

Oraby) to lunch in Cairo and, wanting to find a place where they could feel at ease, I took them to a restaurant called Hati, which is rather gaudily decorated with gilt mirrors, chandeliers, and so on. At first they were terrified of the vulgar place, and tried to run away, but I hauled them back and told them not to be children, and that they were as good as anyone else there. They said it was much too grand for them; so I exploded at them: "Grand! You dare to call this cheap imitation grand, you who can build better than this with your eyes shut!" And, taking courage, they came in and started to discuss the place, making such sound and telling criticisms as even many architects might not.

The Use of Mud Brick an Economic Necessity

We are fortunate in being compelled to use mud brick for large-scale rural housing; poverty forces us to use mud brick and to adopt the vault and dome for roofing, while the natural weakness of mud limits the size of vault and dome. All our buildings must consist of the same elements, slightly varied in shape and size, arranged in different combinations, but all to the human scale, all recognizably of a kind and making a harmony with one another. The situation imposes its own solution, which is—perhaps fortunately, perhaps inevitably—a beautiful one.

Whatever the peasant may want to do, whatever rich men's villas he may wish to copy, he won't be able to escape the severe restraint imposed upon him by his material. Whether, when he has lived in a truly beautiful and dignified village, he will still hanker after imported modernity, we shall have to wait and see. Perhaps, when he has no reason to envy the rich man anything at all—his wealth, his culture, and his consequence—then too he will cease to envy him his house.

Normally, a peasant has only one big chance in the whole of his life to choose for himself what sort of house and furniture he wants. Only when he marries can he make any major change in his surroundings, for it is only for this occasion that he brings together enough money to make such a major decision. The custom is for the bridegroom to give the bride a sum of money, the *mahr*, which is a kind of dowry, while she is expected to provide furniture, kitchen utensils, and linen. All these goods are collected in the house of the bride's parents and then carried in procession with great ceremony to the couple's new home. The procession goes all round the village, displaying the goods, so as to show everyone that the new couple are well provided and able to take their place as an independent family among their neighbors. These household goods will have to last them

for the whole of their life, and their purchase decides the beauty or ugliness that will surround the couple and their children for years ahead.

Another critical step is taken when a family builds a house for itself. This, indeed, may determine the surroundings not only for one lifetime but for generations to come.

If it is only once in a lifetime or once in several generations that the individual has a chance to make any big change in his environment, how often does it happen that a whole village is presented with such an opportunity? Here, on an enormous scale, was exactly the same chance, exactly the same freedom to choose between beauty and ugliness, and the decision, once made, would determine the visual environment of thousands of people for a century or more to come. The importance of the decisions taken at this time is perfectly obvious. No care, no skill, no exercise of sensibility can be superfluous at this moment.

In Gourni a thousand families were going to take this step of getting a new house. Each family deserved the chance to make its house as efficient and beautiful as possible, and each family deserved to have a say in the design of the house. Because each family differs from all others, it would be necessary to design each house individually.

If each family were to have its individual house carefully adapted to its needs and the way of village life, then it would take a long time to design them all. This, I thought, was perfectly satisfactory. I did not at all care for the method of designing the village arbitrarily and as a whole at the very beginning of the project, and then, in the three years given for its completion, simply supervising the construction. Besides being too rigid and inhuman a method, it would be very boring.

Gourni was to house nine hundred families, which implied building at the rate of thirty houses a month. Thirty houses would be, at the most, three family neighborhoods, and certainly the design of three such blocks could easily be completed in one month. However, when we came to the actual building, I found that even the working drawings lost much of the importance they usually have. The masons were master craftsmen to whom every detail of the work had become familiar over many years, for it was their own technique. They knew by heart the proportions of the various rooms and, given the height of a dome or vault, could tell immediately where to begin the springing. In fact, they would even watch me while I was drawing, and tell me not to bother with these dimensions. Between us, the masons and I had restored the creative relationship between designer and craftsman and brought together two members of the dispersed trinity;

that the third member, the client, did not play a full part in Gourná was not our fault, and I am sure that in any future project the three members will cooperate harmoniously and fruitfully as once they used to.

Reestablishment of the "Trinity": Owner, Architect, and Craftsman

In official building projects, the design department prepares all the shop drawings and hands them over to a contractor, who has to follow them to the letter, under the supervision of architects in the field. At Gourná, however, we were our own designers, supervisors, and contractors, while the masons were as conversant with all the processes of construction as the architect himself. Thus all I had to draw were the ground plans of the individual houses and, to give them the heights, silhouettes of the family neighborhood blocks.

One of the great advantages of using traditional building methods and bringing the craftsman back into the team is that by so doing the architect is relieved of the work that he had unnecessarily taken over from the craftsman. In this method of construction the unit of design is the room; the masons can be trusted to supply it in standard quality and all sizes almost as if it came prefabricated from a factory. Such economy could never be obtained with concrete or other alien materials and techniques.

Ideally, if the village were to take three years to build, the designing should go on for two years and eleven months; right up to the last moment I should be learning, modifying, and improving my designs and making them fit more perfectly the families that would live in them. In spite of these good intentions, however, I found at Gourná that it was very difficult to interest the peasants in their new houses. This indifference was, indeed, largely due to their reluctance to do anything which might later be construed as an acceptance of the plan for removing them, but it also sprang from their inability to put into words their needs and fancies. One sheikh told me that so long as his cattle were properly accommodated he didn't want anything else, and this was a pretty general sentiment. I changed their minds only by showing them that, if they devoted their attention only to cattle and regarded their houses as a kind of annex to the stable, their city-educated sons would be too ashamed to visit them. They agreed that it was worth while bestowing some attention on the house, but they said that they would leave it to me to design whatever I liked. This *carte blanche* made the problem even more perplexing. How could I possibly learn all the details of the domestic life of a Gourná peasant and understand what he wanted in a house?

Possibly this indifference of the men toward their houses arose

from the fact that the house is the province of the woman, not the man. It would have been a great help if I could have consulted the women, but it was unfortunately impossible because they were kept jealously out of the way. Later, when certain ladies of my acquaintance came to Gournia, we did manage to take the ideas of some of the village women.

Anticipating this difficulty of getting the Gournis to take a constructive part in the planning of their houses, very early on I built some twenty houses to show them the kind of architecture we were proposing, as they couldn't understand plans. I hoped, too, to observe the families actually living in them, and thus, as it were, "consult" them by seeing their needs in practice.

This may seem a lot of trouble to take, and the reader may wonder whether the Gournis ever did make any contribution in their role as clients. I believe, though, that the contribution the client makes to a design, however ignorant or even suspicious he may be, is something we cannot do without. Not only did we have a duty to these poor peasants to restore to them their position as patrons of a craft—whether or not they themselves had surrendered such right, and whether or not they resented the idea of the project—but we owed it to ourselves as architects not to try to design without the indispensable help of the client. Certainly the Gournis' somewhat unrewarding attitude to us arose only because they saw us as agents of the government which was intruding all unasked into their lives. A Gourni having a house built for himself with his own money would have quite a different attitude, and would play a far more positive part in the building than he wanted to with us. It was an attitude of busy interfering concern in every stage of the building that I wanted to encourage in our clients the Gournis.

The intelligent participation of the client is absolutely essential to the harmonious working-out of the building process. Client, architect; and craftsman, each in his province, must make decisions, and if any one of them abdicates his responsibility, the design will suffer and the role of architecture in the cultural growth and development of the whole people will be diminished.

The Gournis could scarcely discuss the buildings with us. They were not able to put into words even their material requirements in housing; so they were quite incapable of talking about the style or beauty of a house. A peasant never talks about art, he makes it.

The peasant art of Gournia is not particularly striking. It occupies the place one might expect on the scale between the high style of Nubian peasant building and the complete degeneration of the Delta. If you travel by train from Aswan to the sea you will observe that the level of folk art steadily declines; plotted on a graph, it would

produce a curve roughly following the profile of the river. Gourná is situated about halfway along the river between Nubia and Lower Egypt.

Vernacular Architecture of Old Gourná

Thus, although Gourná has nothing of the colorful and imposing architecture of Nubia to show, nor perhaps the same pride in really beautiful craftsmanship, yet there are occasional buildings that show a certain purity of form, that are at least free from the artistic corruption that thickens about all village life as one proceeds northward.

No people anywhere is entirely devoid of artistic creativeness. However repressed by circumstances, this creativeness will always show through somewhere. In Gourná it is not so much in their houses, where they are open to bad influences, but in their various little domestic constructions that the villagers allow themselves to mold the most individual and beautiful plastic forms. In the old village there are beds like large mushrooms where the children can
 38 sleep safe from scorpions (from which they derive their name *beit el agrab*); there are imposing, monumental pigeon towers with a very particular dignity of their own; there is a simple, grand, and beautiful bed raised by a peasant in his house, as central and important as the
 39 bed of Odysseus; there are even one or two whole houses showing the same flow and plasticity of line that the *beit el agrab* has. These houses, as it happens, are among the very poorest in the village. Their owners were forced by their poverty into genuine design. Because they could afford in their houses neither the rather tasteless elaborations that their richer neighbors affected, nor the help of a paid builder, they had to contrive every part of their dwelling themselves. Thus the plan of a room or the line of a wall would not be a dull, square, measured thing but a sensitively molded shape, like a pot. In many of these very poor houses, if one can see past the incidental mess and dirt, the lines of the building present an instructive
 40 lesson in architecture. Look at the photograph of the little house in Gornet Morai; here there is no taint of architectural snobbery, no straining to climb into a "higher" social station, but a straightforward adaptation of the materials to the purposes of the peasant's life; each detail was built because he wanted it and where he wanted it, in the most convenient shape and size, without any thought of impressing other people. The result is in fact quite impressive. The house has the quiet self-sufficiency of any artifact produced by a competent professional.

This particular kind of plasticity and informality cannot be reproduced from a drawing board. It is conceived as it is built, like a piece

of modeling in clay, and flat drawing has no part in the process. Such a house must be built by the owner, for every irregularity and curve is a reflection of his personality. But just because of this personal stamp that the house carries, it can exist only in a village where building is a leisurely and unsophisticated process. As soon as a project such as ours is launched, the building process jumps to a quite different level, becomes organized, time-conscious, and generally more “professional.” Such a jump from the “modeled” house to the “engineered” one is a natural stage in the evolution of building, following an increase in the villagers’ wealth. If the change takes place naturally, the new architecture will grow into a tradition. It was not, indeed, my task in Gourni to create the tradition that the Gournis ought to have had, for even if it were possible to do for a man what he must do for himself, to get inside his skin, to be his artistic conscience for him, such presumption would destroy his artistic initiative and integrity and defeat its own end.

Yet I could not flatly ignore all that the Gournis had done, erase every vestige of their own creativeness, and plump down my own designs on the site thus cleared of embarrassments. Such of the traditional construction as could be incorporated I had to use, and as much as possible of the spirit of the Gournis I had to bring out in the new designs.

Certain constructions were easily incorporated, and they helped us greatly from the beginning by providing a keynote in the design. The pigeon towers of the old village, for example, were entirely original and spontaneous peasant forms, not suggested from elsewhere but dictated wholly by the villagers’ taste, their own inventive answer to the problem of keeping pigeons. Such a structure went with no sense of strain into the setting of the new village. The same hands made it, the peasant mason built the old pigeon tower for the new village, and it is just as right today as it was yesterday.

Then again, we found a very interesting *maziara* in the old village.

A *maziara* is the place that holds the water jar called *zeer*, and in this case it took the form of a vault that shaded the water jar from the sun, a somewhat crude arrangement, but quite pretty. In the new village the vault supporting the staircase offered a suitable situation and really deep shade, while we were able to complete the arrangement by adding a *claustra*—a kind of mud brick *mushrabiya*—to act as a natural air filter.

In the mosque too, we were able to preserve an important part of the Gourni tradition. One of the old mosques of Gourni made use of a straight external staircase slanting up to the minaret, a form which dates from the earliest years of Islam and is still found in Nubia and Upper Egypt. Although the mosque in the new village had to be far

41-42

43-44

45

46

larger, since it would serve the entire population, now concentrated into one village, yet it was well worth while making the effort to adapt the old design, including the external staircase, to the new scale.

It is important to understand that this search for local forms and their incorporation in the new village was not prompted by a sentimental desire to keep some souvenir of the old village. My purpose was always to restore to the Gournis their heritage of vigorous locally-inspired building tradition, involving the active cooperation of informed clients and skilled craftsmen.

Change with Constancy

At all costs I wanted to avoid the attitude too often adopted by professional architects and planners when confronted with a peasant community, the attitude that the peasant community has nothing worth the professionals' consideration, that all its problems can be solved by the importation of the sophisticated urban approach to building. If possible I wanted to bridge the gulf that separates folk architecture from architect's architecture. I wanted to provide some solid and visible link between these two architectures in the shape of features, common to both, in which the villagers could find a familiar point of reference from which to enlarge their understanding of the new, and which the architect could use to test his own work's truth to the people and the place.

An architect is in a unique position to revive the peasant's faith in his own culture. If, as an authoritative critic, he shows what is admirable in local forms, and even goes so far as to use them himself, then the peasants at once begin to look on their own products with pride. What was formerly ignored or even despised becomes suddenly something to boast about, and moreover, something that the villager can boast about knowingly. Thus the village craftsman is stimulated to use and develop the traditional local forms, simply because he sees them respected by a real architect, while the ordinary villager, the client, is once more in a position to understand and appreciate the craftsman's work.

Yet, to arrive at a positive decision on the kind of architecture for the new village, further investigation was necessary.

Besides the man-made environment of Gourni, with which the new village would have to harmonize, there is the natural environment of landscape, flora, and fauna. A traditional architecture would have accommodated itself to this natural environment, both visually and practically, over many centuries. The new village would have to tone with this environment from the very beginning, and its build-

ings must look as if they were the product of centuries of tradition. I had to try to give my new designs that appearance of having grown out of the landscape that the trees of the district have. They should look as much at home in the fields as the date-palm and the dom-palm. Their inhabitants should live in them as naturally as they wore their clothes. But it was a very heavy task for one man; could I think myself into the experience of generations of village masons, or conceive in my mind all the slow modifications caused by climate and environment?

Yet we can seek the help of our elders to obtain such knowledge. The Ancient Egyptians had penetrated the soul of this land and had represented its character with an honesty that carries across to us over the intervening millennia. In their drawings—simple lines painted on the walls of the tombs—they convey more of the essential character of nature than do the most elaborate confections of color and light and shade by the most celebrated exponents of modern European-style painting.

As an architect's plans are all line drawings, I thought that I could place against my designs drawings of the flora and fauna of the district, done simply, like Ancient Egyptian drawings, and I was certain that these pictures of palm tree or cow as seen in the Tombs of the Nobles would set off the honesty or show up the falsity of the buildings. I did all my renderings of the test designs like this; carefully avoiding the professional slickness of many architects' plans, which often distort natural forms in order to make the setting match the buildings, I did not try to produce effects of depth, nor bring in convenient oak trees to balance a massing, but executed my drawings in plain lines and set about them sketches of the animals and trees and natural features of Gournā. These were: the hill above Gournā, which, with its natural pyramid on top, has always been a sacred rock; the cow, for the cow-goddess Hathor was the protectress of the cemetery of Gournā, and Gournā was in a district where there were many cows and where the ubiquitous buffalo of Egypt was not seen; the two trees, the date-palm and the dom-palm, for these are the trees of Upper Egypt; a certain character shown in the massing of some of the houses in old Gournā, with their loggias on top.

All these shapes I put against my first tentative, exploratory rendering, to act as a standard of comparison. I felt that in Gournā it was our duty to build a village that should not be false to Egypt. The people's style had to be rediscovered; or, rather, refelt from the sparse evidence of local crafts and local temperament. We had a technique from Nubia; we could not build Nubian houses here. Being faithful to a style, in the way I mean it, does not mean the reverent reproduction of other people's creation. It is not enough

to copy even the very best buildings of another generation or another locality. The method of building may be used, but you must strip from this method all the substance of particular character and detail, and drive out from your mind the picture of the houses that so beautifully fulfilled your desires. You must start right from the beginning, letting your new buildings grow from the daily lives of the people who will live in them, shaping the houses to the measure of the people's songs, weaving the pattern of a village as if on the village looms, mindful of the trees and the crops that will grow there, respectful to the skyline and humble before the seasons. There must be neither faked tradition nor faked modernity, but an architecture that will be the visible and permanent expression of the character of a community. But this would mean nothing less than a whole new architecture. Change would certainly come to Gourná anyway, for change is a condition of life. The peasants themselves wanted to change, but they did not know how to. Exposed as they were to the influence of the meretricious buildings in the provincial towns round about, they would probably follow these bad examples. If they could not be saved, if they could not be persuaded to change for the architecturally better, they would change for the worse.

I hoped that Gourná might just hint at a way to begin a revived tradition of building, that others might later take up the experiment, extend it, and eventually establish a cultural barricade to stop the slide into false and meaningless architecture that was gathering speed in Egypt. The new village could show how an architecture made one with the people was possible in Egypt.

Climate and Architecture

The climate of Upper Egypt is characteristic of a hot, arid zone, with a very wide difference between day and night temperatures. Because of the almost complete absence of cloud screening, the ground by day receives a great amount of solar radiation, while by night it radiates a great amount of heat out to the sky again. Thus any surface exposed to direct sunshine, such as the ground or the walls and roof of a building, heats up enormously during the day, and has to lose its heat during the night.

Therefore the comfort of people inside buildings in this district depends largely upon the thermal properties of the walls and roof. The best materials are those that do not conduct heat.

Sun-dried earth brick is, fortunately, one of the poorest conductors of heat. Partly because of its very low natural conductivity (.22 calories/minute/cm²/unit thickness for bricks with 20 percent fine sand, .32 calories/minute/cm²/unit thickness for bricks with 80 per-



7. Masons outline a parabola on the end wall with mud plaster

8. Trimming plaster with an adze





11. A third brick completes the second course



12. The third course leans more sharply from the vertical

15. The fifth course is completed

16. The first inclined ring is completed





17. Masons insert dry packing in the interstices

18. The inclined face of the rings gives support to succeeding courses



