4. The Iran Center for Management Studies, Tehran

J.B. Kassarjian and Nader Ardalan

The Client's Perspective *J.B. Kassarjian*

I became involved in the Iran Center for Management Studies project sometime late in 1971. Unlike the typical large-university design, the ICMS project did not have an architect's program or a design program – those thick books that some institutions charge a lot of money to prepare for the client. What we had was a concept that sort of wiggled its way through the Ministry of Higher Education and Science in Iran. A group of people who might, I suppose, be regarded as the various constituencies of management education gradually became involved in the project, and their concerns as they defined them became its requirements.

It was to be a very small facility – somewhere between sixty and one hundred and twenty students – devoted solely to management studies at the graduate level. The idea originated with one of the advisers at the Ministry of Science and Higher Education after the ministry personnel received a large number of applications for various technical schools (in Iran these are more or less equivalent to an American business school at an undergraduate level). During the application review one referee hit upon the idea of proposing to the minister that a more advanced graduate school be set up for the most talented among the applicants. The minister liked the idea and called in some industrialists with an interest in management education to help implement it.

Two important decisions were made early in the discussions that ensued. The first was that the active support of the management community in Iran ought to be solicited for the plan, and the second was that the school should be kept independent both of the existing university system and of the vagaries of government control.

They then looked around for a model by which to accomplish these aims, and soon found that a number of schools of management had been set up with varying degrees of help from the Harvard Business School. But they also learned that help from the Harvard Business School would entail adopting the case method of teaching, which has a somewhat special meaning in management education. It does not deal with case studies as we are presenting them here today, but with the presentation of a problem in a way that is supposed to give the student a chance to grapple with a real situation: analyze some of the data, pull it together, and then decide on a course of action to take. After discussing the problem with a small group, the student then presents his case solution in class. It is a rather special form of pedagogy that involves a great deal of student participation and very little of the traditional teacher-in-front-of-the-room format.

The case-study concept was strange to Iran, especially in its assumption that the professor did not have all the answers. The question was how to find the people who would support such an endeavor. Since we felt it was very important to maintain our independence from the government, we needed support from the private sector, and to get it we had to convince them that the case study was a viable method of teaching.

To do this we instituted something called the President Seminars: calling them the "President" Seminars put them right up in front. We invited some leaders from both the private and public sector for one week's rather intensive program on a topic of interest to them. We held it at a remote site and taught it by the case method. At the beginning the results were somewhat chaotic, because it took time for the banker to start talking to the academician to start talking to the industrialist and so on, and for each to discover that if he listened the views presented could broaden the issue and give him a clearer perspective. Soon most of the sessions were extending beyond the hours assigned, and eventually an appreciation of this way of learning did occur. Altogether it was an interesting experience.

It also had the desired effect; support for the idea of establishing a case-study-based center was by now enthusiastic. The government granted us a charter for an independent center for management studies, and we were offered a number of large sites – for those of you who may know Tehran – in the far north and the northwest parts of the city, toward the mountains. One of them, though still on the periphery, was within the northwest edge of the city limits. It was only 87,000 square meters, but it had a clear title and clear boundaries and was right next to city utilities. We decided to take it, rather than one of the larger lots up in the hills. The latter would probably have involved us in litigation over boundaries and ownership and opened us to attack by the municipality, whose only means of controlling the growth of Tehran, at least at that time, was to withhold services such as power and water. The small site was far enough away to escape pollution (it has since caught up), but still close enough for easy access to the city.

Our next objective was to find the means to maintain our institution's independence – a very significant issue in countries where education is almost entirely financed by the state. In Iran, the government controls admissions through a *concours* system. As a result, students often end up in their third, fourth, or even fifth choice in both the school and the major they want to pursue. Tuition is low; so are faculty salaries, and most faculty hold down three, four, or five jobs at a time. There is considerable bureaucratic red tape that has to be complied with. The result is an uninvolved faculty, apathetic students, and academic standards that gravitate toward the lowest common denominator. With a few notable exceptions, this is the pattern in Iran.

To avoid all that, we had started with the notion of independent fundraising. We had no single benefactor in view: the question was whether to use a scattershot

approach in our fundraising—shoot in every direction and try to get a little bit from everywhere—or a rifle approach—aim for a few large targets. We chose the latter. We had little time, since we had decided by early 1970 that September 1972 would see the first entering class. That rather tight schedule was primarily what led us to choose the target-of-support approach that included naming buildings after the major donors.

The case method of teaching assumes that its students have had some practical professional experience beyond the college years. It therefore necessarily involves older students with active careers, and the program has to be brief. We decided on an intensive eleven-month program to cover what is normally covered in the West in two years. Iran's universities, I am told by Iranian experts, are based on the French method of rote learning combined with some local traditions. The case method, with its dependence on reading, analyzing, and expressing one's own views, would represent a strange new device and pose tremendous problems of adaptation. How would the students respond to this? Should the school be residential? Some people argued that since it would involve older and therefore probably married students, they would prefer to live at home and commute. The argument on the other side was that the intensiveness of the program, a new pedagogy, and adaptation problems would more easily be solved in a residential campus.

In the case method, the student deals with the case in three settings: first, individual study; second, a small study group of typically seven, eight, ten people; and finally, a larger classroom. How could the architect devise facilities that could not simply accommodate, or tolerate, this pedagogy and intense academic program, but actually support it? It was a challenge to produce a design that would fit the type of teaching, the type of student, and the type of program all at once.

At the Harvard Business School, residential courses are organized in what are referred to as "head" groups — a bathroom surrounded by four sets of rooms so the toilet becomes the center, the focal point. I am not sure what that says about American culture, but that was the initial model, though not exactly the appropriate one for us. For classroom design, we needed a room in which sixty to eighty students could interact eye-to-eye from every position. This requires very good acoustics and a relatively small space. At Harvard the rooms are even sealed, with a tiny window in the door, but no windows. Could that be fit into Iran?

One could argue that initially we had only two choices: either to stick to traditional designs or to break away from them. A new method of teaching and learning, an intensive program, a six-day week with very little time off for eleven months might call for a complete break in the architecture as well. Would a Western model of building facilities and use of space better support the novelty of this essentially Western method? Or could we find a design in harmony with Iranian culture, traditions, uses of space, form, and color that could still support this pedagogy? I turn to Mr. Ardalan to supply the answers.

The Architect's Perspective *Nader Ardalan*

When the work was commissioned to our office in 1970, there were only two years left before opening day. We had to design and build a facility, admittedly rather small, but nevertheless one that represented a totally new concept in education, and we had to do it in a relatively short time and for very demanding clients. Here I endorse a point made by Mr. Serageldin: the value of interaction with the client. We were very fortunate in that the client was eager to innovate.

We chose from the very beginning to seek a design resolution that would deal with the adaptive principles of the ecology and culture of Islamic Persia. Initially the project had been a sore point in our office, because at that time we were a rather large firm, and we really did not want to get involved with small projects of this nature. Everyone fought against it—obviously we would lose money. But perhaps this is where linkages and associations help, because the man behind setting this school up, Habib Ladjevardi, a sort of Lever Brothers of Iran, had been trained at Harvard. Although he had inherited a vast fortune and could have gone into the family business, he decided that he wanted to make a social contribution. This dedication on the part of the person who was the basic moving force, who collected the various people together, including the architects, and raised the funds, was important for encouraging the participation of others.

The project also coincided with the growing interest among Iranian architects, encouraged particularly at Tehran University and the National University which housed the two schools of architecture in Tehran, in trying to create a modern Iranian architecture. A small group of these enthusiasts held the First International Congress of Architects in Isfahan where people such as Louis Kahn, Buckminster Fuller, and others from the West joined in to encourage them in their quest for an indigenous style. With that experience behind us, our firm approached this particular project as a first, very self-conscious step toward building a bridge to our past. When it was completed, none of us considered it particularly significant, because it was so very small, and it was relatively self-conscious, as you will see. But later, after years of designing 200,000-population cities, large universities, and various other huge establishments, we came to realize that some of the significant projects that we had built were in fact the small ones. Even now, in spite of the changes that have come about in Iran, we still have to look to some of these structures for testing ideas about how to integrate the past with the present.

With the simultaneous concern for cultural relevance and ecological adaptation in mind we set out to develop a language of relevant form. To do this we isolated a series of generic forms from Iran and its history and arranged them into a coherent whole using a series of spatial systems of organization. We looked for economies in construction, and from the very beginning committed ourselves to using only locally available materials and craftsmen. Economy and social purpose would be two of the bases on which our work would be judged.

Anything under the sun is possible when you start in on a design, so the choices you make and the limitations you set for yourself at the outset are important, especially when time is short. Stravinsky once said that "art is born of limitation and dies of freedom": the extreme limitation of time and of the theoretic design principles we made for ourselves added to the rigid functional program that the pedagogic requirements provided set strong but nonetheless welcome constraints. As we went through the process, we had to come to grips with problems, rather than ignore them and hope they would go away. We had no choice but to make a decision between A and B and move on.

In the years since, I have come to realize that the concerns we had were all within the limited circle of Persian culture, which is in turn a matrix, a series of symbols and revelations, that came out of Arabia to make up the Islamic view. Islam has obviously influenced a number of cultures, but we are concerned only with how it was received in Iran and what the language of form that resulted and which we sought might have been. Was it unique to Iran? Or was it merely one dialect of a general language that was spoken all over *dar al-Islam,* the world of Islam? When the Temple of Luxor was turned into a mosque, were some elements from the ancient, pre-Islamic culture of Egypt then subsequently integrated into an Islamic perspective, making a local but still Islamic variation? When Hagia Sophia was turned into a mosque and all later mosques of Turkey followed its pattern, were there not still elements underlying that pattern that were discernibly Islamic? When someone goes from North Africa to Moorish Spain or from Central Asia to China or India, what in the variations that they see is the result of an Islamic point of view?

In the past ten years it has become clear to me that there is a language of symbolic forms that is identifiably Islamic, or to put it another way, that there is an identifiable standard architectural language behind the numerous dialects that Islamic buildings speak. One of the sources for the dialects is, of course, the ecological diversity of the world. If you take simple gradients like water, vegetation, and temperature you get eight or so ecological zones in the world, ranging from the tundra and extreme cold to the desert and scorching heat. In between are scrub, plains, forests, mountains, and so on. But much of the Islamic world happens to be limited to a zone that is either hot and arid, or scrub oak with slightly more humidity and slightly higher elevations, or finally great tropical rain forests.

Iran's ecology is basically that of the hot, arid zone, although it also has two great mountain ranges, the Zagros and the Elburz, and on their slopes, away from the intense sun, one finds a coniferous and deciduous forest ecology. But Iranian culture created its architecture mainly within the hot, arid alluvial fan of these mountain ranges where most of its cities are still located.

Tehran is one of the newer cities in the foothills of the Damavand, a volcanic peak of around 18,600 feet, the highest of the Elburz Mountains (pl. 1). Over millions

Pl. 1 View toward Mt. Damavand

of years alluvian fans have formed from the glaciers and wash-offs that have occurred from the melting snows, creating great fingers that reach from the peaks to the desert below. In this traverse from high to low, the cities are located. Tehran means "Low Place," and Shemran "High Place." The High Place, a sort of summer settlement, is tucked away in the mountain ravines for the sake of coolness; the town itself, the Low Place, is further down. This is true not only of Tehran, but of other cities as well, since in this way they can take advantage of the natural flow of water and of underground water sources. It was on this kind of barren, sandy, gravelly soil that we were to create our new Center of Management Studies.

Many of us were the products of a Western education that had completely drowned out the architectural language of our past. Because the two architectural languages were mutually incomprehensible, most of us had absolutely no idea how to converse with our tradition. We began to learn by touring through the villages and towns of Iran, and this resulted in a concern about what the language, its meaning, and the way of using it might be. One manifestation of that period was my book, *The Sense of Unity,* published in 1973, which documented some of the theoretical bases of traditional Persian architecture. One of the theories propounded there was that the culture of Islamic Persia hinged on the concept of complementarity. If the surroundings are hot and dry, what one builds is cold and wet; together they create a new unity.

When you go back into the history of Islamic thought, you find that the paradise garden is a peaceful, serene, and Islamic place, and that being there is one's reward for having been a good person in this world. This paradise is often beautifully depicted in miniatures, where the border always imitates an exceedingly dry exterior, often the buff brick architecture common there, that acts as a wall for the paradise inside. Islamic paradise is not an esoteric or immaterial sort of place. It is a manifestation of the Islamic point of view in its complement of the pragmatic and the mystical, the material and the spiritual. The *batin* and the *zahir,* the hidden and the manifest, are two concepts of reality that are strong in the Islamic world, and especially so in Iran.

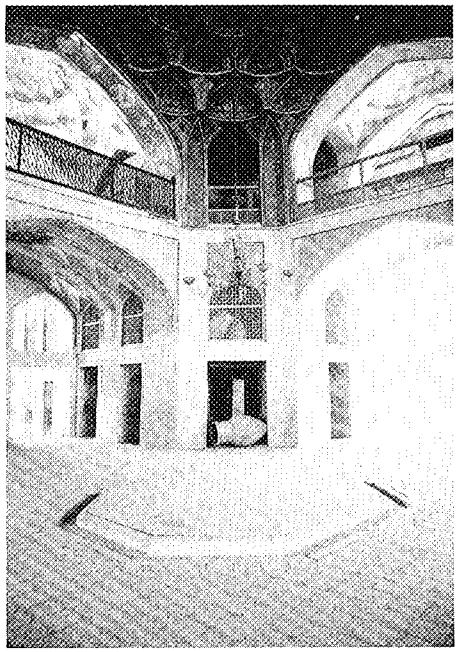
Another element in the Islamic point of view is called the law of similitude—that is, whatever you feel becomes the raison d'être for your art as you express it, as you develop it. If you are an architect, you create your view of life in the diagrams of your buildings; if you are a miniature painter, you create it in your paintings; if you are a weaver of carpets, it is reflected in them; if you are a ceramicist, it appears in your pottery.

There is a world of Islamic aesthetics that can be learned. It is in fact only within, say, the last fifty years that it has been forgotten because it is no longer taught in our schools. Certainly it is not taught in the schools of architecture in Iran, and so far as I can tell that is true of schools of architecture in other Islamic countries as well. In Tehran in the late sixties only European architecture was taught. And of course, in those institutions where those of us trained in the outside world received our education—in the United States, Japan, France, Great Britain, or some other European country—Islamic history and Islamic aesthetics were rarely, if ever, taught either. It is really only recently that courses like the present one have come about.

Back to the hidden paradise garden: about two years ago an earthquake hit one of these hidden places, the Garden of Tabas in the Great Salt Desert of Iran, and the only thing left standing were the trees. The mud village was entirely devastated. What better symbolism for the idea of centrality, of inwardness?

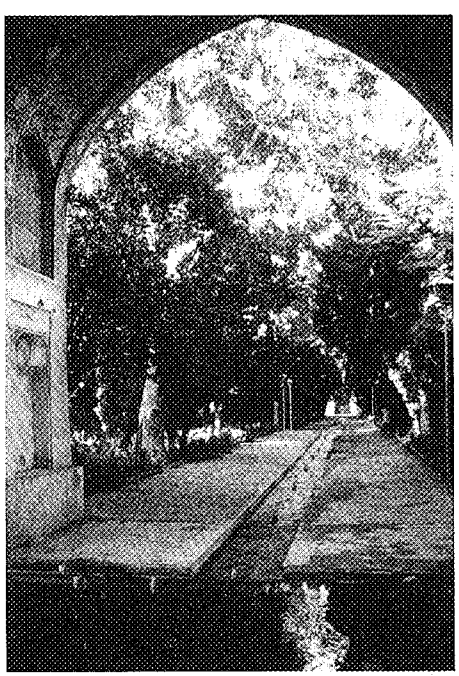
Centrality also dominates much of the architecture of domed buildings. Inherent in the dome form, of course, is an emphasis on its center, and decoration is typically used to emphasize that centrality. It is also ubiquitous in carpets. A square grid carpet of Bakhtiari origin has its boundary composition in the border and its center compartmentalized into a garden pattern, emphasized by a selective picking out of the color tones.

One of the buildings that influenced a particular part of the Management Center was the Hasht Behesh, the Pavilion of Eight Paradises in Isfahan (pl. 2). This seventeenth-century building of the Safavid period again has a mandala, or central form, that leads to a water source, a fountain. On the top of it is a great oculus that brings in light. The central pavilion moves in four directions, principally through porches, to the four quarters of the garden, where four corners have a sort of enclosed pavilion space. The idea of a central building, a four-arched form sitting in the center of a garden, is also seen in some of the great garden designs. One of the Safavid gardens exemplifies inwardness by marking the middle with a pavilion that has water gushing from its center and bounding it by a great courtyard wall. In the hadith, the Prophet Muhammad describes just such a place. In his visionary recital of the night sea journey, the Prophet sees in paradise a pearly dome that is held up by four columns, and on the columns is written: *bism'allah arrahman arrahim,* "God the merciful and beneficent," one of the fundamental tenets and attributes of divineness. If you have such an architectural beginning already established by the Prophet and remains of buildings built from a thousand years ago up to today, you know you must be dealing with a series of generic, repetitive forms that comprise an Islamic vocabulary.



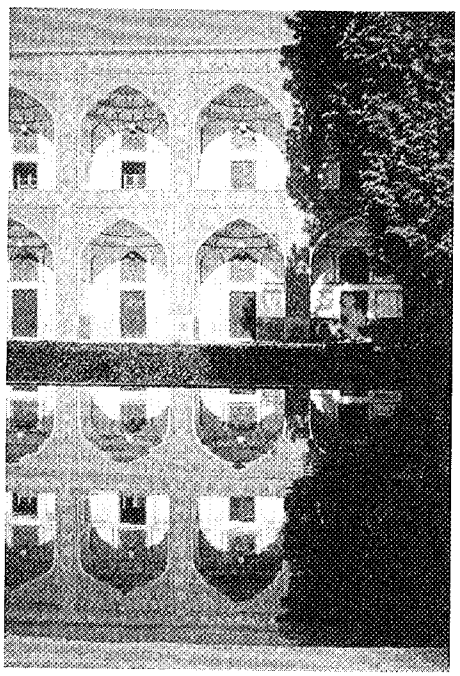
Pl 2 Hasht Behesh, the Pavilion of Eight Paradises, Isfahan (photo: Sheila Blair and Jonathan Bloom)

The scale of these gardens was rather small. While we were studying some of the qualitative dimensions of Islamic design, we were exceedingly careful to measure the buildings and gardens at Bagh-i-Fin (pl. 3). The garden was approximately 168 meters long and approximately 80 meters wide—compare that to the gardens at Versailles which have to be measured in kilometers. In a desert environment, they had to be small to survive. I am always taken aback when I see designs for these waterless areas that include vast open green spaces; most of the environment we are dealing with cannot support them.



Pl 3 Bagh-i-Fin, side pavilion, Kashan (photo: Kendall Dudley)

The next element to influence our design was the madrasa, or the place of classical education, in Iran. The Madrasa Chaharbagh in Isfahan (pl. 4), again from the Safavid period, has a courtyard design, around which are distributed the rooms of the individual *tulab,* or students. Its garden with its fountain once more recalls the paradise garden, not only in its design, but also in the motifs, drawings, and surface decoration of its mosque, an element of this particular theological school.



Pl. 4 Chaharbagh mosque-madrasa (photo: Budek)

The study, then, of madrasas, caravanserais, and other traditional places that belong to the history of Islamic architectural creation, was very important to us for developing scale, organization, and the vocabulary of forms to be used. Another more particular influence was the architecture of Kashan, whose style is rather stark, perhaps because the prime mover in the group whom I mentioned earlier, Habib Ladjevardi, came from there. So did the masons who built our project, because there the tradition of vault construction had still been maintained.

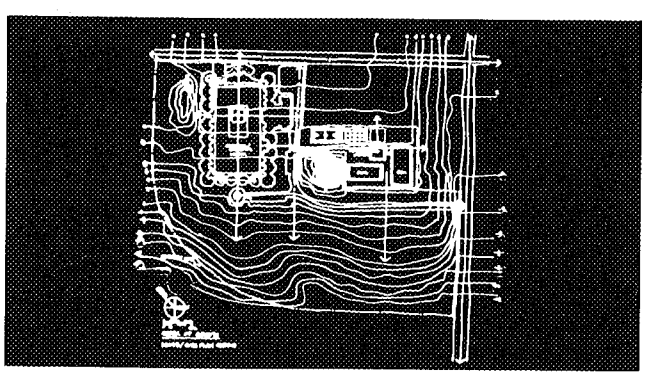
A courtyard immediately provides a system of connections that uses space rather than shape as an element of design. To enclose space with walls and then use the walls as a basis for liveable areas one has to have a system. The spatial system in almost 90 percent of the buildings analyzed consisted of a culminating space, a transitional connecting space, and a gateway space. The same threefold element always governed the spatial system: connection, usually the gateway; transition, which could be a series of devices, a porch or a *hashdi,* an octagon shape, or any number of other basic systems of transition between a gate and a culminating space, and finally the culminating space itself. This system of positive space connections gave a very important clue to how to design courtyard architecture. From these studies we managed to formulate some design criteria.

We also found, by the way, that there was no gulf between residential design and educational design. Both house and madrasa often have a courtyard, gateway, porch with socle, and some raised element of symbolic importance. In both, the hot, arid environment encourages the idea of "inward-lookingness" and the garden within and space as the object, as opposed to Western concepts of space, where the object is an element and the space is all around. Desert architecture has a hierarchy of relationships that always involves an inward-looking courtyard unit very strongly related to the cluster of units around it. In the Islamic city, whether as a residential unit or as a madrasa (both cluster and fit in the same way), there is no outside to this architecture. Each building backs up against the next.

The element of inward-lookingness also has something to do with a culture that stresses modesty and frowns on ostentatious display and a climate that encourages architectural compactness and shadow-making. The area from Afghanistan to Saudi Arabia has the highest level of solar radiation gain of any place in the world. Because light brings with it enormous amounts of heat, radiant energy surface exposure must be minimal. Another idea we came upon was the porch as a three-dimensional method of modulating the penetration of light into a building. In most of these climates one can live outdoors six months of the year, and the porch doubles as an outside room. A final idea was the use of a landmark to orient the building in space.

Now let us turn to the results of all these studies (pl. 5). The site was located in an isolated, barren alluvial fan that would in time be overrun by the city. Crowning

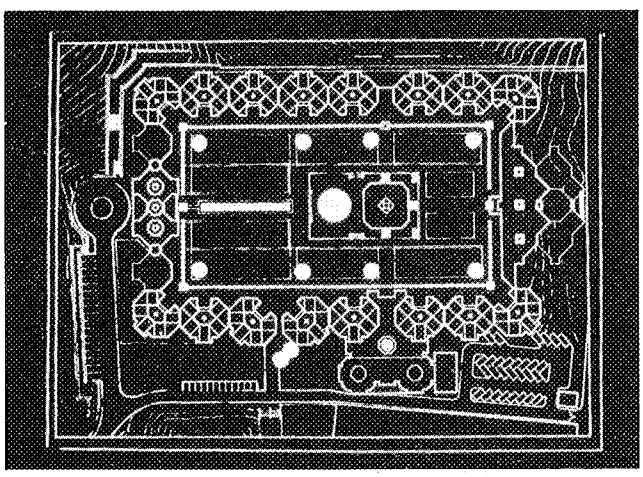
Pl. 5 Aerial view, Iran Center for Management Studies, Tehran



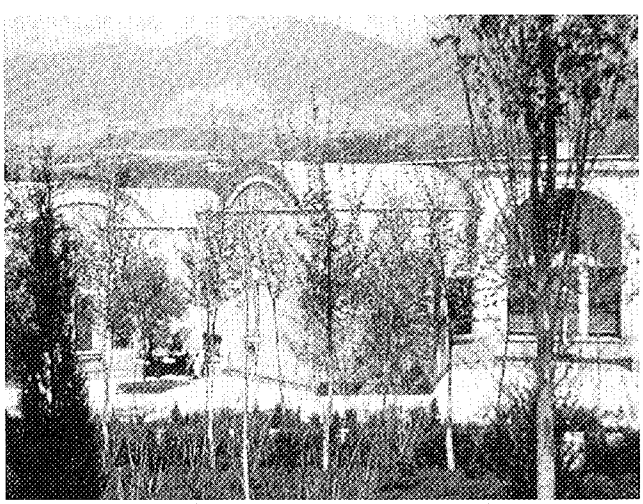
Pl. 6 Site-plan sketch

the mountain range to the north, looking more or less to the rising sun, was the great peak of Mt. Damavand. In the winter cold winds come down from the mountain. A river ran through the lower level of our site. The hill itself had two levels: one a sort of a platform, the other sharply dropping. The site was more or less square (pl. 6), with a niche cut out of it which did not then belong to us, though it was possibly to be acquired later on (by now, I think, some of it has been).

From the very beginning, our study of traditional form-making told us that the creation of a sense of place depended on the idea of a garden and green space in this vast, harsh, barren plain. So we took our highest point and made that the source of water. Using wells and pumps we brought water to this high point, and then its downward flow naturally set the gradient for every thing else that was placed on the site. The natural water flow would provide irrigation for planting. The first phase, then, was to develop the garden in which the main academic and residential units would be set (pl. 7). In time we created another courtyard as a place of recreation. Other domains of growth were left for the future. The plan was exceedingly rigid, in a way. It used the concept of the border surrounding a garden, whose sides would form the residential courts (pl. 8).



Pl. 7 General plan

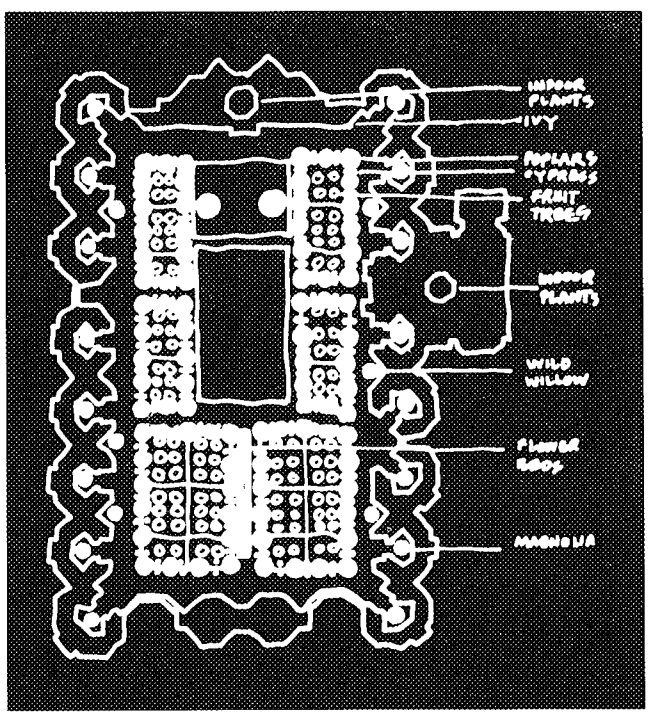


Pl. 8 Living courts surrounding major garden

We rejected out of hand the idea of a master plan for the whole site, because Iran at that time was changing so fast and the institution that we were about to create was so unprecedented that whatever master plan we might have come up with would probably not have worked. We simply did not have enough information on which to base our prognostications. Master-plan production as practiced and taught today, or at least in the late sixties and seventies, involved predicting how many students there would be, what the growth would be, and so forth, and then putting all the parts together. But in this case, that would have been like trying to design a suit for a baby that would still fit him when he reached the age of twenty-five. In the dynamic economic climate of the Middle East these days, and especially in the OPEC countries which have a 7 percent rate of growth in the cities, by the time data are gathered and a plan produced it no longer fits.

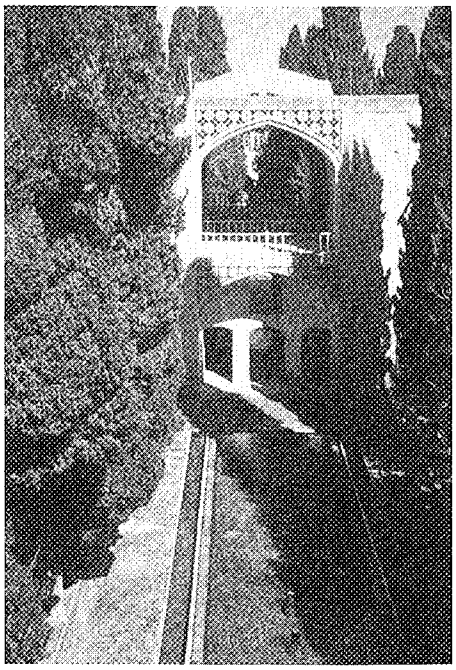
Before the revolution in Iran, more money was spent on master plans, engineering work, and architectural commissions than was spent on constructed works. That was the scale on which the country was planning, with realization lagging far behind. This is typical for growing societies. We really want the best for our countries, but we use tools that have either never been tested for that scale of development, or, if they have been, they were used to create a Tennessee Valley Authority—some particular, large project with predictable parts and a stable economy to depend on. Aside from new ways of thinking about images and forms, we should also be rethinking the whole process of design. The techniques for making master plans need overhauling before they can work in the Middle East.

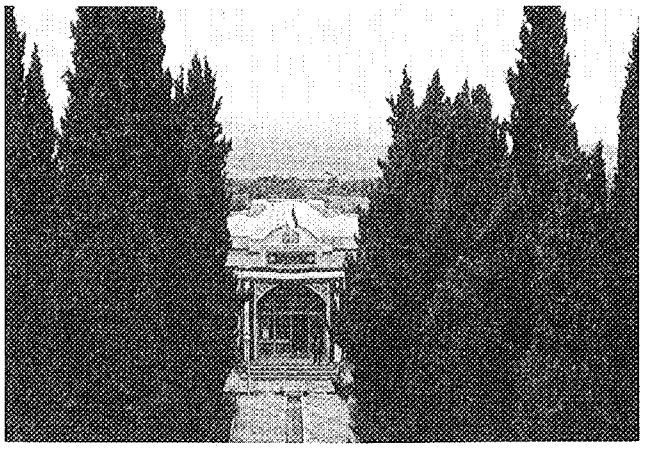
From the order of water came the order of the garden (pl. 9). By simply analyzing the garden size, we knew that we could support something roughly the size of the



Pl. 9 Order of garden

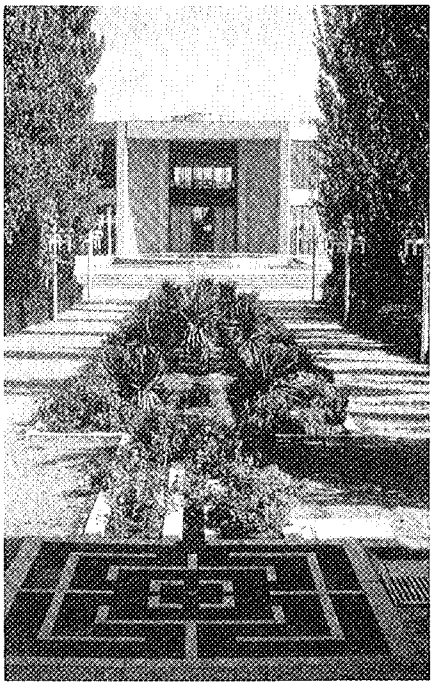
Bagh-i-Fin (pl. 10a-b). We planted poplars, which are fast-growing and shade-giving, with cypress, which are slow-growing. By the time the poplars die, the cypress will be large enough to replace them. We created an orchard of cherry, apple, pear, fig, and quince. These trees soon bore fruit, and the students had parties in which they gave fruit to one another. In fact, these experienced, middle-management businessmen became very involved in the whole life of the garden. In the gardens of the individual living clusters we planted magnolias to fill the residences with their fragrance.





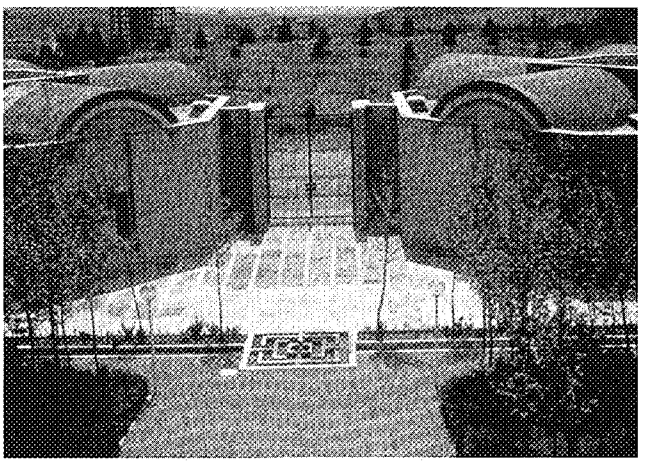
Pl. 10 Bagh-i-Fin, Kashan (a) water channel and pavilion (b) view to museum (photos: Neil Hart)

Subsidiary nodal points grew off the main garden space. Around those nodal points of smaller, dependent gardens the court itself evolved, designed in such a way that those elements that could look onto it were placed around it, and those elements that were introverted were placed outside it. With their own courtyards, they sought their own privacy. The library was in the center because it would be a place of gathering (pl. 11). It was on a socle, making it a double-story building; it looked out onto the garden, to provide a break from reading, and to the mountains beyond.

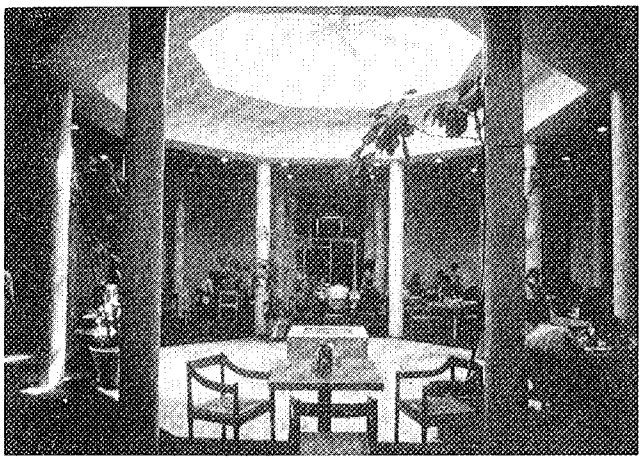


Pl. 11 View of central water channel and library

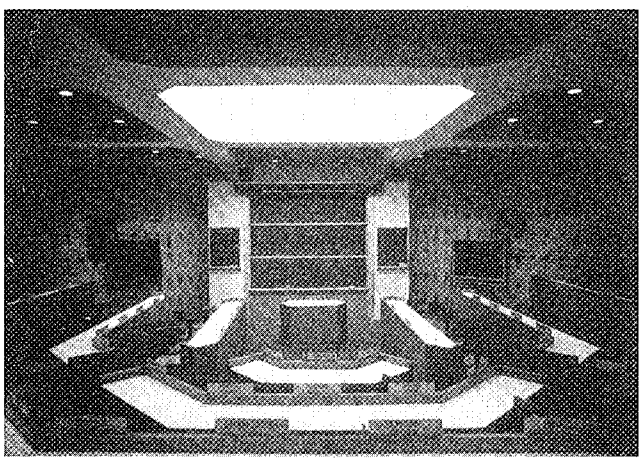
Applying our spatial connecting systems again we created gateway (pl. 12), transition, and culmination spaces for the place of dining (pl. 13), the classrooms (pl. 14), and the administration. The idea of the living courts began with a circle, within which we used other of the eight demi-regular geometries that will fit the hexagon, the square, and the triangle (pls. 15–16). We only built eight, or half, of the residential units, and then added four more, so that from the beginning there was a sort of geometric, modular anticipation of future growth. Each unit consisted of four rooms of two men each, and then a central room to be used both as a case-discussion room and as a living room. From this system of connection, transition, culmination came tertiary spaces that supported those rooms in the form of closets and bathrooms — and the total became the unit of design. Concern for ventilation led every room to have a small slit window that would open into the cool, shaded courtyard (through the course of the day there was always shade there), so that breezes would be able to



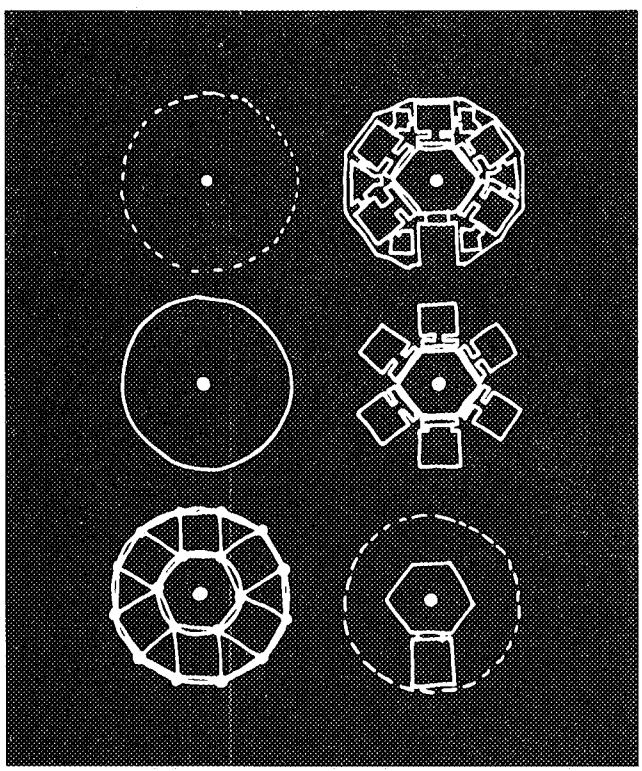
Pl. 12 Southern gateway



Pl 13 The dining atrium



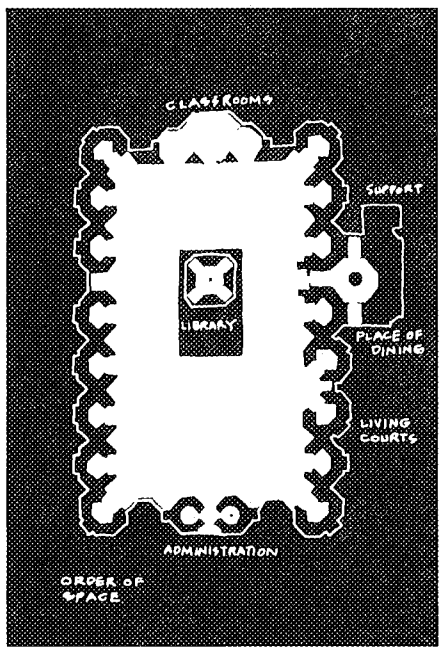
Pl. 14 A lecture room



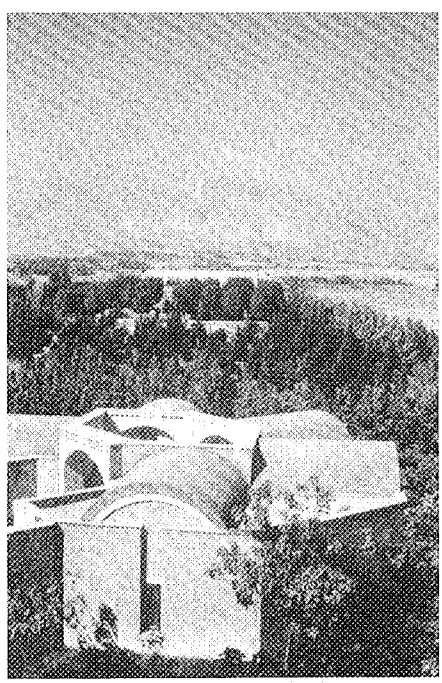
Pl. 15 Plan of living courts

pass through the rooms. These rooms were liveable throughout the summer without air conditioning. The construction system was a normal load-bearing buff-brick building form with a vault (pl. 17). Why the vault was used I will leave for another time, but it became the basic unit.

Now I hope we can look at this structure as if we were a group of designers commissioned to do a series of similar works. Through some process of idea-raising and problem-solving, and through an experiential process of design, perhaps we can then come up with even better ways, or at least more pointed questions, about how to go about designing more relevantly in Islamic cultures.



Pl 16 Plan showing organization of main elements



Pl 17 Living courts showing vaulted construction system

was organized because of a feeling that there is a crisis of identity in Islamic architecture and in the Islamic world. I wonder how we might go about setting up criteria for generating Islamic architecture—is that the subject of our meeting or not?

VIGIER: We are under no illusion that we can set up criteria for an Islamic architecture in five days. Our intention was only to take a small first step. By concentrating on a particular type of institution that is obviously of great importance in terms both of need and of commitment in Islamic countries—for, regardless of the levels of wealth, all of them have made an enormous commitment to education—we thought that at least some of these criteria might emerge. Our intention was in fact twofold: to start this exploration, and to establish a dialogue among practitioners in the Islamic countries, whether from that area or from the West. That dialogue has to continue if our efforts to improve the quality of the architecture in the area are to be successful. These are themes we will be addressing in the workshops and in our summary discussions, though I suspect we shall keep on raising questions rather than providing answers. But maybe we will at least be able to differentiate a little bit more sharply among those elements in institutions of higher learning that are common to all of them regardless of where they are, those aspects of the design and planning that are particular to Islamic societies, and those aspects that are specific to site, climate, or country. It is by making differentiations of this sort that we might begin to find some answers.