long time completing this study. The outcome of this research materialised in the form of a doctoral thesis for the School of Architecture at Clermont-Ferrand entitled: "Hassan Fathy: the sage of Arab architecture"².

Indeed he is a sage to all 'poor' and non-industrialised countries. But unfortunately Hassan Bey remains practically unknown in these countries, while he is more highly esteemed abroad in the West, where he has even established a school of thought. His disciples have difficulties in spreading and propagating his views. They are not numerous and even fewer are those who venture on the pilgrimage to 4, darb Labbana, his home in the citadel of Cairo.

Fathy is also the sage of Arab/Islamic architecture. In our search for identity,



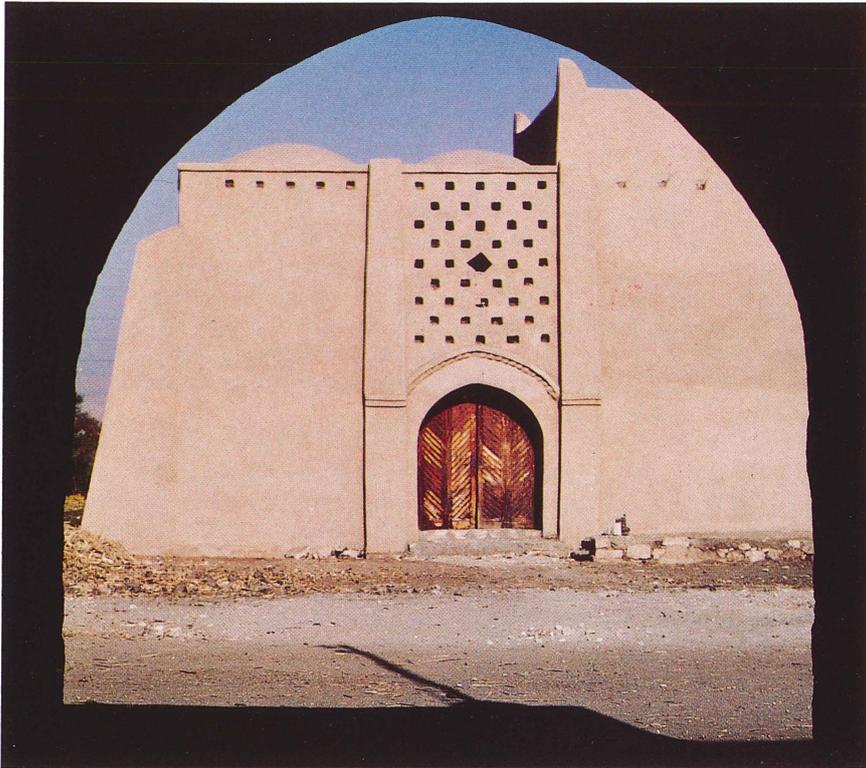
'modern' towns have had little to offer us. This makes us reconsider the role of the architect in our civilisation. If in the past architecture had been a means of expressing cultural identity, one notices that nowadays, it had partly lost this function. Indeed the same forms and the same system of architecture are taught in American, African and Asian schools and universities as in Europe. That architecture reflects different civilizations and that its wealth lies in this diversity has been forgotten.

"It is our culture that makes us into

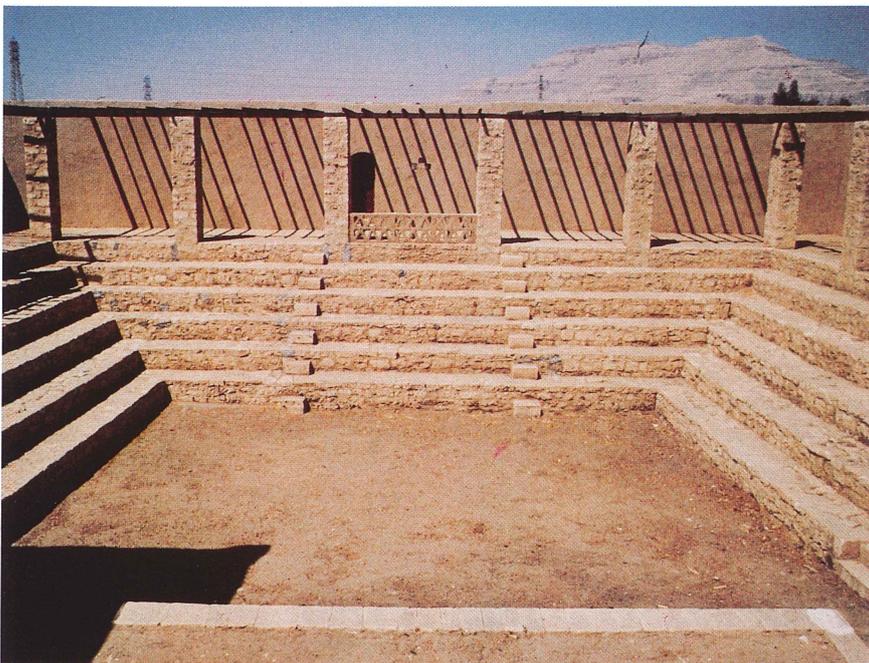
specifically human, rational, critical and ethically engaged beings. Through it, we make valued judgments and choices. Through it, man expresses himself and becomes conscious of himself as an unfinished being; questions his own creations, searches unceasingly for new meanings and creates works that transcend himself."³

³ UNESCO declaration in Mexico: "Politics of Culture: from theory to practice". UNESCO no 33.1983.

² Moustaafer A and A Berzem, "Hassan Fathy: the sage of Arab architecture". Volume 1: *The thoughts of Hassan Fathy by A Moustaafer*. Volume 2: *Gourma The unfinished dream by A Berzem*. Clermont-Ferrand Doctoral thesis.



*Left: Detail of main entrance to Theatre after restoration.
Left, below: Pergola and seating area of the Theatre.*



It is through culture that man can manifest his presence in the most accomplished way in the world. No doubt contacts with other cultures and other civilizations are enriching, but not to the point of domination, as this denies and compromises the identity of the other.

Thus the role of the architect is all the more important. He has to take into consideration the beneficiary of his work, the social power that he wields and the tradi-

tions that have formed him. He has to be aware of: the composition of the society, the way people live at home, their wishes and their needs.

There are many questions that need to be posed before starting on a project in order to finally find the means to blend architecture with society. In this, Fathy has been a master and a great humanist and thus able to create the natural environment — the human environment.

Author with Hassan Fathy.



Ali Moustaader, born in 1954, in Morocco, received his architectural diploma at the Faculty of Clermont-Ferrand in France in 1984. He worked in Egypt with Hassan Fathy in 1982 and 1983. He currently practices in France.

