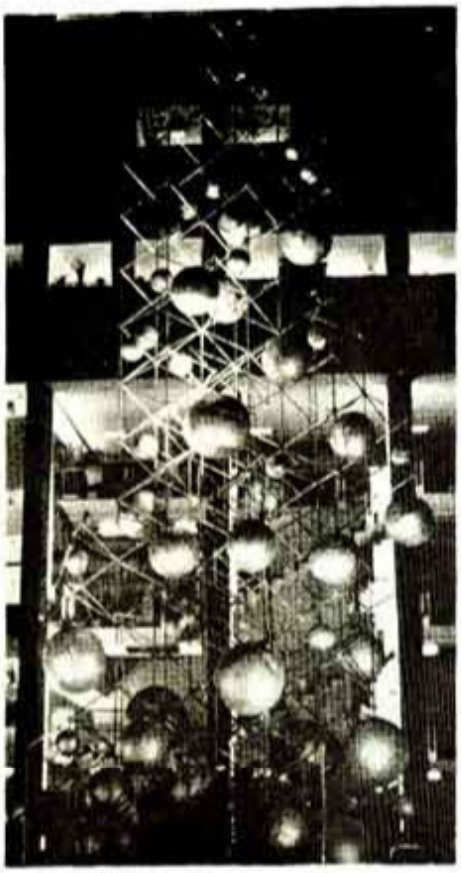
تازه‌های صنعت و معماری



شاخ و برگهای درخشان...

این تشکیلات زینتی درمقابل ساختمان رادیو تلویزیون ملی فرانسه بنا گردیده و شامل قطعات فلزی بصورت لوله و گویهای پولیستر است که با ورقه‌های آلومینیومی پوشش یافته‌است. تمامی این ترکیبات مجسمه‌ای را تشکیل میدهند که انطباق کاملی با معماری ساختمان دارد.

ارتفاع این مجسمه فلزی ۱۵ متراست وبك مغز الکترونیك در آن ترتیب یافته که تنوعات رنگی بوجود میآورد. این اثر توسط برنارپروو کلود بووار طرح شده است.

آلودگی هوا ومبارزه باآن

مقدار دودیکه روزانه از طریق دودکشها بهوا پراکنده میشود بچندین تن بالغ میگردد. محیط زیست راآلوده ساخته وزندگی مارا بخطر میاندازد. علیرغم تجسات متعددی که صورت گرفته است در حال حاضر هیچگونه راه حل مؤثری برای جلوگیری از تشکیل دوده در دودکشها پیدانشده است. ذراتی که درون دودهای هزاران کانون صنعتی و دسته‌جمعی وخصوصی شناور میباشد سهم بزرگی در آلودگی هوا دارند این ذرات باید ازطریق دستگاههای تصفیه دودجذب شوند. دستگاه تصفیه دود فومی ترم (Fumiterm) که جوابگوی این ضروریات میباشد دستگاهی است که بر قله دودکشها نصب میشود. این دستگاه جهت جذب ذرات شناور درتمام دودها ساخته شده است. جنس دستگاه تصفیه فومی ترم تماما ازپشم شیشه و اپوکسی (Epoxy) میباشد. مقاومت آن دربرابر شرایط جوی استثنائی بوده ومستلزم هیچگونه نگهداری یا زنگ زدن نیست. این دستگاه سبك‌وزن بوده و بدون اشکال در بلندترین نقطه تمام دودکشها ومجرا های آجری وسیمانی یافلزی نصب میگردد انواع مختلف دستگاه تصفیه‌را میتوان درکلیه کوره‌ها که قدرت گرم کننده آنها بین ۱۰۰،۰۰۰ و ۱،۲۰۰،۰۰۰ کالری درساعت است بکار برد.

تریپلکس (TRIPLEX) : یك حفاظ

دستبرد ازطریق شکستن وبشرین روز بروز شدت میابد و کلیه مغازه‌ها در معرض آن قراردارند. تکنیکهای متعددی جهت رفع این مشکل بصورت نصب میله های آهنی وغیره بکار برده‌شده بااینحال نتایج حاصله آنطوریکه باید رضایت بخش نبوده است. زیرا یا میله‌ها بنحو شایسته‌ای از ویترینها محافظت نمیکنند. یاآنکه در تماشای اشیاء درون آنها مشکلاتی بوجود میآورد. پس این خود شیشه است که باید چنین حفاظتی دربر داشته باشد.

تریپلکس این مشکل‌را حل کرده است واتومبیل‌داران اکنون از آن در شیشه جلو اتومبیل خود استفاده‌میکنند و درنتیجه مغازه‌داران میتوانند برای حفظ مغازه خود بآن اطمینان داشته‌باشند. زیرا شیشه بی تریپلکس (Bi - Triplex) درمقابل پرتاب سنگ و مولتی ـ تریپلکس (Multi - Trsplex) حتی در برابر گلوله‌هم مقاومت میکند.

یك میز رستوران بسبك جدید

اکثر رستورانهای عمومی به میز و صندلیهای چهارپایه مجهز میباشند معذالك هرصرف‌غذا مستخدمین صندلیها را روی هم‌میچینند تا بتوانند بامر نظافت بپردازند. این کار مستلزم صرف وقت زیاد و در نتیجه باعث از بین رفتن مقداری ازدرآمد رستوران است. بهمین دلایل ژرژ الونك از طرف مؤسسه مالیك (Matic) در فرانسه فرمول جدیدی ازمبلمان رستوران مورد بررسی قرار داده است و آن مجموعه‌ای است ازمیز وصندلی موسوم به (T 4 S) مرکب ازیك میز وچهار صندلی یکپارچه. این مجموعه تشکیل شده‌از یك چهارچوب فولادی باچهارپایه کاملا پوشیده از ریلسان (Rilsan) روی این چهارچوب چهار صندلی با پوششی ازپولیستر مسلح قرارگرفته و این صندلیها بنوبه خود برروی محورهائی که مجهز به گوی میباشند واقع شده‌است. این ۴ صندلی گردان امکان میدهند که انسان بنحوی آسانتر پشت‌میز بنشیند. خود میز نیز روی مجموعه‌ای که‌فقط شامل دوپایه مرکزی میباشد واقع شده و بااین ترتیب فضای بیشتری در اختیار استفاده کننده قرار میگیرد. از سوی دیگر یك سیستم لوله‌تاشو امکان میدهد که ۲و۳و۴ میز وحتی بیشتر بهم نصب شوند و۸ و ۱۲ و ۱۶ نفر دورآن بنشینند. این‌سیستم محسنات زیادی در بر دارد از آن جمله قیمت نازل آنست نسبت بمیز وصندلی معمولی. رنگ آمیزی پوششها نیز به محیط رستوران نشاط بیشتری میدهد و خصوصیات دیگر این سیستم آنستکه سر وصدائی تولید نمیکند و از هر لحاظ راحت میباشد.

برندگان
مسابقه ساختمانهای کتابخانه
آوریل ۱۹۷۳

برای انتخاب بهترین ساختمان کتابخانه از طرف، انستیتوی آرشیتکتهای آمریکائی (AIA) انجمن کتابخانه آمریکا و کمیته ملی کتاب در آمریکا برنامه‌ای ترتیب داده شده بود که در ماه آوریل سال جاری پس از رأی‌گیری، هیئت‌ژوری ۲ کتابخانه را با نشان افتخار، برنده اول و ۷ کتابخانه را با نشان شایستگی بعنوان برندگان دوم شناختند.

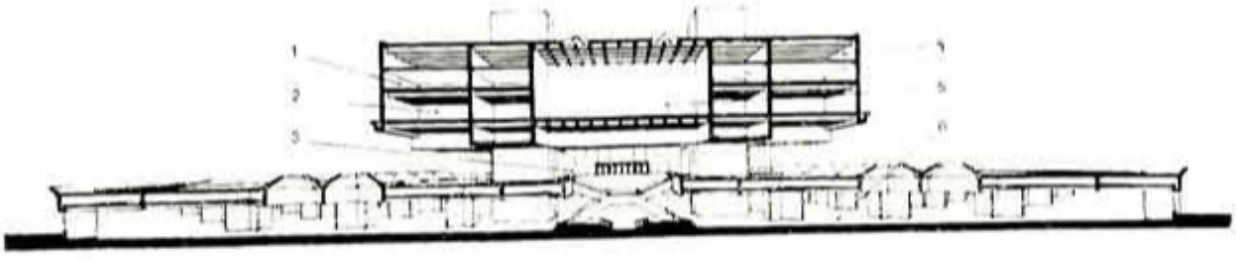
این کتابخانه‌ها شامل ساختمانهای کتابخانه‌های دانشگاهی، عمومی و مدرسه‌ای داخلی و خارجی هستند و بیشتر برپایه اینکه مشکلی را توانسته باشند حل کنند، انتخاب شده‌اند.

مختصری از مشخصات کتابخانه‌های انتخاب شده در اینجا آمده است.

۱. کتابخانه آرشیو مرکز تاریخی اوهایو (برنده اول)
واقع در کلمبیا اوهایو،

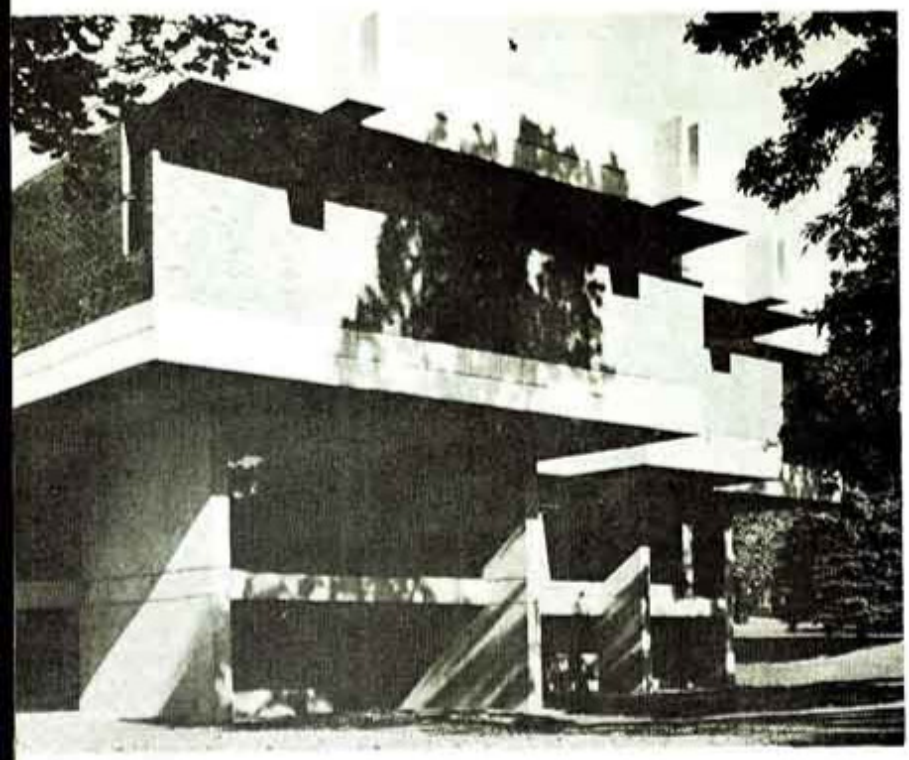
آرشیتکتهای این ساختمان از انجمن ایرلند هستند.

دارای ساختمانی است جسورانه، خیالی وشگفت‌انگیز ونیز سمبل خوبی برای یك مجموعه مرکزی نیز هست. راهرو و موزه بصورت پایه گسترده شده‌اند وساختمان کتابخانه همچون توده‌ای عظیم روی آن قد برافراشته است. بطورکلی ازنظرساختمانی، تقسیم‌بندی فضا وسمبل، بنای بسیار جالب توجهی است.



۱ــ کتابخانه
۲ــ دفتر ومرکزی کار کتابخانه ــ آرشیو
۳ــ سطح مرکزی ــ ورودی عمومی
۴ــ قسمت آرشیو
۵ــ اطاق مطالعه عمومی
۶ــ موزه نمایشگاه، اطاقهای کار، دفتر

مسابقات بین المللی



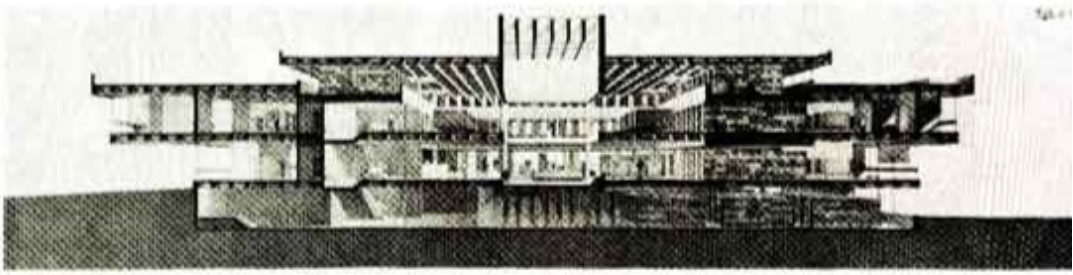
کتابخانه کالج پرووویدنس
(برنده اول)

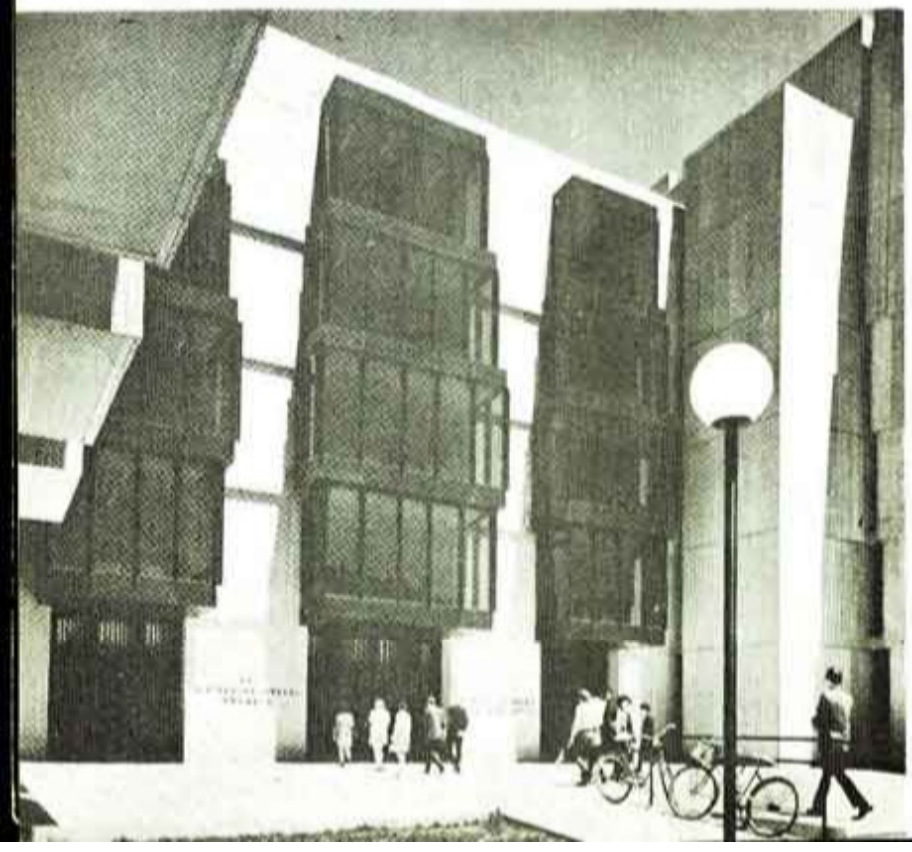
واقع در پرووویدنس ـ رود آیلند.

طرح از: ساساکی، داوسون وانجمن دومی «Demay»

ترکیب ساختمان این کتابخانه بصورت قرینه و متعادلی است و رابطه فضاها با مطالعه و اطاقهای مطالعه بطرز بسیار خوبی حل شده، طرز قرارگرفتن ساختمان و تقسیم‌بندی فضا تازه وچشمگیر بوده، مقیاس و استفاده از رنگها بسیار جالب است.

درانتخاب سیستم ساختمانی، مصالح وبکار بردن المانهای مکانیکی ابتکارخاصی بکار رفته است.





کتابخانه جوزف زجنشتین
«Joseph Regenstein»

دانشگاه شیکاگو ،

واقع درایلی نوبز، شیکاگو

آرشیتکتهای این مجموعه، «اسکید مورو» از «اونیگزاند مریل» هستند.

ایـن ساختمان بـرای تحقیقات و بررسیهای در سطح عالی ساخته شده است.

با ۵۲،۶۵۰ مترمربـع مساحت و ۳،۵۲۵،۰۰۰ جلد کتاب از بزرگترین کتابخانه‌هائی است که در برنامه منظور شده است.

این ساختمان ازلحاظ طرح ونقشه کتابخانه ازآثار جالب معماری بحساب میآید.

طرح «کیشو ـ ن. کوروکاوا» برنده اول مسابقه ساختمان مرکز فرماندهی تانزانیا

جمهوری متحد تانزانیا که درنهم دسامبر ۱۹۶۱ باستقلال رسیده قبل از استقلال سالها از مستعمره‌های انگلیس بشمار میرفت. این جمهوری در طی ۱۰ سال استقلال پیشرفتهای زیادی کرده است تانزانیا بعلت داشتن طبیعت دست نخورده وشگفت‌انگیزش ارزش زیادی در دنیا دارد.

درطرح ساختمان مرکز فرماندهی برای تانزانیا که در اواخر سال گذشته (۱۹۷۱) از طرف دولت تانزانیا بمسابقه گذاشته شده بود جمعاً ۲۹ کشور با ۱۳۷ طرح شرکت داشتند، که بین روزهای ۱۴ تا ۲۸ فوریه امسال روی طرحها قضاوت شد و جایزه اول به «کیشو ـ ن. کوروکاوا» ازکشور ژاپن تعلق گرفت. که جزئیات این طرح در اینجا بنظرشما میرسد.

کیشو ـ ن. کوروکاوا درتوضیحی که‌برای طرح خودش نوشته اضافه کرده است که در طرح این ساختمان دست بررسیهای وسیعی درباره روابط بین «معماری وطبیعت» وبین «معماری وشهر» زده ونیز کوشیده است اصالت طبیعت زیبا و شگفت‌انگیز تانزانیا را حفظ کند. درست است که هیئت ژوری چند ایراد ساختمانی برآن وارد کرده‌اندولی این ایرادات جزئی وقابل برطرف شدن بود.

این ساختمان از نظرفرم وارتفاع تناسب کاملی باساختمانهای بلند اطراف‌خود دارد وتلفیق‌فونکسیون بافرم درآن بنحو کاملی‌صورت گرفته بطوریکه میتوان‌گفت درعین زیبا بودن، کاربردهای یك مرکز فرماندهی کامل را داراست.

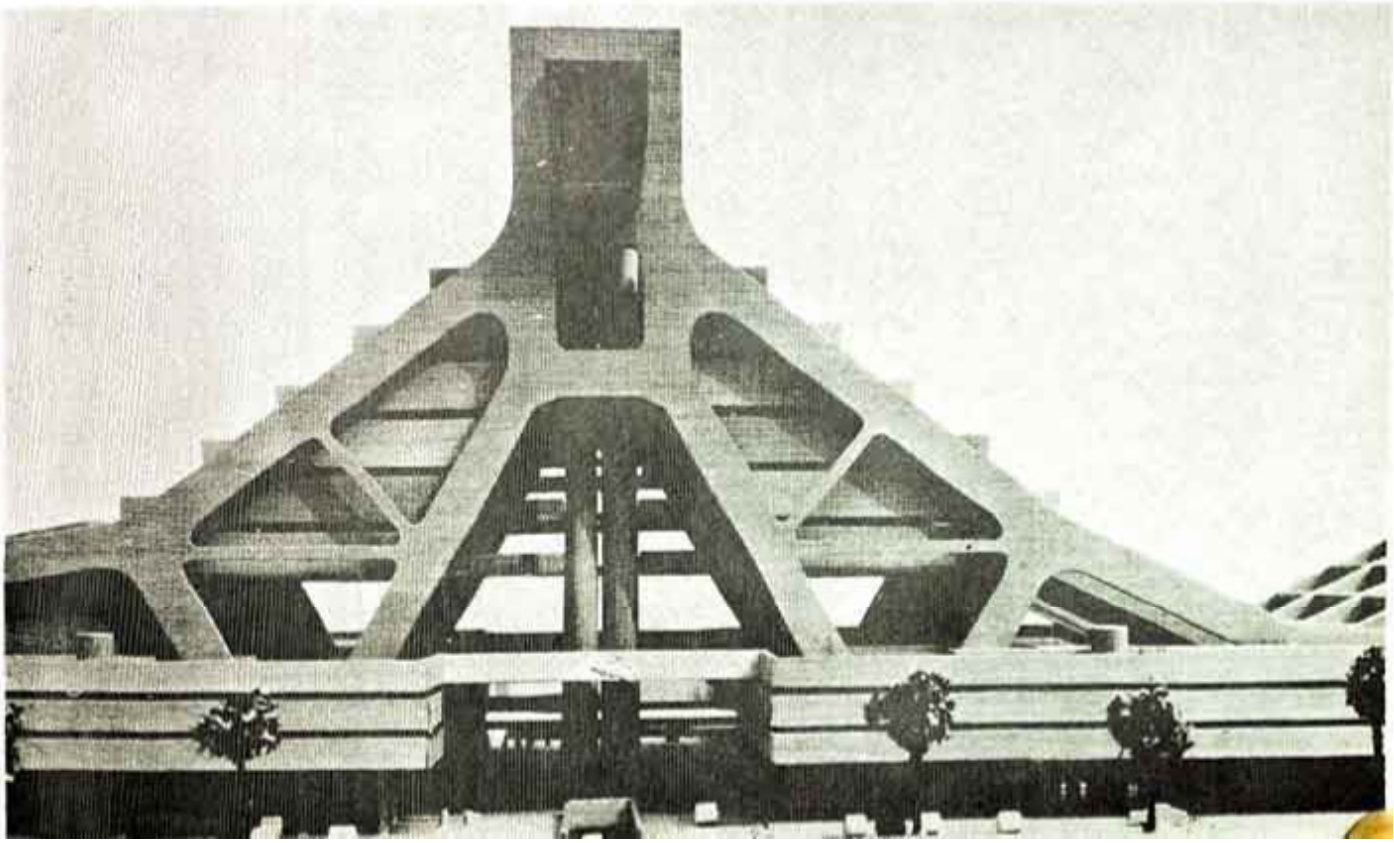
سقف‌آن ضمن جلوگیری از تابش شدیدآفتاب تانزانیا محیط وسیعی برای تماسها و رفت وآمد مردم بوجود میآورد. کریدور اصلی برای ملاقات فرماندهان، سالن اجتماعات ملی ومرکزفرهنگی همه و همه دریك اشل‌شهری ساخته شده‌اند.

این طرح مخصوصاً از نظر ارائه ونمایش عالی و چشمگیر بود.

قسمتی از نوشتهٔ «کوروکاوا» دربارهٔ طرح خود:

«کریدور شهری
سقف شهری
هال شهری

این سه اصل‌کلید کشف روابط جدید بین‌معماری و طبیعت، معماری وشهرومعماری و مردم یك ملت است. با قراردادن یك‌کریدور شهری روی یك پیلوتی امکان این بدست میآید که طبیعتی‌کوچك ساخته شود بدون‌اینکه منظوری برای قطع رابطه با دنیای طبیعت بزرگتروجود داشته باشد. این فضای بسته نه میدانی است که بین حصار قرارگرفته باشد و نه چون یك حیاط است، بلکه واحه‌ای است‌که در



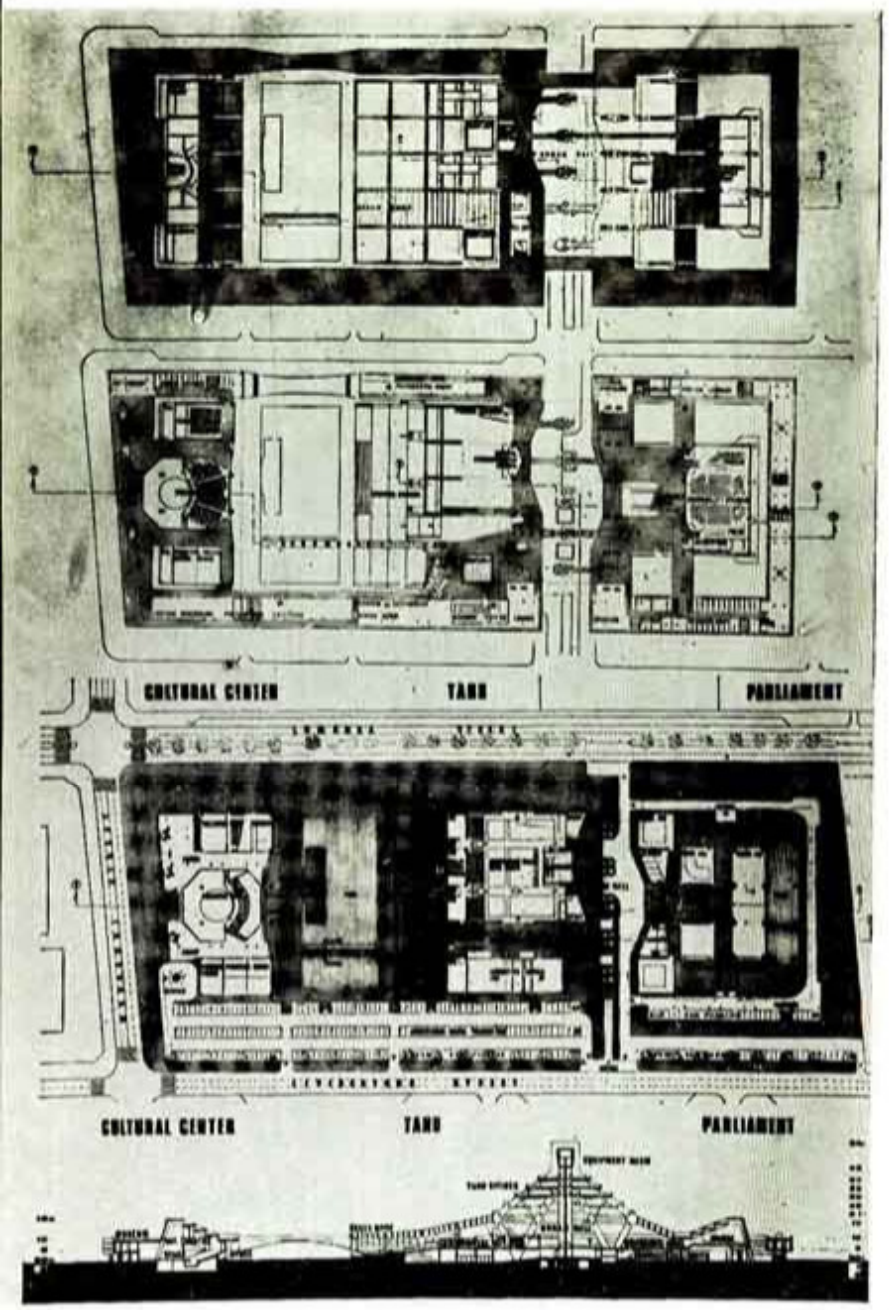
دارالسلام ظاهر شده ، این فضای نیم بسته شامل استخر و یك مرکز فرهنگی برای استراحت مردم خواهد بود.

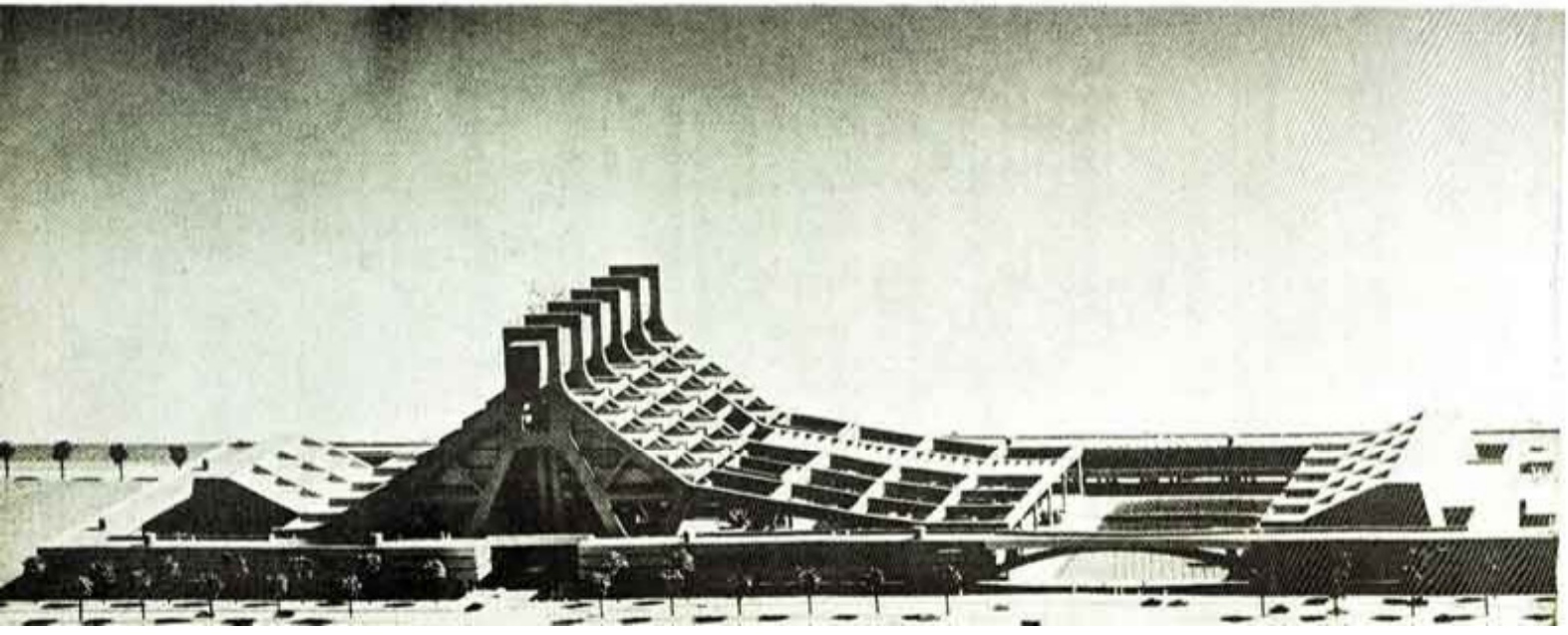
علاوه بر این خصوصیات، در هر حال گریدور شهری که وسیله‌ای است برای اتحاد فرماندهان، سالن اجتماع ملی، وتسهیلات مرکز فرهنگی دریك اشل شهری ساخته شده‌اند.

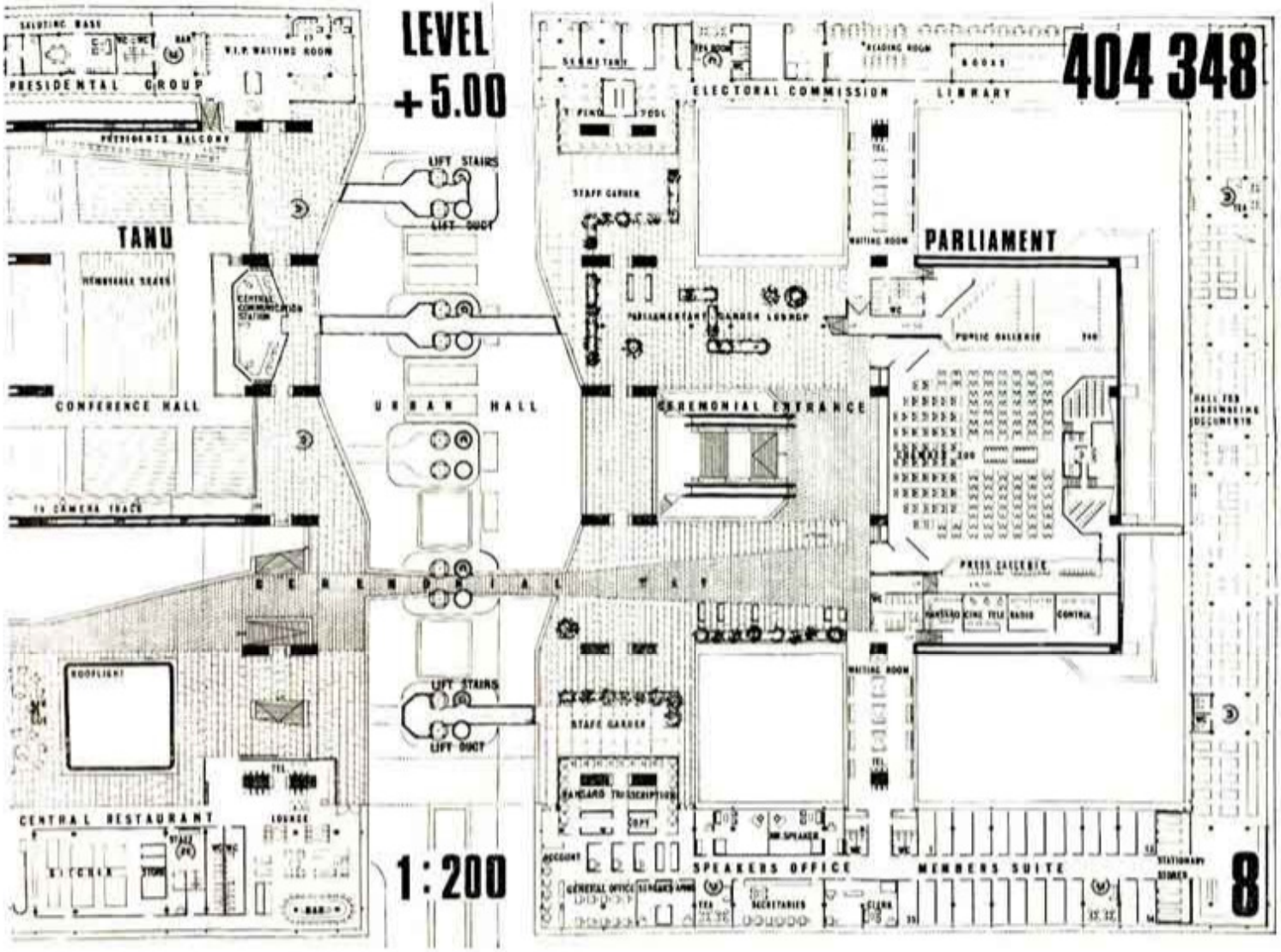
این وسیله شاید کمکی بقدرت و اتحاد دارالسلام باشد، درگذشته من اینرا «معماری خیابانی» مینامیدم.

ولی چنین گریدوری که بیشتر به گریدورهای ژاپنی شباهت دارد می‌تواند راهی جدید برای پیوستگی ساختمانها وشهرها باشد.

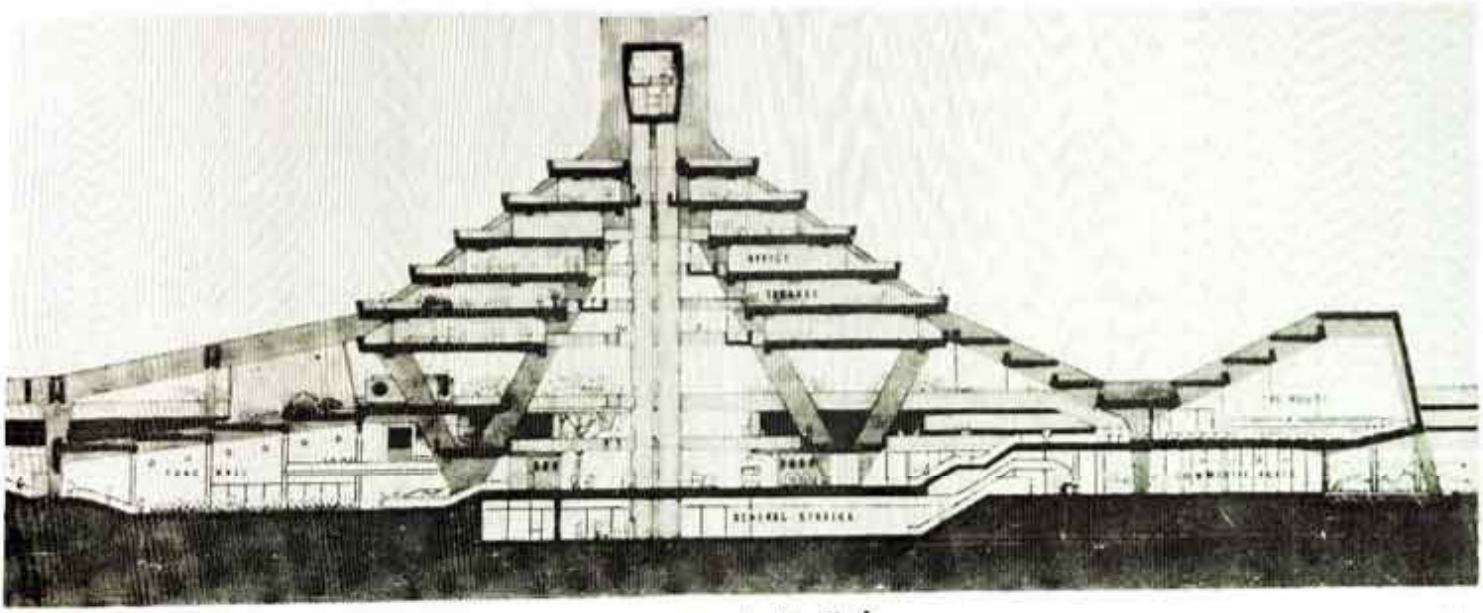
سقف آن ضمن اینکه از تابش آفتاب سوزان تانزانیا جلوگیری میکند ، فضائی برای رفت وآمد بوجودمیآورد که نه ورودی است نه خروجی، و باوجود داشتن رابطه بادنیای طبیعی، بسوی فضاهای معماری نیز رهنمون میسازد. هال اصلی محلی است برای برخوردها و تماسها، نه برخوردهائی که میتواند بین یك گروه معماری وجود داشته باشد، بلکه تحولات بشری بتمام معنی که قادر است این فضا را بصورت مظهری از تانزانیا درآورد.»





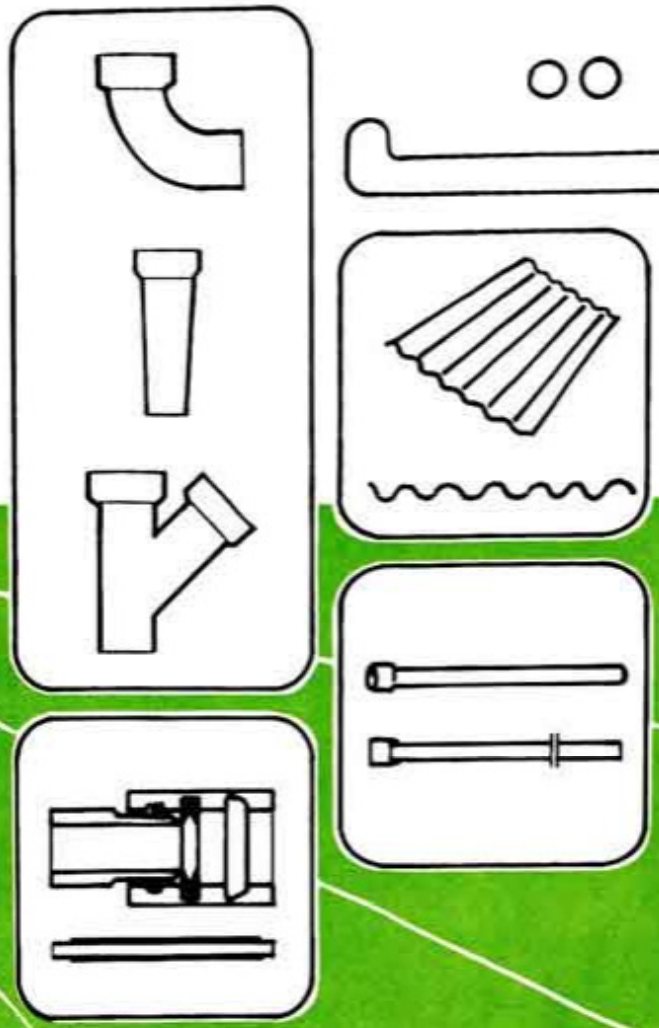


مرکز فرماندهی تانزانیا (طرح پیشنهادی کیشو ـ ن ـ کوروکاوا)



محصولات

ایرانیت



ساخته شده از سیمان و پنبه نسوز

- نمی پوسد و زنگ نمی زند
- سبک با طرز نصب آسان
- عایق حرارتی بسیار مناسب
- با صرفه و غیر قابل رقابت

- ورقهای موجدار برای پوشش سقف با موجهای کوچک و بزرگ
- لوله های ساختمانی با اتصالات مربوطه
- لوله های آب رسانی تحت فشار و فاضل آب
- اتصالات چدنی : انواع زانویی، سه راه و چهارراه

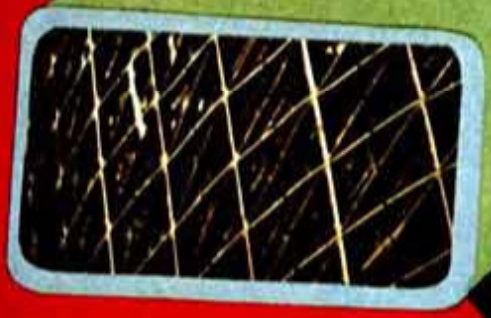
IRANIT

PRODUITS
AMIANTE-CIMENT
ASBESTOS-CEMENT
PRODUCTS

ایرانیت
IRANIT

شرکت سهامی ایرانیت : کوچه بشارت . شماره ۸ ـ خیابان تخت جمشید تلفنها ـ ۸۲۸۴۱ ـ ۸۲۸۴۴۲ ـ ۸۲۱۸۴۶

P. N. S.



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سالن ، کارخانه (با هردهانه وجرثقیل سقفی و بدون جرثقیل درظرفیتهای مختلف) ، انبار، استادیوم ، ساختمان ، گلخانه ، تعمیرگاه ، پل و ضربه‌گیر جاده ها از نظر سرعت عمل و صرفه‌جوئی پروفیل نیمه سبک را انتخاب می‌کنند .

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COMMENT COMMENT CO

Architects have at long last come to be concerned with more than a pleasing facade, a well-designed chimney. We've grown beyond the role of designer of isolated monuments to see our profession in a larger context. All over the world, our profession finds that, by virtue of education and training, its members must share responsibility for attempting to solve many of the critical issues facing mankind today.

This edition of the English language section of the magazine is a look at some of those issues – seven broad topics with which we feel the profession must deal. If the content of these pages seems overly critical, it must be remembered that it is in the nature of Issues that they signify discontent with the status quo. It is only by discussing the problems that we can hope to find solutions.

– There is an on-going storm of controversy about the use of Iranian versus Western design. Which way should we go? Perhaps we would do well to first define "Iranian design" so that everyone can at least understand what the argument is about.

– We must be responsible, too, for keeping what is left in our environment of our great cultural heritage. Perhaps more than others, we architects understand how buildings and places give a sense of continuity with the past, so we must do everything possible to preserve these landmarks and make them a meaningful part of contemporary life.

– Does the public really know who we are and what we do? Not really. It is time for the Iranian architect to demand recognition as the professional he is; but in order to do so, he must first make his clients and the public aware of the necessity and value of his work.

– "Environment" and "pollution" are international catchwords today, but they are valid concerns for the Iranian architect. We, who have the education and training to design and understand the built environment, cannot abdicate our responsibility and sit back, letting the economists, industrialists and others destroy the quality of our urban life in the name of the Gross National Product.

– Housing – a big issue. 1972 is housing year in Iran, 1973 has been proclaimed International Housing Year by the United Nations. This country needs to construct nearly 2 million dwelling units over the next 10 years. Will we leave it to the government to build this housing and restrict ourselves to expensive, private villas? Don't we have a lot to offer in the area of medium-and low-cost housing as well? We must get involved.

– Construction is an issue. No matter how lovely the rendering, a poor construction job can ruin all our efforts, be time consuming and more expensive in the long run. Construction must be scheduled; drawings must be complete and coordinated; architect, engineers and contractor must work together as a team, not in opposition. We need building codes to protect life and property and no one is better qualified than architects to take an active part in creating these codes.

In this edition of the magazine we touch upon these issues lightly. Subsequent editions will be devoted to each of them in turn.

We can point out the issues, discuss them, invite your comments or refutation of any points presented here, even make recommendations. But it is up to the members of the profession to act on the issues. And we *must* act, separately and together, if we hope to reach professional standards.

E. Nader Khalili
Moira Moser – Khalili

COMMENT COMMENT CO

THE ISSUE: IRANIAN VS. WESTER

Western things and western styles have come to symbolize modernity to Iranians. How often does one, sadly, hear, "It's not very good – it's Iranian." In trying to catch up with the western world in economic and industrial development, we have unwittingly adopted western designs as well and too often think of them as valid outward symbols of our progress.

But there are a few, mostly professionals in the various arts, who favor a return to Iranian themes and who, feeling the urgency of combating blind imitation of the West, may even declare that western styles and design *per se* are wrong for Iran. Indeed, "Iranian design" and "Iranian life style" have become the phrases one must utter if one is to be up-to-date in this controversy.

But just what is "Iranian design"? And is it a thing to which we can "return"? Is it the Safavid tilework of Isfahan, the image by which most foreigners recall this country? Is true Iranian design something which existed only during the 16th and 17th centuries and is it limited to a stylized method, admittedly a beautiful one, of articulating a facade?

Or do those who speak of Iranian design mean the desigr of Persepolis? if we go back to the origins of our empire and the grandeur of its ceremonial complex constructed over 2,000 years ago, will we find there the authentic Iranian design?

Or, if authenticity is to be found in something less grandiose than those massive walls and slender columns, perhaps we should look to the villages of Iran? And shall we choose the flat roofs of the foothill people or the buttressed domes of the desert settlements as our symbol?

THE ISSUE: IRANIAN VS. WESTER

N DESIGN THE ISSUE: IRANIAN

The First International Congress of Architects held in Isfahan in 1970 discussed at great length the problem of defining Iranian design. The consensus of opinion of the participants, who included some of the world's foremost architects, was that there is no single, definable Iranian design style.

If Iranian design is not limited to something developed in the past which we should copy now and forever, perhaps we can define it as an approach to meeting the requirements of the country and the life style of the inhabitants. But here we immediately come up against another problem: Just what is the Iranian life style? Mention the phrase and people will nod their heads knowingly, but they cannot define it.

The Iranian life style is more than a type of toilet and a balcony for every apartment. *It is a relationship to nature, an attitude toward the use of spaces, a concept of privacy, a tradition of family.* We will learn far more about our life style if we study our poets and philosophers than if we look with uneducated eyes at our wealth of historical architecture. Then we will see that Iranian designs and styles have evolved out of the Iranian culture.

It is because of this close relationship between culture, life style and design that it becomes important to develop "Iranian solutions for Iranian problems". When western fashions of building and planning are blindly copied in an attempt to be "modern" and "progressive", the Iranian design values may very well be lost and the life style forced into foreign ways. It is not good to simply imitate the West, but neither is it realistic to imitate ourselves. Just as Safavid architecture is different from that of the Acheamenid Empire because of different values and requirements, so must today's architecture in Iran be developed of fit today's life and today's needs.

There are, of course, many elements of traditional Iranian design upon which we may draw in principle — fenestration designed to combat the heat and glare of the harsh, summer sun; color used to create a man-made environment in contrast to the baked brown of the desert; stylized design, geometric and abstract, to cover surfaces in planar fashion as if they were carpets; natural ventilation systems to take advantage of every breath of air. These, and more, are the types of things we must study and understand in order to develop today's Iranian design.

Too often it seems that in trying to recapture a national style we have fallen into our own trap and have come unconsciously to see ourselves through the eyes of the tourist looking for something "authentic and traditional". We feel limited on the one hand to something like Isfahan's Shah Abbas Hotel, which may justifiably exploit historical style for its "Persian-ness" only because it is converted from the old Mader Shah Carvansarai and which is clearly intended for those who want to stay in "an authentic Persian atmosphere", as the guide books say. On the other hand we may choose Tehran's Imperial Hilton of non-descript International style, clearly designed for foreigners who prefer the familiarity of home. Both of these complexes are good in their own ways and they are both valid for the tourist trade, but *we cannot limit the range of our architectural design in all fields to historical Persian or ubiquitous International.*

Where is our contemporary Iranian style or regional styles? The closest we seem to have come to it is in the area of what we might call modern folk art or craftsmanship — the designed metal gates one finds in the cities. Although originally adapted from Europe, and one might therefore classify them with other copies of western style, the abstract designs embellishing these gates, combining curved and angular themes and terminating with non-western unexpectedness, are uniquely Iranian. There are a million gates with a million different designs.

N DESIGN THE ISSUE: IRANIAN

VS. WESTERN DESIGN THE I

Perhaps it is because the craftsmen of these gates are relatively uneducated and unworldly that they have been able to evolve this unique, indigenous style. But whatever the reason, it is sad that our educated, worldly, sophisticated architects have not yet found themselves capable of such inventiveness.

Of course, one must not laud the simple man at the expense of the educated professional, for we find that it is precisely among those who have newly reached middle class status that blind imitation of the West is most flagrant. The growth of the fairly recent middle class, concurrent with the largely western-inspired beginnings of Iran's national growth, was accompanied by a desire for outward symbols of western progress. We thought we had to adopt western ways and clothing in order to "catch up" with the developed countries.

What has been the result architecturally? A multitude of low-rise apartment building with impossible-to-live-in plans, European-style moldings and a mixed clutter of finish materials intended to convey a rich "western" look.

The problem is that once the bigger cities, like Tehran, become full of this psuedo-western style, the small towns blindly copy the superficial features they find in the big cities in order to show that they, too, are progressive. And so the whole nonsense is soon filtered down to the village level, the last bastion of indigenous Iranian design today, and is spread across the land.

Of course we must be modern and progressive. Of course we must be aware of what is going on architecturally in the rest of the world. But in order to develop valid contemporary Iranian design styles, we must reach back deeply to our cultural roots and study them for the Whys and Wherefores. Then we may be able to develop an authentic contemporary Iranian architecture.

Wouldn't it be nice if someone copied *our* modern design for once?

VS. WESTERN DESIGN THE I

THE ISSUE: PRESERVATION THE I

In the ever-more-rapidly developing world where mankind's increasing numbers and rising standard of living render yesterday's amenities inadequate today, where the advances of science and technology render today's inventions obsolete tomorrow, it is all too easy to allow our past – our heritage – to be wantonly destroyed in the name of progress.

We speak of the continuity of our language, our literature, our arts as holding us in awareness of the roots of our civilization. Of equal, if not greater value is the preservation of our built heritage – our ancient sites and cities, buildings, bridges, gardens – not as museum pieces to be viewed on a Friday afternoon, but as viable parts of our towns and cities.

The growth of our urban areas cannot and must not be halted simply in order to preserve our past glories, but steps can be taken to assure that progress and development respect and accommodate those ancient districts and structures which must not be destroyed.

Is Iran in danger of losing its landmarks? When a nation is industrializing at such a rapid rate that its GNP increases over 10% annually, when the official policy promotes "modern and progressive Iran" instead of "ancient and colorful Iran" to the outside world, when nationwide industrial development takes priority in National Development Plans, then we can be sure that Iran is in danger of losing its landmarks, through inattention if not by outright destruction.

Developed nations – primarily western Europe and the United States – have found themselves losing their historical landmarks at an alarming pace, or perhaps worse, turning them into parking lots under the pressure *of crowded cities.* Lack of legislation and government polisy to preserve Eng. Hushang Seihoun is a well-known architect actively engaged in practice in Tehran. He is President of the Iranian Architects' Association and past Dean of the Faculty of Fine Arts and Architecture of the University of Tehran. These irreplaceable sites and districts and to provide for their integration with current urban growth have left them unable to compte with the high cost of land and the predilection for inconsiderate design which define the growth pattern of today's cities.

Egypt's Aswan High Dam, undoubtedly necessary to that nation's agricultural development, is slowly inundating some of the world's greatest monuments of the past. Europe's great plazas and squares are becoming parking lots for the ubiquitous automobile. The United States finds that over half of the 12,000 buildings in its Historical American Buildings Survey have been razed and the remainder are constantly threatened by urban economics.

The United States, with a heritage less than 200 years old, is making valiant attempts through both national and local governments to reverse the rapid loss of its historical landmarks. How much more necessary, then, that Iran, with over 2,000 years of cultural landmarks dotting its deserts, mountains and cities, should provide for the protection of its built heritage in the face of the rapid growth enveloping this country – protection not only from outright destruction, but also from the incompatible encroachment of thoughtlessly designed development.

Eng. Hushang Seihoun is a well-known architect actively engaged in practice in Tehran. He is President of the Iranian Architects' Association and past Dean of the Faculty of Fine Arts and Architecture of the University of Tehran.

THE ISSUE: PRESERVATION THE I

SSUE: PRESERVATION THE ISSUE:

The U.S. President's Council on Recreation and Natural Beauty reported in 1968 that "the Nation has failed to save many of its significant historical and cultural sites. An urgent need exists to preserve and restore those which remian. Our young Nation, which has always looked toward the future, already has a valuable heritage; it should protect the outstanding remaining symbols of this heritage for future generations.... Historical buildings... have considerable value in urban design. Their presence in an increasingly dreary urban scene can contribute a distinctive charm. ...old buildings are important when they are a part of whole historical quarters where the atmosphere of the past can be evoked.

"The powers of the city can be used to preserve historic districts. Old buildings can be restored and new uses made of them, and new buildings, compatible in function as well as in architectural form, can be incorporated harmoniously in an environment primarily reflecting past traditions. Accommodations for modern uses often can be made, but care should be taken to preserve the historic setting of the area."

In light of these findings, the Council recommended expansion of government programs for the protection of historic sites and for their "enhancement as assets of urban design".

In the Soviet Union, the Chief of the Leningrad State Inspectorate for the Preservation of Monuments declares, "if we didn't have monuments, we wouldn't have a nation" and the director of preservation work in old St. Petersburg says, "it's our history, the history of the Russian people". People need the familiarity of buildings and spaces to remind them of what their lives have been in the past, to give them an insight into how their lives are proceeding today.

When these buildings and spaces are affected by new development or adjacent construction, it is the architect who must deal with the physical forms themselves,both esthetically and structurally. If Iran is to grow and develop in its urban areas and, at the same time, preserve its unequaled heritage of districts and structures in a viable state, it is of paramount importance that architects with an intimate knowledge of Iran's architectural heritage be included at the point of design decision in such situations.

The consulting or supervisory architect well versed in and sensitive to Iran's heritage can make decisions that no one else is qualified to make. He must be called upon to decide how the old forms can most effectively be complimented by modern forms, which he also understands. He must be concerned with the compatible blending of the forms of both past and present and he must deal artistically with both. To leave the decisions in the hands of architects who, though they may be conversant with modern design and techniques, have little knowledge of or feeling for Iran's architectual heritage, is to place that heritage in extreme jeopardy. Invariably the new, the modern, the progressive will supersede the old, the fragile, the irreplaceable and we will, like so many other nations, lose an ancient heritage which is not only valuable to the rest of the world in a historical sense, but is necessary to the continuity of our own culture.

SSUE: PRESERVATION THE ISSUE:

THE ISSUE: THE ARCHITECT

AS A PROFESSIONAL

The Architect in Iran has too long been at the beck and call of the client, private or government. In fear of losing a commission, he allows himself to be treated like a draftsman instead of a professional. He does too much free work in order to get a contract and then allows the client to dictate contract terms and, too often, the project design. And the architect rarely has an efficient method of obtaining payment for his services. Would a doctor allow himself to be put in such a position?

We have been trained, both here and abroad, to fill a special position, to perform a special service as responsible professionals; but there is no professionalism in our practice. To a large extent, we have ourselves to blame.

How can the public be expected to respect a profession which cannot even evaluate itself? There is no registration of architects in Iran, no uniform criteria set up to evaluate foreign and Iranian degrees and licenses. We have no means to equate the proficiency of an architectural graduate of the University of Tehran with a member of the Royal Institute of British Architects, with a Doctore from an Italian university, with a holder of a United States architectural license. It is pointless to simply tack a diploma up on the office wall; we must judge real knowledge and ability.

Once we have set uniform professional standards for ourselves, we will have a stronger voice and need not necessarily accept whatever the potential client whimsically says or does. We can begin to educate our clients, to show them that their indecision and caprice during the design and construction stages of a project invariably result in greater expense and an extended schedule.

If we are to help our profession progress to a point of competence and efficiency and save ourselves much frustration, we will have to teach the client in Iran how to work with us. This is an area that has been too long neglected. We have allowed the public to believe that the only difference between the client-as-designer and the architect-as-designer is that the architect knows how to use a T-square and triangle.

How many times has someone come to an architect with a large piece of land and said, "Give me a master plan for this. I've just had it subdivided by a civil engineer and the streets are going in now". We must convince the client that he's going about things backwards.

Or take the very typical case of the client who wants to get a building permit and begin construction with nothin much more than the foundation drawings completed. He has no clear idea of what his building will be like and yet he is impatient to start putting it up, as if the work on the site is the only work that counts. Then, as the design progresses, this same person makes continual changes but can't understand why it takes so long to complete his building and why it is now so expensive.

If we hope for more successful projects, we must educate the client, showing him that proper scheduling of construction and purchase of materials from completed and approved drawings will result in both faster and less costly construction. *Only if we take leadership in design situations will we properly fulfill the role of professional for which we have been trained.*

THE ISSUE: THE ARCHITECT

'S ROLE THE ISSUE: THE ARCHITE

IN GOVERNMENT

There are two aspects to the architect's role in government: the role he plays when rendering his services to the government-as-client and the role he can play as public servant.

A very serious problem is being created by the tremendous growth of architectural departments in various branches of the government. *The use of in-house architectural services for the vast majority of municipal and national government projects is killing private practice for all but the few "big" architectural offices.*

We will agree that government offices must have architectural representatives to coordinate construction projects, but the actual architectural work should be done by private firms. Design is inevitably superior, less costly and more successful when it comes from outside of the bureaucratic systems of government. Around the world today, government architecture is notoriously mediocre and Iran, with so many government construction projects, may be in of creating a glut of mediocrity across the land.

The government is our biggest builder, both in the size and quantity of its projects. And as in industry the government is encouraging more and more private participation and private development and is handing over large parts of its own industries to the people, so, much of the government's work in construction, including architectural design, should be taken out of bureaucratic offices and given to the private sector.

The government should also look around its home territory for the special consultants needed on many projects. *It has become a trend, a matter of status and prestige to employ "foreign expertise".* But we have innumerable specialists, many of them foreign educated, right here at home.

'S ROLE THE ISSUE: THE ARCHITE

CT'S ROLE THE ISSUE: THE A

Let us take His Imperial Majesty the Shahanshah's admonitions to government regarding industry and apply them to the work of our own profession as well: **Give more of the work to the private sector and encourage their participation. Seek to use the talents and expertise of Iranian rather than foreign firms and specialists and, where the expertise does not yet exist here, help it to develop.** If we allow the government and foreign experts to monopolize the practice of architecture in Iran, our own talents will atrophy and we will become a nation poor in design and increasingly dependent on outsiders.

AS A PUBLIC SERVANT

How can we bring about a change so that more government work goes to private firms? By becoming active in government ourselves and taking positions as decision makers. Architects in government have, so far, usually restricted themselves to working as architects for a ministry or municipality, but in this position they are typically frustrated by their lack of influence or decision-making power over even the daily work they must do themselves.

We need more architects as city councilmen, as ministerial undersecretaries, as directors of agencies. These must be responsible individuals who will not misuse their authority simply to find lucrative commissions for their favorites. By taking positions in the decision-making councils of government, we can influence government to be more concerned with better design and planning, to take action for the preservation and enhancement of our built environment, to encourage better relations with the profession as a whole and, not least, to award more government work to private architectural firms.

AS EDUCATOR

Children know that they can grow up to be policemen, shopkeepers, doctors or nurses, but how many know they can also grow up to be architects? How many know what an architect is or what he does? How many ever wonder how a building gets to look the way it does? Very few, unless there happens to be an architect in the family.

Today's children are tomorrow's clients and, with the longevity natural to members of our profession, many of them may very well be our own clients in the future. It behooves us, then, for ourselves and for the sake of a better built environment, to do our part to introduce the profession of architecture to these children.

You have heard of classes in music appreciation and art appreciation, but have you ever heard of classes in the appreciation of architecture or of the man-made environment? Iran's architects should go, each and all of them, at least once a year into the elementary and high schools and talk to the children. Every architect who designs a new school should go to that school after it is open and tell the students how it was designed and built. The students will then not only learn to appreciate the buildings and the city around them but they will also grow up with some idea of the importance of an architect's work. And then, perhaps, the clients of the future will be better able to cooperate with the architect, to work with him for better buildings and better design.

AS MEMBER OF A PROFESSIONAL ORGANIZATION

As in every country, we have a professional organization – The Iranian Architects' Association. This organization is an opportunity of which we have not yet taken advantage, a chance to make our voice heard strongly as a united profession.

CT'S ROLE THE ISSUE: THE A

RCHITECT'S ROLE THE ISS

But an organization is only as strong as the united cooperation of its members. And though the IAA makes attempts at representing the profession, the membership tends to regard it as a social club.

The "active" membership changes with the current president and board of directors, those who are personally "for" the group in command attending meetings and those "against", dropping out and not participating at all. Any professional organization deteriorates into a clique when its members operate within such narrow limits of petty jealousy.

Iranians are perhaps the world's greatest individualists, but as individuals alone we cannot hope to better the conditions of our profession. This can be done only with the strong and unified voice of our professional organization and it won't happen until we can put aside our differences and begin to support and actively participate in the IAA.

If we will allow it to be spokesman for the profession, the IAA can help us educate our present and future clients, can assist us to play a stronger role in government projects, can do much to enhance our image as professionals. A strong professional organization can, in fact, be of great assistance in confronting and solving each of the issues discussed in this magazine. It can lead us in the way of diversity, teach us the language of international finance and construction, foster teamwork between architects and contractors to achieve more successful projects, and much more.

RCHITECT'S ROLE THE ISS

THE ISSUE: ENVIRONMENT THE

Now that we have achieved a reasonable amount of industrialization in Iran, now that we have begun to connect all points of the country with paved roads and have brought piped water and electricity to many of the villages, we have found that it is time to be concerned also with the *quality* of our human environment.

We are particularly concerned with the relationship between the urban environment and the quality of urban life. Various groups and agencies are taking action in specific areas of environmental problems, but the efforts are not yet coordinated as a whole.

One cannot isolate a particular environmental ill and treat it as a separate problem, believing that the solution to that problem alone will give us a better life. The environment as a whole is an ecological system and ecology, by definition, implies interdependance and mutual relationships. Who is better equipped by education and training than the architect to explore these relationships, to lead discussion concerning the present and future quality of the total built environment?

It used to be that the architect's major interest was in designing a beautiful facade, creating a monument to the owner, making each building a separately superlative structure. But now we've found that all those separate structures together make a city and that their aggregate effect on the people who use them and come in contact with them is of major importance. If we are to consciously design the future built environment rather than allow the uncontrolled forces of industrialization and growth to shape that environment for us, then the architectural profession must act as guide.

THE ISSUE: ENVIRONMENT THE

We must think of the design of our cities in terms other than the simple, graphic master plan with renderings of urban shopping centers. As architects we give the urban environment much of its visual aspect; we must also assume some responsibility for the condition in which the cities find themselves.

One smoking flue in a village, one bottle thrown carelessly by the roadside may be hardly noticable against the vast backdrop of nature; but *when we are concentrated together in cities, the effects of our dirt, in whatever form, and of our carelessness are more glaring, the ills are magnified.* If a city is to offer its residents "the good life", it cannot be designed and operated on the basis of statistics and economics alone.

URBAN LAND SPECULATION

What are some of our concerns regarding development of the metropolitan environment? Land speculation is a major concern because of its debilitating effect upon well-balanced growth. When many owners simply "sit" on their city land, waiting for the price to go up, these empty parcels force uncomfortably high densities and misuse of land in other areas. *City planning and land use studies become meaningless when the land remains undeveloped.*

In an effort to prod owners into developing their parcels within the existing city limits, the Tehran municipality has refused to grant building permits for projects outside those limits until the inner parcels are built upon or walled in. There is the danger, however, that this will further escalate the price of land because the available supply beyond the city limit has been put out of reach. And the problem will become worse instead of better. Perhaps more effective would be the proposed increase in taxes on undeveloped urban land.

ENERGY AND NATURAL RESOURCES

The architectural profession must also be concerned with the inefficient consumption of energy and natural resources in the operation of the city's aggregate built area. The more electricity we use – and waste with inefficient equipment, the more water is needed or gas is burned to generate that electricity. As our standard of living increases, we each use more water, gas and power every day. Our natural resources do not multiply to meet our demands, but the pollution and waste generated by our consumption do increase. *The total of waste and pollution from separate energy systems designed for separate buildings is greater than would be the total for planned, combined, multi-use systems.*

With an ever impending water crisis in Tehran (available sources adequate for a maximum population of 5½ million in a city already rapidly approaching 4 million) and other cities of the Iranian plateau, how much water can we afford to waste down flush toilets? An "aftabeh" requires very little water and, although we would not advocate denying flush toilets to the population, perhaps we should look for an alternative to this wasteful use of our natural resource. In a country notoriously short on water, it behooves us to develop systems which will re-use the same water as many times as possible and in the most efficient manner.

VIRONMENT THE ISSUE: ENVIRO

In a country just creating a national power grid, we should develop integrated power systems to allow energy trade-offs on a national scale and multi-use on an urban scale. With the establishment of generating stations at our dams creating pollution-free energy and the use of natural gas, with a low-pollution index, for additional generating capacity, Iran has the opportunity to become a leader among nations in the struggle to produce clean energy.

It is up to the architect to look for design solutions optimizing the efficient use of energy systems, to require better systems of his engineering consultants and to realize that environmental engineering is an important factor in environmental design.

NATIONAL URBAN POLICY

Having been established by government agencies responsible for improving Iran's annual increase in Gross National Product, the nation's urban policy is, quite naturally, based on industrialization and the development of job centres. This is all well and good, but city life is more than money in the pocket and a steady job. *As architects we must promote aspects of urban policy dealing with patterns of urbanization as they affect the quality of life – there is no other profession adequately trained to do this.*

It is sad but true that developing nations, like children, seem unable to learn from their elders but must make the same mistakes over again. So we congratulate ourselves on a rate of growth of GNP even greater than that of Japan, forgetting that Japan's urban areas are now suffering the dire consequences of their perhaps too rapid economic growth and forgetting, also, that the money spent to correct our mistakes contributes just as much to the GNP figure as does our real increase in production. *We see industrialization as the symbol of an advanced society and forget that very soon we will find, as the industrialized nations have already found, our resources nearly spent, our land polluted and our values questioned.* We must be careful and try to learn from the mistakes of others.

Yes, we must have progress, but what kind of progress? Perhaps we should stop and re-think our concepts of "city". What is it that draws people together in urban agglomerations and what keeps them there? Do they really need to be massed together in crowded cities in order to perform efficiently as producers and consumers and are these roles the most important ones we can offer our citizens? Don't the possibilities opened up by instantaneous world-wide communication, such as education and information via telephone and satellite or nearly personal contact via television and holography, modify some of the traditional reasons for large cities? A national urban policy is a plan for the future and we must ensure that it is not limited to today's possibilities but is based on the technology as well as the needs of the future which begins tomorrow.

VIRONMENT THE ISSUE: ENVIRO

NMENT THE ISSUE: ENVIRONME

NATURE IN THE CITY

"Nature is lost quickest in a big city. The cause is geometrical, not moral. The straight lines of its streets and architecture, the rectangularity of its laws and social customs, the undeviating pavements, the hard, severe, depressing, uncompromising rules of all its ways – even of its recreation and sports – coldly exhibit a sneering defiance of the curved line of Nature." **O'Henry.**

Iranians are great lovers of Nature and even those living in cities are not many generations removed from villages where Nature was at the doorstep. Therefore, keeping nature in the city is of even more concern to Iran's architects than it would be to, let us say, Europeans who have been urbanized for generations.

We need more parks – whole systems of parks and pedestrian ways throughout our metropolitan areas. The people stroll and picnic on every tree-lined avenue (witness Isfahan's Chahar Bagh or the streets of Shemiran in the summer) and throng what park-spaces there are, but it is not enough. Tehran is building a major park in the south of the city, which will help if they will allow people to sit under the trees or picnic on the grass and will not confine them to asphalted pathways as in most parks. But you can't air-condition a park and the people from the south of the city will probably continue to go up to Shemiran's cooler streets in the summer.

We need not just one large park to stand as a monument to public works but many smaller ones all over the city as oases in the midst of congestion. We need parks integrated with other community facilities such as Yousefabad Park in Tehran which is integrated with a library – and also happens to be designed for use by non-ambulatory persons, a rare consideration in Iran.

There is a sense of desperation in the massive Friday exodus from the city in search of a tree and a stream. It is as if the urban dwellers are virtually starved for a touch of Nature. We can and should bring it to them in the city.

The quality of our environment is really an international concern, and Iran can be proud of its participation in the International conference on the environment held in Stockholm in June of this year. But we must begin to solve the problems on a national scale and realize that ecology is related to regional planning, that the quality of the built environment is related to the design of cities.

More has been done nationally than most of us are aware of. The Game and Fish Department has set aside 35 wildlife parks and protected regions totalling 4,500,000 hectares, an area larger than Switzerland, and has made major advances in protecting our wildlife and waterfowl, a measure which will become increasingly important as we become more and more an urban nation. In addition, it was announced in Stockholm that an international wildlife sanctuary has been established near Shiraz, the first of its kind.

The Game and Fish Department has now been renamed the Department of Environmental Conservation and its responsibilities have been extended to include additional aspects of Iran's environment such as pollution control and land use. We sincerely hope that its record of progress and action under its new name will equal what has gone before.

One day we may be a nation proud not because it has the biggest GNP or the most industrialization or the largest cities but because proportionately, it has the greatest amount of land devoted to parks, wildlife reserves and protected open space in the world.

NMENT THE ISSUE: ENVIRONME

THE ISSUE: POLLUTION

THE ISSU

It seems that as we grow, we get dirty. As our standard of living rises in economic terms, the quality of our environment deteriorates. Our air becomes dirty, our water is foul, we can't get away from the noise in the city, solid waste from our homes and industries piles up in threatening mountains, and the potential beauty of our urban environment is marred by careless visual atrocities. The cities, to which we gravitate for work, excitement and an urbane way of life, become dusty, dirty, noisy, ugly places to live.

AIR

Our master plans bring together thousands or millions of people, provide nearby industrial sites for their jobs and give them speedy expressways for the long home-to-work trip the city plans inevitably require; and all these factors have a hand in creating air pollution. As designers we, too, are responsible for the smog that dirties our buildings, kills the trees that shade our streets, stings our eyes and damages our lungs.

Tehran, the worst offender, is installing new air pollution measuring devices. The government has planted a green belt of trees around the city designed to produce clean oxygen for the population. There are several voices in Parliament and the press calling for improvements in the condition of our air. We hope that soon the talk will turn to action.

NOISE

We must continually question the environmental effects of our urban, industrial and technological development. How much more smog does each new expressway bring into the central city? How much traffic noise can the human organism tolerate when residences are constructed next to freeways? We should zone the land adjacent to freeways for other than residential construction for, although they may be relatively free from traffic now, the freeways will be crowded with too many automobiles sooner than we think.

THE ISSUE: POLLUTION

THE ISSU

POLLUTION THE ISSUE: POLLUTI

Noise is not only a matter of more automobiles, machines and airplanes; it is a matter of land use, siting and construction materials. We must prohibit the construction of homes within airport flight patterns, create buffer zones for freeways and expressways, provide proper insulation for plumbing pipes. We can contribute measurably to reducing the impact of urban noise through both planning and construction.

WATER

Water is scarce throughout most of Iran and it is fitting that the nation's first major anti-pollution law, passed in August, should deal with the pollution of this important resource. The measure prohibits the dumping of garbage and pollutants into all bodies of water (we presume this includes the Persian Gulf as well as the Caspian Sea, rivers, lakes and streams) and provides for heavy fines for violators. It will be difficult to administer this law initially, for the industries, many of them developed by foreign companies whose capital has been important to Iran's economic growth and which have been so necessary to our industrialization, have grown here without thought or consideration for the control of pollution. We will find ourselves in the same uncomfortable position as the developed countries where the problem is one of finding a balance between the need for clean water (or air) and the costs to the nation's industry.

There are many close ties between architecture and the use or mis-use of water, one of them on a major design scale. We all known that open and running water have traditionally been important elements in Iran's landscape architecture, but it has not been until recently that we could develop this particular relationship in a contemporary way. Now, the construction of dams has given us many potential water playgrounds which can be of great recreational value to our city dwellers.

These same dams sometimes alter the disposition of flood plains, critical factors in the annual flooding of villages and towns in an otherwise arid country. When will be learn not to build on flood plains and not to build on the areas which are needed for natural run-off? As architects, we must at least advice against such practices.

SOLID WASTE

The solid waste problem is not immediately solved by the city disposing of our garbage, private and industrial; it is also a problem of educating the public regarding the ill effects of littering. People not only wash their cars and, in sections without piped water, their clothes at the "jubes", they also throw trash and garbage in them. And after a heavy rain, all the accumulated mess is washed down to the lower sections of town where the jubes overflow onto streets and sidewalks leaving a litter of orange peels, old socks, cans and miscellaneous junk everywhere. One recalls the European cities of the Middle Ages where people threw their garbage from upper story windows into the street and the pedestrian, beware.

People seem to think that any unwalled, empty lot or undeveloped section of the city can be used as a public trash dump – witness the heaps piling up in Tehran's undeveloped Abbasabad area or the hundreds of empty plastic bags one finds glinting in the sun like some strange kind of plant on the hillsides. *Our industries are just now beginning to produce what the developed nations are trying desperately to collect and dispose of: cans, no-return bottles, non-degradeable containers. We'd better take a hard look at what we're manufacturing while we still have a chance to avoid further mistakes.*

UGLINESS

When it comes to the visual pollution of our built environment, the architectural profession must take an authoritative position. This is not to say that stylistic criteria for the design of buildings must be set up, for who among us is to say

POLLUTION THE ISSUE: POLLUTI

THE ISSUE: POLLUTION

THE ISSUE

what is beautiful. But it does mean that we must take action against sleaziness and the unkempt aspects of our cities, for we do recognize ugliness – the clutter of signs, the glare of unshielded parking areas, the tawdriness of streets strung with electric wires.

The Iranian people have a marvelous talent for graphics which should be encouraged to produce signing of visual delight rather than confusion. They also have a talent for visual display, as in street decorations made with colored lights – the unique "cheragh buni", and we would do well to take advantage of this natural aptitude in order to enhance the visual quality of our cities. The "cheragh buni", for example, is required many times each year by various holidays and we should provide for this in the design of our buildings rather than simply leave it to be tacked on the outside.

Fortunately, our metropolitan regions are still young. We still have a chance to clean up our pollution before it overtakes us. And more and more groups are recognizing the urgency of the situation: The National Iranian Oil Company conducts a seminar on air pollution, an agreement is made with the Soviet Union to study the problem of pollution in the Caspian Sea, Tehran constructs a plant to convert the city's refuse to fertilizer. But we must follow through with our efforts. One shot deals are no solution.

The smog in Tehran puts it in the catagory of any city of several million, but it isn't as bad as the smog of Los Angeles or Tokyo – yet. Further pollution of the Caspian can be prevented, at least on our side, if we will use discretion in industrializing the coastal region. We still have time to review the freeway and expressway routes of our cities' master plans with an eye to decreasing the impact of traffic noise. And, if we will make our professional voice heard, we may yet protect ourselves from the visual pollution which threatens our urban environment.

A recent report made by the Ministry of Development and Housing through its Housing Organization shows that Iran must construct nearly two million dwelling units over the next ten years in order to give all of the nation's people a decent place to live. That is an average of nearly 200,000 new units each year, a quantity virtually impossible to construct with our time-honored but slow, brick-by-brick methods.

Only 15 percent of this demand is in the upper income catagories, where private capital is willing to invest, while nearly 1/3 of the needed units fall in the lower income catagory and will require major or full government subsidy. It is a situation where the social need is not equalled by the desire to invest – business can too easily find a faster and greater return in other fields.

The nation clearly faces a problem: How can we construct so many units in the short time allotted and, secondly, who can afford to invest in this kind of housing? Some few measures have been taken to encourage private investment in this sector: Many more banks now make housing loans and, occasionally, development terms include what amounts to a guarantee of purchase through the bank, sponsored by the government. The Ministry of Development and Housing will provide land at minimum cost for low- and medium-income projects meeting their cost, area and materials specifications. All these measures help attract capital, but it is questionable whether they can compete with the large profits to be made from industrial investment.

The result is that the private sector leaves the problem to the government, which is constantly initiating projects for 500 or more apartments in major cities throughout Iran in an attempt to house everybody. These efforts are laudable, but the planning is cranked out of central offices in Tehran by employees who have no knowledge of the sites or people for whom they design. They have never been to, for example, Bandar Abbas in the summer and therefore imagine that

THE ISSUE: POLLUTION

THE ISSUE

smaller windows are the only variation needed to make the standard unit acceptable in that infernally hot and muggy climate. Take a standard plan and put slot windows in for the Persian Gulf area and tack on porches for the Caspian coast and you've got the solution, they think. The problem is that the people for whom these units are intended often refuse to live in them, prefering their poorer but more comfortable shacks.

Among private architects are many professionals who are highly motivated to produce good design and successful projects, not only because of their reputations and their pocketbooks, but also because of a professional fascination with problem solving. With their expertise, we might see major advances not only in the quality of mass housing, but also in the quantity.

There has been a great deal of talk about using prefabricated techniques to solve the problems of quantity production, and it is very possible that private architects could offer new and viable programs for prefabricated housing here. Europe, particularly, offers prefab systems using masonry which, at first glance, might be appropriate for use in Iran. However, industrialization of the building process must be carefully adapted to Iranian needs and conditions.

Another aspect of housing which must be studied is the government's policy of constructing only high-density complexes in urban areas. This at first seems logical in light of existing land values, but, as a national policy, what are the sociological consequence? What happens when the generations of a traditional patriarchal family, "overcrowded" in a small, single family dwelling, are suddenly separated and installed in the isolating units of a high-rise apartment house? Does the provision of an accepted minimum square area per person make up for the break in family continuity which results? Is it right to allow our housing policy to force a change in the Iranian family structure from the traditional "stem" family to the typically western "nuclear" family, to change patterns of neighborliness, to isolate people *en masse?*

The argument is that high-density is necessary because of the high cost of urban land. But this high cost is a result of rampant, uncontrolled land speculation which has spread like a disease through our urban areas. Instead of applying a high-density "bandage" to the sore, we would do better to treat the disease itself. How morally correct is it to change the sociological patterns of the nation's family life simply so that a minority of land owners may get rich? Proper housing must be provided, yes, but not at the expense of a life style and for the profit of land speculators.

Fortunately, attempts are being made to dampen urban land speculation through application of higher taxes for undeveloped parcels and through offerings of government land at minimum prices for housing projects conforming to government requirements. But it is quite likely that even more stringent measures will be necessary before we can economically afford to construct lower income housing at lower urban densities.

In an attempt to upgrade the quality of low-income dwellings, the Ministry of Development and Housing has developed minimum housing standards for projects seeking government loans and (presumably) for their own projects. These standards deal with materials and with area per person, which is good in principle, but they also dictate number of

HOUSING THE ISSUE: HOUSING

stories and lot size, which may come too close to regulating living conditions beyond the point which is sociologically acceptable. We need minimums for area, sanitation, materials and amenities which are realistically applicable to the lower-income groups in our urban society and are not simply middle-class systems superimposed on the hapless public in a regimented fashion. The government is doing its best to build the required housing, but if people will not live in the units or live in them uncomfortably, mere numbers of dwellings constructed will not constitute success.

One problem which we cannot avoid so long as we expect the government to construct most of our housing is the mediocrity which inevitably is the mark of government design, be it that of the Russian government or the Iranian. It seems that all over the world, as soon as the designer's job is protected by the civil service system and is no longer directly dependent upon his ability and as soon as the anonimity of government employment protects his reputation, the design quality suffers.

Another problem is the lack of "feed-back" from projects already built. Repetition of design mistakes could be avoided and new projects could thus be more successfully built and maintained if the time were taken to go back and check the efficacy of design solutions in practice. Do the occupants use the spaces as they were intended? What have they added or altered that can be incorporated in subsequent designs?How well do the materials withstand use? Thousands of dwelling units produced over time very nearly become a manufactured product and, like most products which are successful, each "new model" should be an improvement over the old.

But as long as no one in the government's housing offices is responsible for design decisions, there will be no long-term motivation to improve design. In order to get fresh viewpoints, new ideas and responsible design, the government would be better off to let cor racts for this work to architects in private practice.

There is another side to government housing that also may have strong sociological ramifications if we are not careful and that is the tendency of various ministries and agencies to construct housing in separate complexes for their own employees Such sagregation by occupation can easily result in civil service enclaves just as debilitating to a well-balanced home and community life as are enclaves developed by income or age group (e.g. senior citizen communities in the United States). We should learn from the experience of Brazilia that government employees do not like to come home from the office to a neighborhood of co-workers.

As things now stand, the architect in private practice has little to say about these problems. His work in residential design is fairly well limited to private villas and high-income apartments. Undeniably, we do have good examples of residential design in the wealthier parts of the cities and the Saman Apartments in Tehran are as good an example as one will find anywhere of sophisticated, high-rise urban living.

But there is no reason why good architectural design should be limited to the upper income groups; it is in the hand of the government to give contracts for the design of low-cost housing to private firms. If they would do so, they would undoubtedly find that Iran's architects can come up with unique and viable solutions to the nation's housing problems.

THE ISSUE: HOUSING THE ISSUE: HO

THE ISSUE: CONSTRUCTI

Building codes, quality control of materials and systematic supervision of construction are three fields badly in need of development in Iran. At this point in time, they are virtually non-existant and their absence has as great a detrimental effect on contemporary Iranian architecture as their well developed presence would have a positive effect. It is difficult to convince a client of the need for emergency exists in his office building when there is no code requirement for them; it is futile to design a lovely brick home if the bricks spall the first year; it is frustrating to have to revise plans during construction because no one coordinated the duct runs with the structural drawings.

CODES

In a land where earthquakes annually take their toll in lives and destruction of property, it is shamefull that there is no proper building code. The Ministry of Development and Housing recently outlined regulations for building materials to be used in structures of certain heights, which is a step in the right direction, but there is no mention of how these structures are to be held together except for a vague reference to withstanding earthquakes and high winds. This cannot be called a building code.

The recent earthquake between Shiraz and Bandar Abbas which left villages and towns in heaps of rubble vividly illustrates the futility of using modern materials when they are not properly tied together. The structures of kiln-dried brick and concrete beams collapsed just as efficiently as the mud brick and mud roofed houses. Quite naturally, the heavier weight of the concrete members took a greater toll in lives. The sad result is that the public, not being aware of the building techniques needed to withstand earthquakes, erroneously concludes that traditional mud brick construction is safer than modern construction.

THE ISSUE: CONSTRUCTI

ON THE ISSUE: CONSTRUCTION

With one hand we send relief teams to help the earthquake victims – we've had to do this so often that we've become quite proficient – and with the other we still allow construction which will collapse just as readily in the next 'quake.

Our major cities are no better. Tehran's Code deals only with the ratio of building area to lot size, with required parking space and with materials for tall buildings. There is nothing to prevent the dangerous use of "cheaper" building techniques too often employed by developers and contractors such as omitting fire exists or supporting structural beams on adjacent buildings.

But when we do go about writing a code, it should be compiled by practicing architects, engineers, contractors, researchers and businessmen with the government taking a supervisory position. A combination of information from other codes around the world and the experience of our own people in the building industry is necessary; theoretical knowledge alone is a poor tool.

Materials and construction techniques must be regulated for the safety of life and limb, beginning in our urban areas. You can't administer a building code for a city of nearly 4 million on an *ad hoc* basis.

QUALITY CONTROL OF MATERIALS

The local United Nations representative at the Plan Organization and U.N. teams who have visited Iran have been advocating for some time that we develop a Building Research Center not only to study construction techniques but also to grade our building materials and equipment and to look for ways of improving them. (Reports on this subject may be found in the United Nations office in Tehran). Such a Centre is urgently needed here. There is a tremendous amount of building activity going on in Iran, but there is no reliable authority to check the quality of the materials which are available for new structures.

Brick, Iran's traditional and most often used building materials, ranges from good to bad with no uniformity of quality. Bricks often spall or virtually "melt away" in one winter's rain and, because there is no quality grading, one must simply learn from experiences which companies provide decent masonry units. Even the Brick Producers' Association does not seem to have taken responsibility for setting standards and for grading the quality of its members' products. Brick, of course, is not the only material at fault, but it serves to illustrate the problem confronting us.

A Building Research Centre which would classify construction materials according to quality, provide quality standards and see to it that those standards are met would be of great help to the architect, and the contractor as well. And the availability of dependable materials would help to improve the quality of our buildings in general.

CONSTRUCTION SUPERVISION

How often have you seen a pipe plastered over in the upper corner of a room because someone forgot there was a structural beam in the ceiling there? It is inexcusable that someone should forget or that architectural, structural, mechanical, electrical and plumbing drawings should be so poorly coordinated that mistakes like this become commonplace. In the first place, construction documents are often too poorly detailed to enable total coordination. In the second place, no one seems to want to take responsibility for such coordination. This is clearly the job of the architect, who is head of the design-construction team and who must insure that the contractor actually builds according to drawings.

ON THE ISSUE: CONSTRUCTION

THE ISSUE: CONSTRUCTION THE ISS

But lack of drawing coordination is not the only problem with our approach to construction. Too many buildings require an unreasonably long time to get built and then are disproportionately expensive because construction was begun too soon. The prevailing attitude is that the sooner the construction crews start, the sooner the work will be finished. Clients often don't realize that to begin a structure with no clear idea of the end result and then to continually make changes in design while the building is on the way up is to work in the most inefficient way possible.

The only way the architect can stop this trend is to educate the client and to write into the contract that construction documents must be completed before construction commences. The one workable alternative to this is the use of the Fast Track method which overlaps design and construction phases in a specific and highly sophisticated way and increasingly reduces the options for design change at incremental stages.

Fast Track is not the only way to get a building up quickly. If construction documents are fully detailed, complete and coordinated, the Critical Path Method of scheduling construction and purchase of materials will see a building completed in the shortest time possible. CPM has been used a few times in Iran, so we know that it works, excuses about materials supplies and unskilled labor notwithstanding.

There are many other aspects of the construction phase of building which should be improved. Temporary barricades must be required for all construction sites, not just for a few in the central business districts, and they must be designed so that the pedestrian is not left without a sidewalk. Materials must be stored on the site in such a way that they do not interfere with traffic on sidewalks and roadways. Present practices waste much material and this is primarily the contractor's responsibility, but the architect must require better practices of the contractor.

If we can attack some of the problems in construction pointed out here and find solutions, we will do much on the practical side to make the practice of architecture better in Iran.

THE ISSUE: CONSTRUCTION THE ISS

بخش انگلیسی

english section
art and architecture

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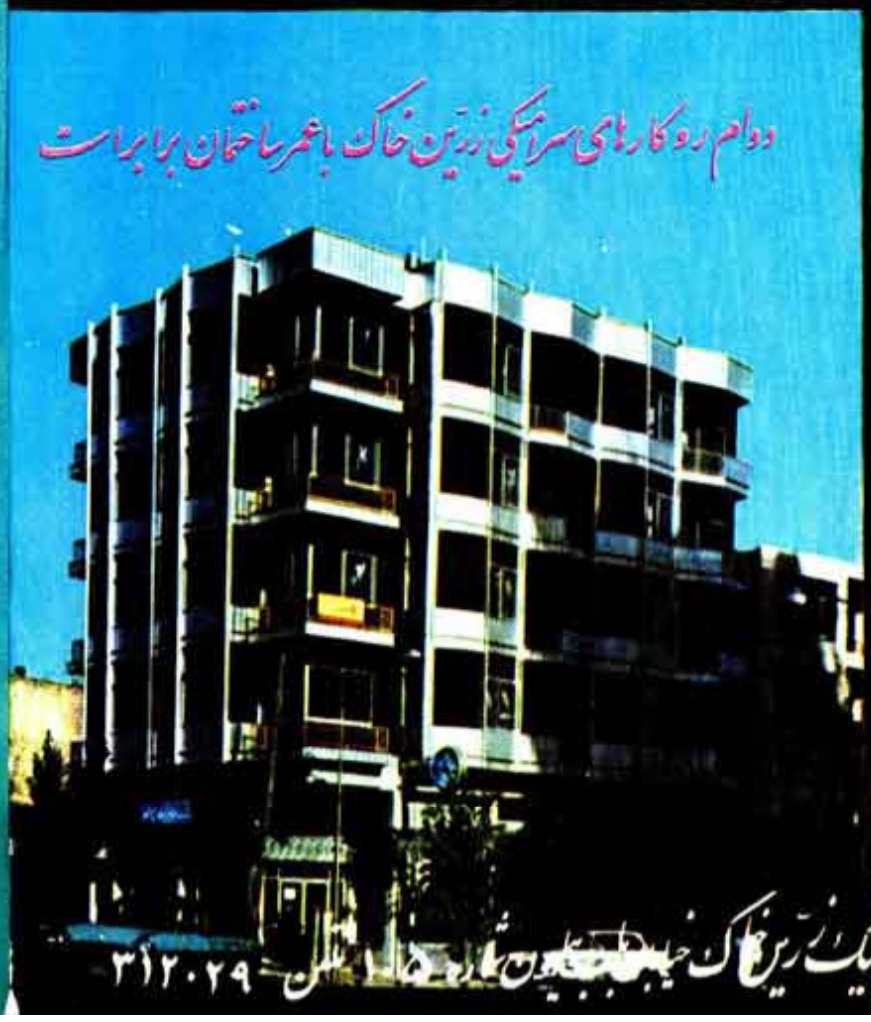

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LE SIMPLE ET LE NOBLE

LES DÉBUTS D L'ISLAM

650 – 1000 A.D.

Avec la vitesse et la violence d'un tourbillon du désert, les Arabes surgirent de leurs demeures ancéstrales, brisèrent la puissance militaire de la Pérse à Nihavand en 637 A.D., et, en l'espace de quelques années, envoyèrent les souverains sassanides survivants se réfugier en Chine. Assez curieusement, la continuité de la vie pérsane ne fut aucunement bouleversée, et les éléments essentiels de la culture sassanide continuèrent d'opérer. Les forces conquérantes de l'Islam n'imposèrent aucune architécture, car elles n'en avaient aucune à imposer. Cependant, l'architecture sassanide, pleine d'invention, audacieuse et impréssionnante comme elle le fut, comptait trop, à cause de ses formes essentiellement structurales, sur les masses inértes pour s'assurer la stabilité. Ce fut le fait de la Pérse islamique que de raffiner ces formes puissantes et de développer leur potentiel en une architecture d'une extrême beauté. Le résultat devait en être plus léger, plus sensible, plus varié et plus expréssif que jusqu'alors.

L'organisation de l'empire islamique, dominant une région culturellement fort diverse, ouvrit de nouvelles voies de communication, accroissant ainsi les échanges commerciaux et créant une économie expansive. Un besoin urgent se fit sentir de nouvelles constructions, laiques et religieuses. Partout, il fallait bâtir des mosquées, des collèges, des tombeaux, des ponts, des forts des hôpitaux, des caravansérails et des bibliothèques.

L'Islam proclamait à la fois la fraternité de tous et la paternité de Dieu, donnant une nouvelle dignité à l'homme commun en le revalorisant. En Iran, la conversion a l'Islam se fit par la pérsuasion plutôt que par l'épée. L'Islam devint alors la préoccupation centrale de l'esprit persan. Remplacant les palais grandioses qui avaient si ostensiblement proclamé l'orgueil et le pouvoir des rois, la mosquée, avec son caractère plus commun et plus démocratique, prit rapidement une place aussi importante que la cathédrale dans l'Europe médiévale.

De la mosquée s'élevait cinq fois par jour l'appel à la prière commune, et, le vendredi, l'appel à la présence. Mais la mosquée est ouverte à chacun, et à toute heure. Elle appartient à tous les musulmans, et le vagabond dénué de tout a autant droit à son hospitalité spirituelle et physique que le plus fier des princes. En outre, la mosquée devint l'institution de base pour la diffusion de l'instruction du niveau le plus élémentaire à la philosophie la plus sophistiquée, en passant par les conférences populaires. Un collège, la "madresseh", y était souvent attaché, et chaque mosquée possédait sa propre bibliothèque.

La mosquée servait souvent de cour de justice. Les scribes y faisaient un commerce florissant. Certaines parties du complexe de la mosquée étaient même utilisées comme prisons ou comme morgues. La mosquée devint peu à peu le véritable centre de la cité. Elle était une "civitas Dei" au sein de la "civitas mundi"

Quant à son architecture, la mosquée était toute centrée sur une cour intérieure, conçue pour être sénarée du monde extérieur et accroître sa concentration intérieure. La répétition des éléments, arcades ou colonnes, lui donne une cohérence qui en même temps définit son but: l'accomplissement de la sorte la plus profonde d'unité. C'est vers la mosquée que convergent à la fois la vie et la pensée de la communauté

Presque immédiatement après l'implantation de l'Islam en Iran, de nombreuses constructions surgirent de terre. Celles-ci devaient utiliser les matériaux, les techniques et les styles locaux. Aucun édifice persan des deux premiers siècles de l'Islam ne subsiste pour le certifier, mais les descriptions contemporaines nous en apprennent beaucoup. Ainsi, nous savons que ces premières mosquées, souvent d'ambitieuses entreprises engloutissant des sommes fabuleuses, continuèrent les anciennes traditions architecturales de la Perse, à l'ornementation somptueuse.

Il y avait trois types fondamentaux de mosquées:

- *le pavillon,* un dôme surmontant une chambre carrée (le temple du feu sassanide adapté au rituel islamique)
- *l'iwan ouvert,* simple voûte en berceau, tradition de Taq-e-Kisra.
- *la cour ouverte,* appelée plan arabe, et entourée d'arcades.

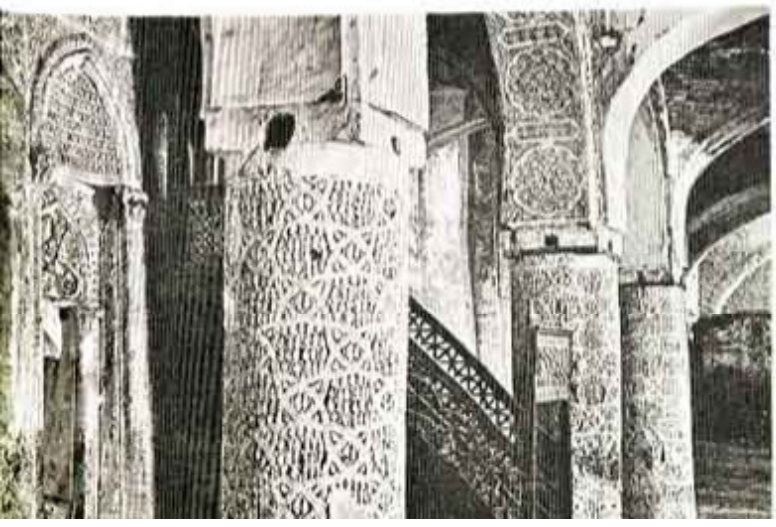
Eventuellement, ces trois types particuliers peuvent se trouver réunis. Dans l'espace de 3 siècles, maintes mosquées importantes furent construites, pour ne pas parler des caravanserails, bazaars et autres constructions. Peu ont survécu, mais des comptes-rendus contemporains parlent avec enthousiasme de ces mosquées pour leur beauté, leur décoration somptueuse et leur taille impressionnante. Jusque vers la fin du 4e siècle, les édifices sassanides, encore abondants dans tout le pays, servirent de modèles aux nouveaux bâtiments.

Exception faite de quelques murs en ruines et de quelques fondations mises à jour, le petit Tari-Khané, à Damghan, construit aux environs de 760, est le plus vieil édifice islamique existant en Iran. La disposition suit le plan

Tari-Khané (Damghan) le plus vieil édifice islamique existant en Iran

typique de la cour intérieure: une cour vaste, presque carrée, entourée des arcades de voûtes en tunnel, posées sur d'immenses môles circulaires de près de 4 mètres de hauteur et de 2 mètres de diamètre. L'ensemble de la structure est simple, et donne une impression de grandeur et de souveraine beauté. C'est l'un des plus splendides édifices de la période islamique, d'un style purement sassanide. La seule innovation réside dans les arcs légèrement en ogive, les premiers de cette sorte relevés en Iran.

L'architecture de cette période s'engagea dès lors vers les effets décoratifs abondants et chargés, le travail du stuc polychrome, exubérant mais sophistiqué. Les tous premiers fragments existant encore sont admirables de beauté et d'élégance: à Nishapur, probablement vers la fin du 8e siècle, à la Masjed-e-Jomeh de Chiraz, vers la fin du 9e siècle, et à la Masjed-e-Jomeh de Nayin, vers le milieu du 10e siècle. La mosquée de Nishapur avait des colonnes de marbre, un carrelage doré, des murs travaillés en stuc polychrome et des toits abondamment décorés. A Damghan, des ornements splendides et des marbres précieux furent utilisés. Depuis la période parthe déjà, le stuc taillé et polychrome était un des éléments primordiaux de l'embellissement, en architecture.

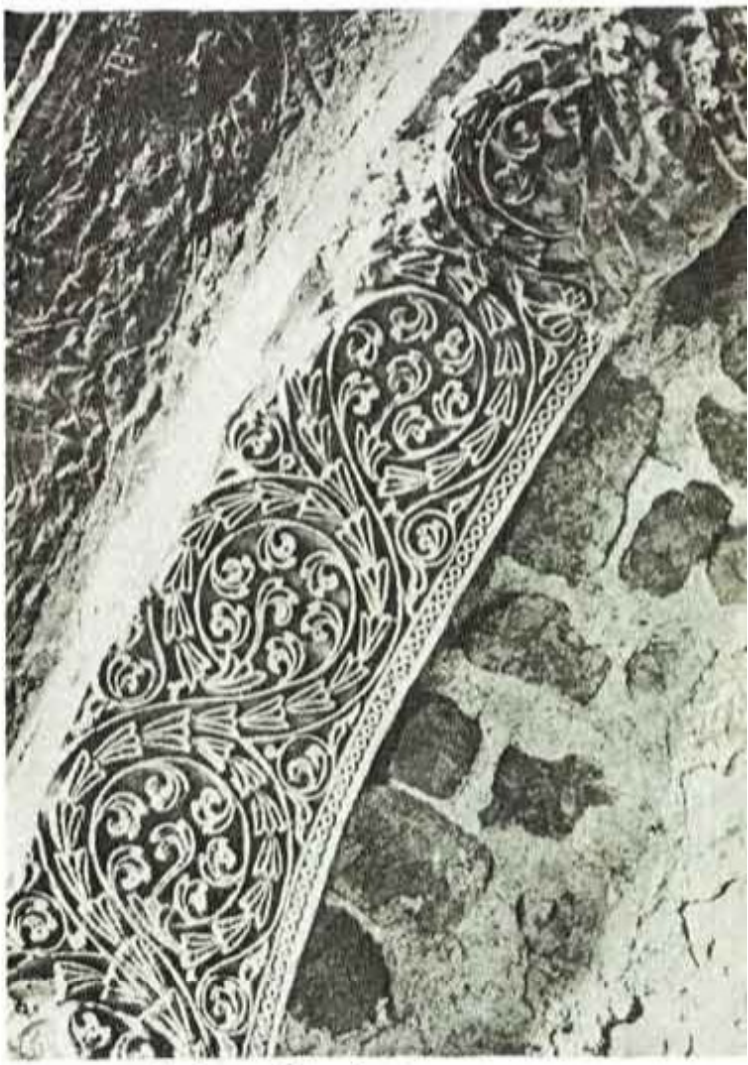


LES SAMANIDES: 892–999 A.D.

L'acceptation définitive de l'Islam apporta une paix si nécessaire, la base matérielle pour le déployement de l'énergie créative. Vers la deuxième moitié du 9e siècle, une renaissance purement persane se développait au Khorassan, qui comprenait alors la Transoxiane et l'Afghanistan. Sous la brillante dynastie samanide, à Bokhara et à Samarcande, surgit, au courant du 10 e siècle, une culture nouvelle mais typiquement persane, l'une des plus exceptionnelles et créatrices dans l'histoire de l'Iran.

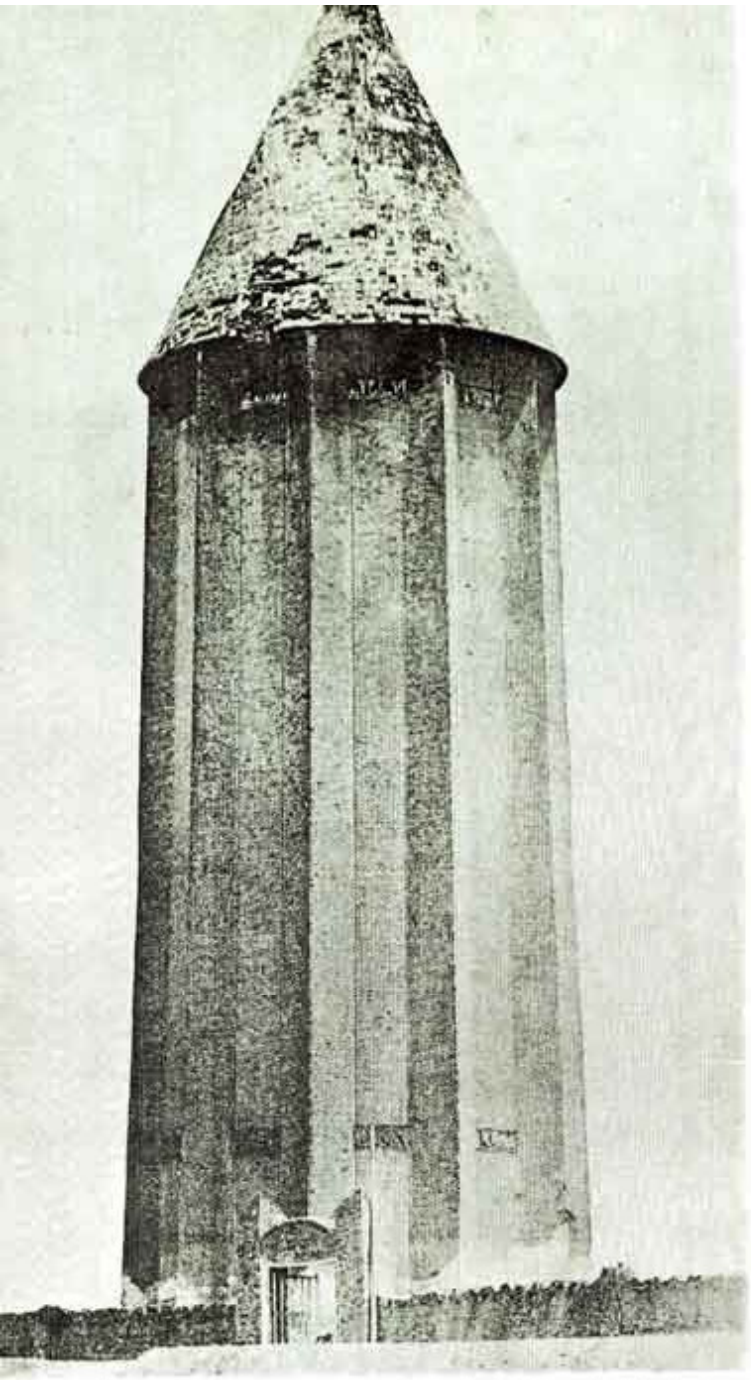
Un seul monument a survécu, le mausolée d'Ismail Samanide à Bokhara (URSS). A la fois par sa structure et par sa brillante décoration, il exerça une influence marquée sur l'architecture islamique postérieure. De facture simple mais imposante, bien que ce soit une construction relativement petite, ses proportions étudiées et harmonieuses, son ornementation vigoureuse et pleine d'invention, le mettent au rang des chefs d'oeuvre de l'architecture iranienne.

Mises à part la massivité de la forme et la robustesse de la construction l'attention, se porta sur la décoration en relief des surfaces. Les murs de briques étaient structurés, et leur texture rappelle le travail de vannerie. L'on retrouve toute une série d'édifices de style similaire qui se succédèrent, à Touran notamment. Dans ses débuts, l'architecture mongole imitera nombre de leurs caractéristiques.



Masjed-e-Jomêh Chiraz (9ème siècle)

Masjed-e-Jomêh Nayîn (10ème siècle)



Gonbadé Ghabousse (Monument tombale de Ghabus-ebn-Wochmguir)

La tour de Gunbad-e-Qabus est la plus ancienne et la plus expressive d'une série de quelques 50 tours monumentales, encore dressées aujourd'hui. Celles-ci couvrant une période de 7 siècles, varient considérablement quant à leurs dimensions, leur forme et leur ornementation. On les a trouvées dans presque toutes les régions de la Perse. La plupart sont circulaires, telle la tour funéraire de Pir-e-Alamdar à Damghan (1021). Des tours aux rebords prismatiques, comme celle de Gunbad-e-Qabus, se retrouvent au 12e siècle à Ravy (1139) et au 14e siècle avec celle de Bistam (1313). Un autre groupe important dans lequel le corps de la tour est composé d'un ensemble engagé de fûts presque ronds est formé des édifices de Jar Kugan, de Radkan Est (1280-1300), et de Kashmar (14e siècle). Les colonnes couplées apparaissent avec le Rabat-e-Malek ou la tour de Jar Kugan, et plus tard dans le Kutb Minar de Delhi. Il existe peu de tours octogonales, mais il faut mentionner le Gunbad-e-Ali à Abarguh, (1036), une superbe paire à Kharagan (1039-1067), en continuant, à travers les 14e siècle, avec les tombeaux de Qom et l'Imamzadeh Jafar à Isfahan, (1341), et même plus tard. Quelques-unes de ces tours sont carrées, telle celle de Gunbad-e-Surkh à Maragha (11e siècle), et le tombeau de Chahzadeh Mohammad à Sari, au Mazanderan (15e siècle).

Au pied de la partie est de la chaîne de l'Elbourz, face à l'immensité des steppes asiatiques, s'élève majestueusement un suprême chef-d'oeuvre d'architecture, le Gunbad-e-Qabus, la tour tombale de Qabus-ebn-Washmgir. D'une hauteur de 57 mètres sans, compter les 12 mètres enfouis sous le sol, elle est faite de briques cuites de couleur bronze et dorée. Dix rebords massifs à angle droit font saillie tout autour du corps circulaire du bâtiment, unissant la base au toit. Entre les rebords, des inscriptions en caractères koufiques, courant le long du bord supérieur et près de la base, portent la date de sa construction, par Qabus, en 1006-7. Qabus fut un homme extraordinaire, ayant gouverné le Gorgan presque sans interruption de 976 à 1012. Erudit lui-même et patron des érudits, poète et patron des poètes, calligraphe, astrologue, linguiste, joueur d'échecs, vaillant guerrier, Qabus était aussi exagérément soupçonneux, et il mourut assassiné par les nobles exaspérés.

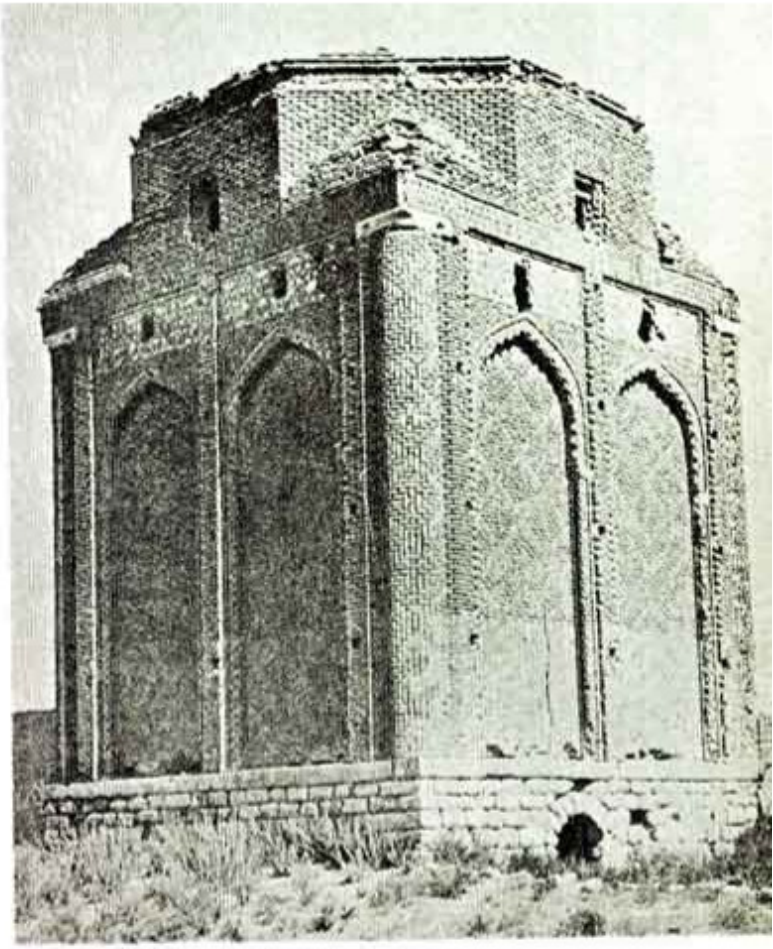
Piré-Alamdar – Damghan – (1021)

Ces tours reflètent fidèlement la période, les styles locaux et le génie des architectes. Le massif Gunbad-e-Ali (1056) à Abarquh, couronnant une abrupte petite éminence, est bâti de lourds moellons. Les anciennes tours de Maragha, méritant une étude particulière, sont des chefs-d'oeuvre de la construction de briques et de la forme compacte et énergique, particulièrement la tour carrée de Gunbad-e-Surkh (1147) qui, avec ses motifs de brique si ingénieux et sa massive colonne angulaire, rappelle le tombeau d'Ismail Samanide. D'autres exemples sont décorés de facon plus chargée, tel le Gunbad-e-Kabud (1196), qui a des panneaux en ogive enfoncés sur chacune de ses faces, est recouvert d'un travail de mosaiques de faience bleues, et est enrichi d'une corniche à stalactitessur laquelle court une inscription en lettres bleues sur fond blanc.

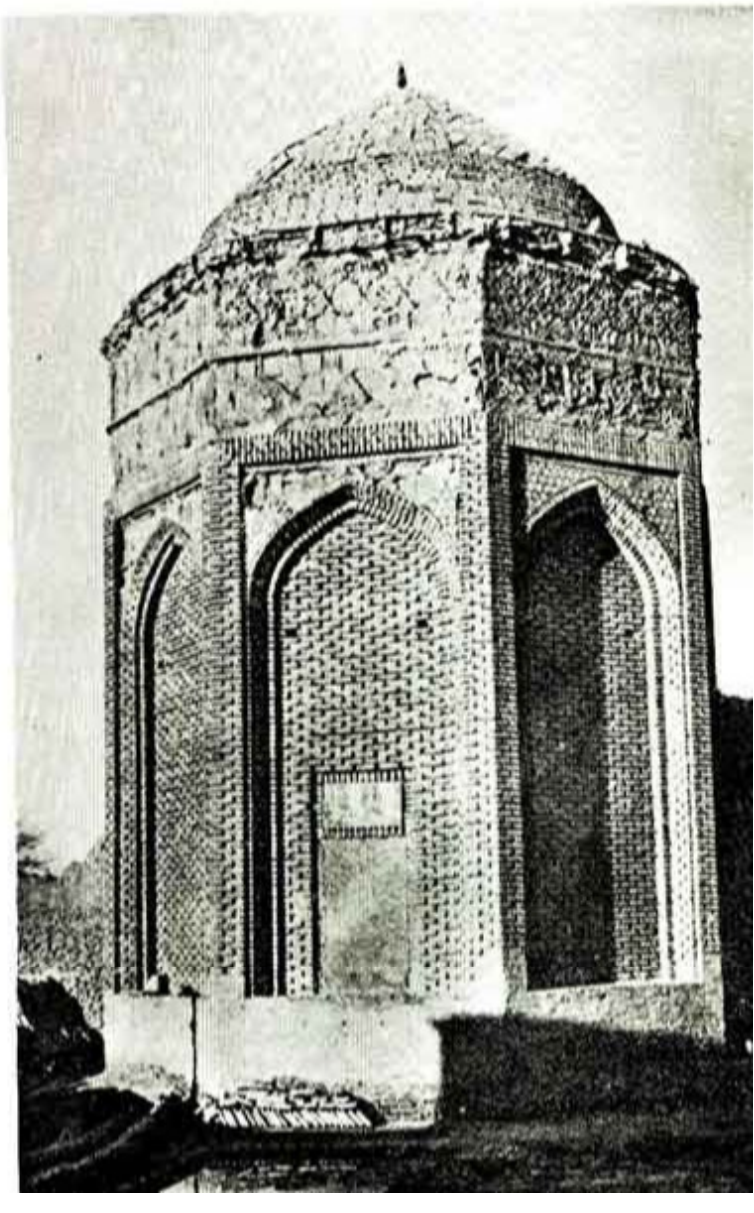
Un autre remarquable minaret; construit aux environs de 1149 par le Ghorid Sultan Ala ed-Din à Jam, en Afghanistan, s'élève majestueusement au coeur d'une profonde gorge rocheuse. Il est haut de 68 mètres et comporte 3 étages aux proportions harmonieuses. Il est recouvert d'un travail de stuc fort chargé aux motifs floraux et géométriques entrecroisés de bandes de caractères koufiques reproduisant un chapitre complet du Coran, le "Maryam sutra", qui ne comporte pas moins de 973 mots. Le minaret est en parfait état de conservation, sauf deux plates-formes vacillantes qui se sont effondrées. C'est un produit de la pensée et de l'âme, l'exaltation et la commémoration du triomphe militaire et politique, dominant la sombre masse des roches insensibles l'entourant. C'est une oeuvre de grande intensité psychique.

Quelques curieuses, et parfois fort belles, tours funéraires sont disséminées dans toute la province du Mazanderan jusqu'aux contreforts de l'Elbourz, fréquement combinées avec des mosquées. De style local rustique, elles sont souvent touchantes dans leur simplicité. Les plus remarquables, cependant datent, du 15e siècle, et se distinguent par une frise supérieure d'arcades fermées, légèrement en encorbellement. Elles offrent parfois une ressemblance frappante avec les tours romanes du 11e siècle. De simple brique, certaines sont même plâtrées.

En bordure du golfe persique et sur des îles telles que Karg, l'on trouve une forme de tour assez frappante, ressemblant à un pain de sucre. Elles sont formées d'une succession fuyante de simples panneaux convexes empilés les uns sur les autres en dimensions décroissantes jusqu'a former une pointe. C'est une fantaisie architecturale qui a un certain charme. Leur histoire est encore inconnue, et leur date incertaine.



Gunbadé-Sorkhe à Maraghé



Emamzadéh Jaafar à Isfahan (1341)