Architecture in Ethiopia to-day

By Z. ENAV

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The aim of my talk to-day is to throw light on some aspects of the architectural development I have seen here in the past few years and bring forth some suggestions for a future course.

In order to be able to discuss any of my views I wish first to dwell a little on the meaning of architecture and to throw light on the factors influencing architectural design.

IN ESSENCE, ARCHITECTURE IS THE HUMANIZATION OF SPACE. Humanization of space has begun with the dawn of man and will continue through TIME as long as man inhabits this planet.

Therefore, when considering architecture we relate it to Man, Space and Time.

Space and Time have abstract meanings if not related to man, and therefore only when related to us can we scale them and utilize them for our benefit.

Humanization of Space is achieved by an interplay of solids and voids in light.

The solids, or the materials, envelope or are enveloped by voids, or space, and this relationship becomes apparent and real to us through light.

When this inter-play of basic elements is related to our scale, our needs and our patterns, we can call it the humanization of space.

The element of Time is introduced to this arrangement because the inter-play mentioned above takes place in a time sequence — meaning it changes and rejuvenates itself through Time. (*See figs.* 1, 2, 3, 4).

In order to understand architecture as explained above, let us look and see what are the factors and elements influencing the design process and consequently what is the architectural result of such a combination of factors.

Architectural design is a process involving, through collecting and digesting information and data, a creative act of selecting a comprehensive solution for a given problem and through which the designer conveys his architectural philosophy.

What then are the factors of design?

Man has a defined intellectual, emotional and physical pattern of behaviour.

This patern indicates his capabilities, limitations and range of perception.

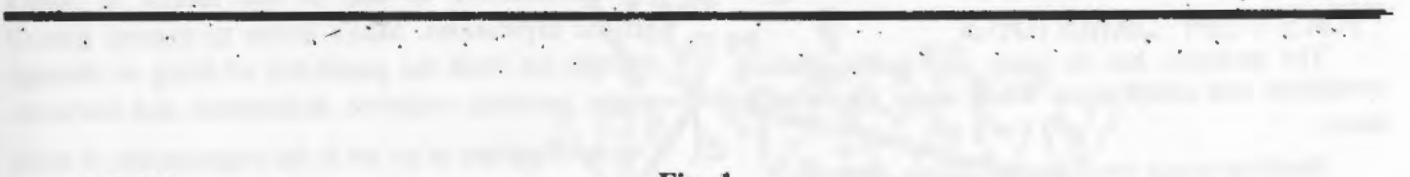
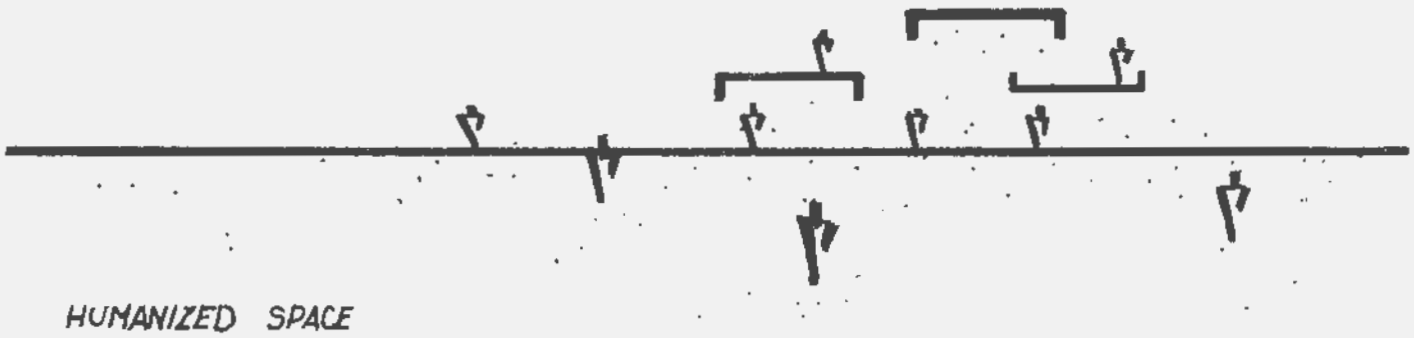


Fig. 1

Fig. 2

It is the aim of the architect to satisfy man's intellectual and physical needs and therefore the study of his patterns forms an essential background for the design. (*See fig.* 5)



HUMANIZED SPACE

Fig. 3

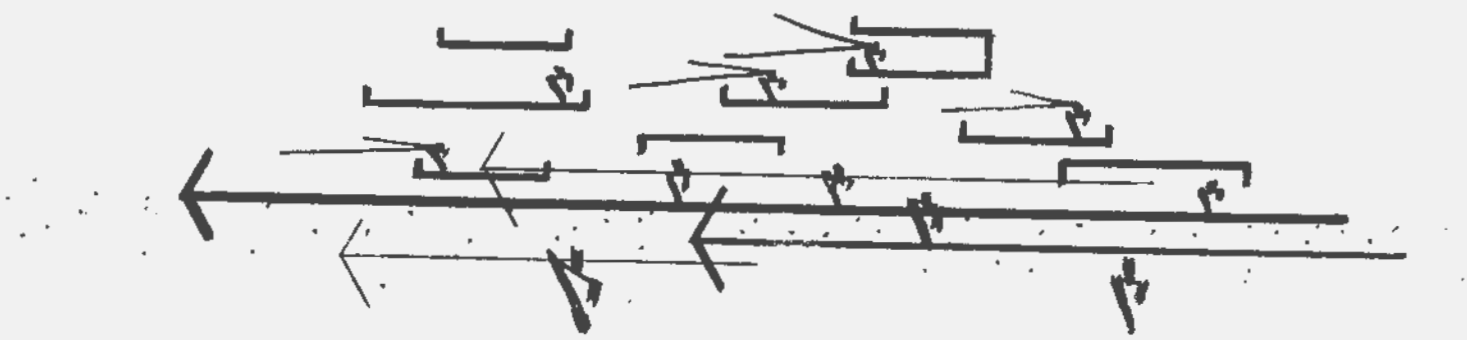
Man's environment consists of material arrangements and cultural manifestations.

Man's environment has direct influence on his social, material and cultural background and development.

The architect has to study and investigate the conditions and components which make the environment.

Studying man's environment means studying:

1. Society's socio-economic background, growth and development.
2. The relationship between man and the group he is part of.
3. Physical and climatological character of the particular place the design is for.
4. The technical advancement of the particular society of which man is an active part.
5. The group's cultural manifestation. (*See fig.* 6)



MAN-SPACE-TIME

Fig. 4

It is hardly necesary to explain the importance of the technological background of any design.

Any and all architectural designs will remain on paper unless they are translated into technical terms and made feasible through the application of technological knowledge, inventiveness and skill.

Therefore, it is of primary importance that the architectural design should follow and base itself on sound technological logic and constructual application.

As part of the technological background, the architect must study materials and their use, labour and its skill, building elements and their proper utilization and the methods of construction possible for specific designs and places.

Architecture is one of the means of Man's artistic expressions. Man's desire to express himself through art finds the possibility of doing so through music, painting, sculpture, architecture and literature.

Architecture as an art is the organization of solids and voids in which relationship the designer conveys his emotional experience of creation and through which the user experiences a similar process of absorption.

In order to convey such an experience, the architect should skillfully use the visual tools at his disposal and with their help create a design which is also art.

Only then the design has achieved the aesthetic merit the architect desires to attain.

All the previously mentioned elements of the design bear direct influence on the work. However, a true piece of architecture should have one additional value, without which it may be lacking — it should convey an idea or an approach to design.

This is so because the architect is part of society and as such he absorbs from the society his cultural

heritage and returns to it what he has digested and understood of this heritage.

The architect, like the artist, is then the medium through which the Society express itself. Being in such a unique position the designer has to approach his work with the clear intention of conveying through it his philosophy of architecture as well as its cultural significance.

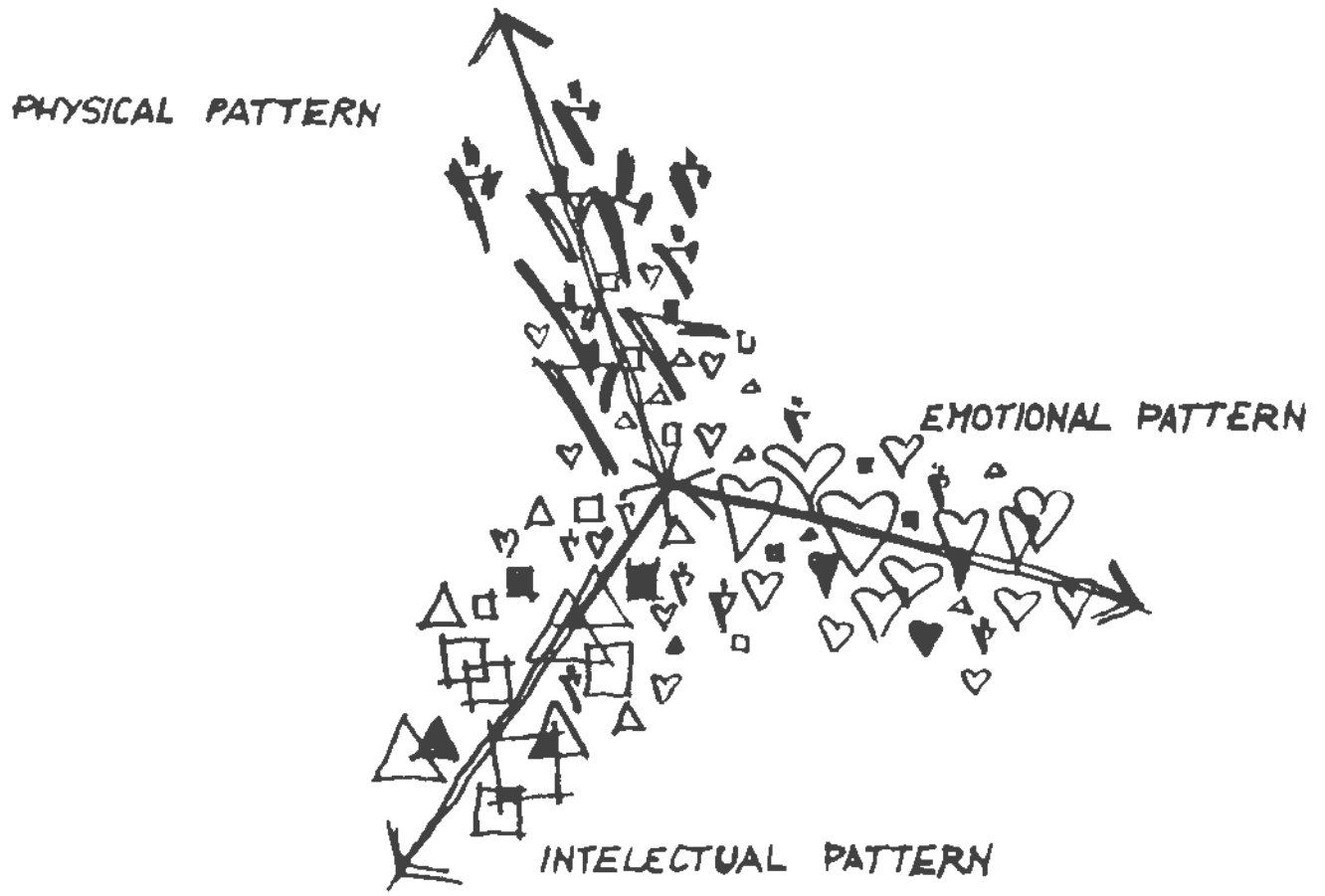


Fig. 5

Therefore, in his design the architect conveys not only material and artistic values but also, and perhaps mainly, human values.

Let us now study the various fields of architecture, against the background I have just pointed out, and their manifestation in Ethiopia.

Doing so, we shall start with planning, national planning, regional planning, town planning and community planning.

When approaching national planning the team (and only an inter-professional team can tackle such a problem) dealing with a study should collect vast information concerning the population, the economic set-up and growth, cultural background and direction, technological developments -- past, present and future — environmental conditions and their potentialities, and so on.

Having collected the information needed, a process of analysis takes place, out of which the planners may come up with a programme of action for growth and its social orientation.

The physical plan is the spatial interpretation of such a programmatic plan and it should serve as a leader and a guide in the progress of the nation.

The graphic interpretation of the physical plan serves as a tool for the realization of a programme in a time sequence.

The plan that any team will come up with, I believe, will be loose in its concept and will give only a general direction for physical growth and changes.

Such a plan should be flexible enough to allow for changes and expansion.

This change must find its guidance in planning and it is the duty of the planner to indicate in his design in what direction Ethiopia, as part of the continent, will move.

Therefore, a national physical plan for Ethiopia should base itself on:-

1. The people and their culture.
2. Communication systems in all mediums.
3. Economic set-up and growth.
4. Social progress.

A basis for regional planning already exists in Ethiopia and there are some reasons for this:

a) Some regions are well advanced in their development.

b) Some regions, thanks to the cultural background of their population, are starting on this road.

c) The communication system of the country, although limited, allows for rapid development of the regions situated in the "right" places.

d) The Government, due to economic pressures and possibilities helps in the development of regions which in turn will expand the country's economy.

Fig. 6

These points also dictate the methodological approach to regional planning here, besides the approach to national planning.

Some regions can be planned all the way down to details and some in structure only, allowing change of direction and flexibility within their frames.

Yet, it should be remembered that the regions are part of Ethiopia and therefore should adhere in their development to a national programme, plan, communication system, and order of priorities.

The regional plan should go further than the national plan in detailing the different elements of the design.

Such detailing should concern itself with the specific characteristics of the region in question and solve them in relation to the national plan.

The regional plan should indicate the communication system, the planned regional structure, the population distribution, the economic set-up and the region's function as part of the national plan.

To take an example one should look at the plan for Awash where a carefully planned development can show the region's agricultural potentiality and structure, the possibility of industrial growth, the population distribution within the region and the region's tie-up with the national plan. All the above elements will dictate the region's growth and development.

Town-planning and community-planning take us further into detailed planning of "Human Settlements".

The principles mentioned earlier are still the same but the scale is enlarged. We deal now with macro-conditions and solutions.

Whilst a regional plan indicates the position of towns, their grading and general function, the town-plan indicates the town-structure, the division into housing, work, cultural entertainment and leisure.

Therefore, the city's structure and projected growth depend on its economic importance, administrative grading and its part in a national and regional communication systems.

The city's growth should follow the overall plan, which in turn should allow for growth and flexibility in its directions of expansion.

I feel that with the exception of the major towns in the country (and these also are not yet by and large comprehensively planned), town-planning has not yet been undertaken on a major scale. This has its repercussions on migration and other social and economic problems.

I should like to illustrate this: -

a) Awassa is a planned town and its growth is immediately sensed when visiting the place. Here we have a positive example of planning and its enforcement and how such an action has given to the people of the town and its surrounding a sense of direction.

b) Agaro is an unplanned town near Jimma; it is growing fast and is economically and socially thriving. Yet this town is an architectural mistake because it slows down the growth of Jimma as a regional centre.

The more Agaro expands the less Jimma will be attractive to people as a social and economic centre as well as a symbolic centre.

c) Addis Ababa is planned, and as a matter of fact it was planned several times; yet its plan has lagged behind the economic and political growth of the town and therefore, one notices here some incoherences and unclear directions of its growth. This affects zoning, traffic, commerce, industry, culture and all other aspects of the town as a living organism.

Community development planning is a basis for an economic expansion of the country and is the source for the human and social happiness.

The economic and social basis of the country is the agricultural community and this is likely to remain so for years to come. Therefore, detailed studies should be made in the various regions in order to determine the development and expansion possibilities of the various communities, and make plans accordingly.

Having dealt till now with planning I would like to proceed to other aspects of architecture — to buildings in Ethiopia.

In order to discuss it more conveniently and orderly I will group the various types of buildings I have in mind in different groups and discuss them as such.

The groups I have in mind are:-

— Industrial buildings
— Commercial buildings
— Habitation
— Public buildings
— Special projects

Unlike some years ago there is quite a serious development to-day of the industry of the country.

The rapid progress in building activity manifests itself in the various buildings which we call industrial buildings. This includes:-

— Building for industrial purposes.
— Buildings for agricultural purposes.
— Power stations.
— Other allied buildings.

The basic influences on the design of industrial buildings are:-

— Function
— Location
— Cost
— Aesthetics

Functionally — the design should follow systematic studies of production, timing, costs etc., and only after such designs are made should the construction be carried out.

I am afraid that not always is this followed here or elsewhere.

Location — this element of the design dictates funtion, transport and costs.

Cost — the relative cost of the construction depends on materials and methods as well as on transport.

It is of prime importance that the cost be kept down by using local materials (and not always is this done or possible) and a combination of manual and mechanical labour.

Aesthetics — in industry I agree that "form follows function", although to some extent only.

The aesthetics of industrial buildings lie in their purity of functional form.

Yet, the choice of forms, materials and the composition of the various parts of the project are to a large extent architectural selections of the designer.

When realizing the importance of the above influences we can undoubtedly insist upon a basic concession the society has to make to engineers and architects, and this is that buildings of any kind must be planned and designed by professionals.

It is a pleasure to see in the country industrial buildings which are architecturally good and even powerful. To state only a few examples:-

— The Shoa sugar factory.
— The Koka power station.
— The Addis Ababa cement factory.

As anywhere else in the world services here grow faster and are bigger than any other section of the economy of the country.

Therefore, it is natural that commercial buildings here mushroom more than others.

When dwelling on commercial buildings I wish to type-cast them as follows:-

— Office buildings.
— Shops and stores.
— Banks.
— Hotels.
— Cinemas.
— Restaurants and Bars,

These are buildings used by the public on a commercial basis.

As such, they depend on some important environmental aspects of the design:-

— People's attitude.
— Urban zoning.
— Traffic.
— Cost.
— Aesthetics.

When comparing the above aspects to the situation here to-day I believe that in some respects criticism is called for.

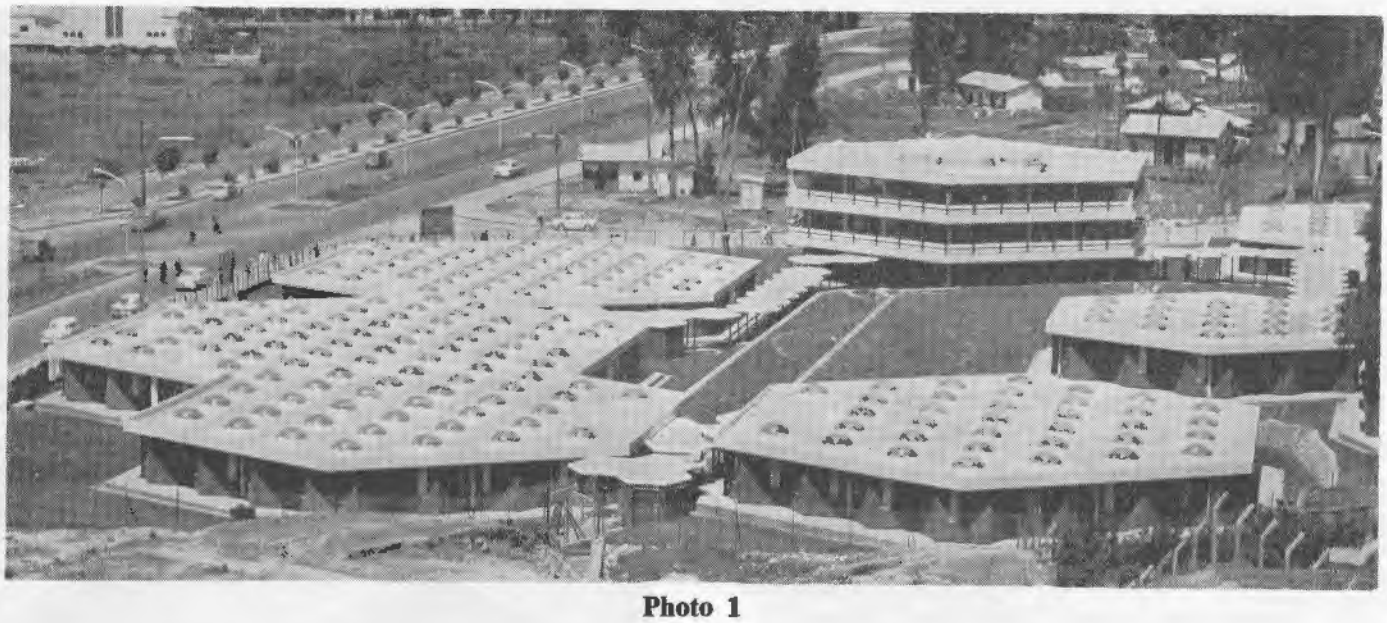


Photo 1

The traffic problem is acute indeed and a main reason for this situation is the lack in provisions for parking and the incomprehensive urban zoning.

The cost of buildings is a function of the building material industry and the cost of labour. Unfortunately, most materials here are imported from abroad; and labour, although cheap, is not very well trained. A major drive to reduce costs by every available means is called for.

Aesthetically many of the commercial buildings one sees around suffer from a basic fault. They are what is supposed to be modern without being so in the true sense. The true sense of modern buildings I have in mind are buildings which convey, with contemporary methods and materials, a country's cultural heritage. They should be designed to be at the service of the people and to conform with the coun try's economie and social progress and capacity. (*See photo.* 1).

As you all know a major portion of the construction work in this country is made of public buildings.

This is a healthy sign for a society that wants to huild a strong cultural and social basis for development.

However, there is a danger, architectural and social, that if public buildings are built without other portions of the building movement following suit, they will become isolated architectural statements without any serious background. In this connection, I think that the construction of public buildings is slowly taking its proportionate place in relation to the other types of buildings.

The group I call public buildings includes:-

— Government buildings
— Parliamentary buildings
— Judicial buildings
— Municipal buildings
— Cultural facilities (museums, libraries, theatres, assembly halls)
— Educational institutions
— Sports facilities
— Recreation centres and clubs
— Public transport systems
— Health facilities
— Military establishments
— Markets
— and many others.

When designing such buildings one has to be conscious about the following:-

1. The location of a public building will in most cases dictate whether people will use it and if so, who will use it.
2. Public buildings are places of gathering and therefore problems like traffic, safety and accessibility are of prime importance.
3. Functionally these buildings are extremely important because they cater for a large number of people.
4. Public buildings symbolize more than any other buildings the nation's cultural heritage and aspirations. One should see them not only as beautiful or ugly buildings but mainly as buildings with symbolic value.
5. Public buildings serve as the meeting place of the citizen and his government. This finds its expression in the design of the building — whether the visitor is welcomed in or whether he is left out.
6. Public buildings aspire to manifest the creative forces within a society, and as such they become the strongest expressions of the cul-

tural life of the country; this is true of course if the buildings are not isolated expressions.

7. Public buildings as a whole are usually expensive and therefore it is of the utmost importance that their standards and cost will be relative to the standard of living of the users — public and government alike.

Referring all the above to what we see here, I believe that while one can see many architectural achievements, these gains are rather isolated.

Most new public buildings here are of very high standards, but they also have their set-backs:-

1. They are haphazardly located and in this way they do not allow for proper town-planning.
2. Most of these buildings are not solved technically — meaning from the point of view of traffic approach, safety, services and drainage system outside. (*See photo* 2).

We are coming now to the most important group — *habitation* —

When talking of habitation I mean the whole range of facilities man uses for his own convenience and happiness — meaning:-

— Housing
— Shoping
— Schooling
— Health centres
— Play-grounds and parks

This group forms man's immediate man-made environment and therefore its importance is greater than that of any other group of buildings.

The importance of habitation lies in the profound influence of the neighbourhood on its inhabitants.

Habitation forms a frame within which man lives and progresses — and whatever activities he may undertake, to a large extent, they are motivated by this surrounding.

Habitation is made of:-

— The individual cell
— The group
— The neighbourhood
— Circulation systems
— Services
— Public facilities.

The individual cell is the house or the apartment. More than any other type of construction this individual cell influences man.

Therefore, its size, arrangement, lighting, standard of finishing and services dictate man's standard of living, in the physical sense.

The group design depends on the social behavior of people and the tightness of their relationship.

Photo 2

A close-knit group will usually want a cellular or cluster development (for instance designing for a *derbo*). A loose-knit society usually departs from close patterns of design (and this to my mind is one of the negative western influences everywhere). The group design is a function of the living cell and the social structure.

The neighbourhood is the unit which already is self-sufficient to a large extent.

It may include five to ten thousand people who live within this unit, shop, enjoy recreation, cater for their health and for their children's education.

Towns are made of neighbourhood units, each of which caters for its own inhabitants, while towns cater for work, cultural activities etc.

The scale of cells, groups, neighbourhood and towns are a function of mobility and servicing.

Speed increases from the cell to the town while services are distributed from the town to the cell.

Mobility depends on public transport systems, private vehicles and pedestrians.

Services include — water supply, electricity supply, sewage system, garbage disposal, road cleaning and sometimes gas and steam supply.

Public facilities in housing schemes or neighbourhoods cater for daily use and supply. Their importance lies in their usefulness and in their symbolic value as community centres.

There is a danger that planners and administrators may forget scaling dwelling units according to income, and standard of living of prospective users.

There is a danger that too many people may be excluded from housing development if their incomes are high. Naturally there is the reverse danger that dwelling units of too low standards may not be acceptable to some people — but this must be tested before crystallizing opinions.

The last group I have in mind is a non-homogenic group because it includes a variety of projects that the only thing they have in common is architecture.

This group includes: -

— Roads
— Bridges
— Dams
— Railways
— Ports
— Airports
— Aqueducts
— and others.

Although these projects are considered as engineering projects, this is true only to some extent.

Any of the above projects can ruin or can beautify the countryside or the landscape.

Therefore, they should be considered architecturally as well as technically.

The best explanation of what I wish to say, I believe, can be made through analysing some examples:

A. *Roads*

Let us look for instance at the Gondar-Asmara road, forming part of a breathtaking scenery with its curves and spirals conforming to the mountainous landscape.

B. *Bridges*

The Blue Nile bridge is a piece of architecture, novel with its arches and light in its appearance.

C. *Dams*

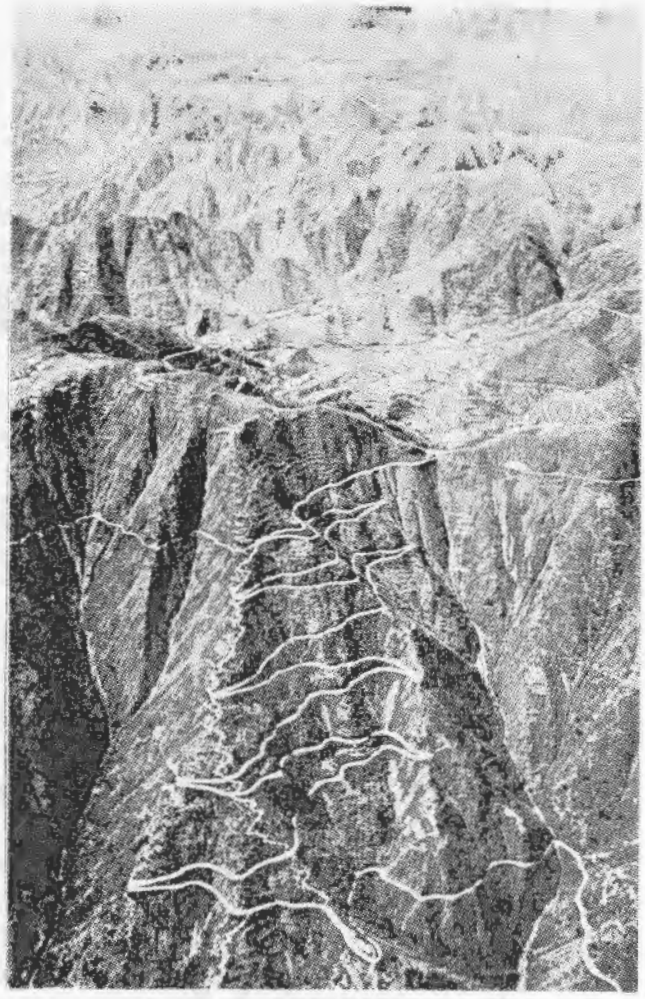
Koka-dam is strong in form and well detailed architecturally.

D. *Railways*

The climbing trains from Massawa to Asmara illustrate to us that a railway does not have to be an ugly landmark; on the contrary it manifests beautifully man's struggle with nature.

E. *Airports*

The Addis Ababa Airport since its opening has become a source of attraction for the people here as well as an inpressive main gate way to Ethiopia. (*See photo* 3).



ASMARA-MASSAWA ROAD.
Road, Organic part of Scenery.

I wish to conclude my talk with the following observations:

1. Ethiopia is developing at an accelerated pace and therefore our actions should not lag behind this progress.
2. Professionals should play a major part in the development of Ethiopia.
3. Architecture in Ethiopia can blossom and assume a great importance in the shaping of the country if all the people involved understand the value of the architect to the society, and the importance of good architecture.
4. The establishment of this Association has been timely in that it could play a positive and essential role in the *modernization* of Ethiopia.