The Architect Associated with the Engineer in Town Planning.

BY

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This subject has so many issues and departures that I find it extremely difficult to condense what I have to say in the time placed at my disposal and therefore I crave indulgence if my remarks appear somewhat disjointed.

It was Aristotle who defined a city as "A place where men live a common life for a noble end," and I feel that we must aim at that ideal, if we are to be successful in our efforts.

We must all realise how important it is, that this town planning subject should be earnestly studied not only by the architect, engineer and surveyor, but by all other professions and every member of the community.

The charm of town planning is one of increasing interest to architects and engineers and we in Ceylon have an excellent field at our disposal and must therefore practically approach this subject as a new art.

If we compare the planning of ancient and modern towns, we at once feel how well the builders in former times combined simplicity, beauty, harmony, utility and truth in their work, while our modern towns are mere aggregations of people huddled together and the planning of the town seems to have been their last thought; our own town is as good an example of this fault as I know of.

On giving our first thought to this town planning subject it seems to us quite a simple task, but after the experience of later times it has proved so very difficult. We have become so accustomed to vulgar surroundings in which beauty has never been thought of, that we do not realise the real ugliness of it all. One of the causes of this ugliness is the industrial development of recent times. Let us but try and
grasp the spirit and feeling which inspired the ancient builders in their work. The lack of this feeling is only too glaring in some of our buildings. Take for example the vicinity of Cinnamon Gardens, there is an entire absence of thought in the individual building which has been thrown on the site in a haphazard manner without regard to level, aspect, situation or anything else.

In Germany town planning has been studied by students of Sociology and by members of Municipal authorities and we are now glad to see an awakening all the world over.

In Liverpool, owing to the great difficulty of arranging with owners of property fronting main streets under the “Improvement Act of 1875,” power was obtained in 1902 to set back the building line to a distance of 36' from the centre line of any new streets. Power was also obtained to vary the widths of carriage ways, footways and decide upon the directions and positions of new streets. When a decision is arrived at, that certain large properties are to be developed as building areas, these powers have now made it very simple to arrange with the owners for the construction of streets through their lands; these streets are constructed some time before the commencement of actual building operations. In compliance with the minimum requirements of by-laws relating to new streets about to be laid out, the land owners have undertaken to pay for the construction and have in addition given up a strip of land 24 feet wide making in all a width of 60 feet. This being agreed to, by the owners, the authorities purchase from the land owners strips of land 24 feet wide at the average value of the estate, thus making the width 84 feet. If it is the intention to lay down tramway lines a further purchase of 24 feet wide is made to allow for fencing off the tramway lines in lengths between cross streets so that the speed of the tram car might be very much accelerated.

One of the main determining factors in deciding our main arteries and roads in a town planning scheme, is in the placing of the sewerage system. Take for instance the city of Frankfort, Mr. Lindley (an English engineer) by designing the main sewerage network in 1866–67 determined the lines of intercepting sewers and in so doing, laid down the alignment of the main roads. The result to-day is fine streets and beautiful avenues.
It will now be seen that the first point in town planning is to prepare a proper and efficient drainage scheme not only for present day purposes but with all future extensions in view.

We must not however forget, that given the most efficient drainage scheme, water supply, &c., without considering a town planning scheme, our towns will still have the same squalid back-yards and dirty corners which will always be places for filth, thereby causing the spread of disease. The duty of the architect is to supply accommodation for the inhabitants, while the engineer sees to their comforts which therefore at once demands the co-operation of the engineer with the architect to prevent all illconsidered schemes.

The requirements of survey maps showing all necessary levels of existing roads and the exact contours of the whole surface, together with positions and descriptions of existing buildings, is indispensable. These maps should make provision for the next 35 years and should mark:—

(1) The land to be built upon.
(2) Lands required for roads and streets.

The whole should then be redivided into sub-areas:—

A. Residential.
B. Business premises.
C. Recreation grounds.
D. Areas for manufacturing purposes.

Adequate, rapid and cheap means of transit should be provided between those sub-areas, so that the cost and rent of the dwelling shall bear a right relation to its occupant.

We must provide against the exorbitant rise in the price of land and cost of building which cause the increase in rents of dwellings. Overcrowding is mainly due to high rents and the owners main interest is to produce the maximum increase of value for himself by cramming on the site as much building as it will hold. Open ground for the admission of air and sunlight to all buildings is a great necessity and provision should be made for parks and playgrounds in our towns.

Suitable lands must be reserved for factories and workshops, giving the maximum of convenience to workers and minimum of nuisance to their neighbours. It is quite a common fallacy of "the man
in the street" to imagine factories as walls with rectangular holes for doors and windows. There are certainly too many buildings of this kind, so above all let us infuse the spirit of the artist into our works. One does not think of "Marble palaces and flashing domes" as suitable designs for factories, but however void of ornament a building may be, it can be beautiful. A building ought to look like what it is intended for. Only too often is art regarded as some species of trimming to be added at pleasure and most of the ugliness in our buildings is caused by this mistaken idea.

From 1852-1870 George Haussmann gave a new impetus to town planning in the great and masterly reconstruction of Paris. His work is characterised by straight lines, formal arrangements and geometrical shapes. Many roads are made to converge at important places and these are chosen so that some monument or public building stands in view down each of these roads.

In America until recently town planning has been arranged in a chequer-board pattern, but this monotonous lattice work of streets cutting up the building sites into rectangular blocks has caused Americans to consider new systems. They have now cut diagonal streets through this chequer-board work which causes some of the building sites to have acute angled plots and therefore do not adapt themselves to artistic grouping of buildings or even are they suitable for open air spaces (see sketch). They have however paid special attention to parks and boulevards which break the monotony of their towns and provide for "lungs" or breathing spaces for the inhabitants of their cities. (See diagram I.)

The Germans regard an irregular plan as the more suitable method, for example, Professor Theodor Fischer, in his plan for the extending of Stuttgart shows more adaption to contours than a less regular treatment. Here a difficulty arises inasmuch that a stranger fails to grasp the leading features of towns planned in this system. The planning of a town may be compared with a well planned dwelling so that it presents the fewest difficulties to the occupant from getting from one room to another. The ease with which a stranger is able to grasp the location of the principal buildings of a town is a sure sign of the success of planning.
We now see that there are two clearly marked schools of town planning:—

(1) The regular plan.
(2) The irregular plan.

Both have their merits, and rather than choose one system, let us abstract the best points from each.

The regular town planner would make a big error if, in setting out the lines of plan, he paid no attention to the sentiments and property boundaries of individual owners of the land comprised within his scheme.

On the other hand, while we are all charmed with the picturesque, we would make a great blunder if we allowed irregularity to interfere with public convenience or to follow lines conducive to the destruction of comprehensive planning.

A town should not extend continuously without some break. It should have wide avenues, boulevards or belts of park land. These breaks could define our parish boundaries and be “lungs” or breathing spaces for the town. A thing of great importance in town planning is to have connections with the surrounding country definitely arranged in order to avoid derelict and squalid buildings with which the approaches to our towns of to-day are utterly ruined.

Can we imagine that on disembarking at London or Tilbury docks that we will be confronted with the world’s greatest city—London? To avoid this disorder and ugliness we must have definite “places” as centres to work from. These centres or open spaces should have definite shapes and the buildings surrounding them must have definite sky-lines. A regularity of form is by no means essential and is often very difficult to discern. We see how deceptive a plan may be when put on paper, take the piazza of St. Mark in Venice, to the ordinary observer it is seldom apparent that the lengths of the two shorter ends are not identical, whereas the end nearest to St. Mark is actually half as wide again as the opposite end. By slightly projecting the centre buildings of a side the sky-line is sometimes greatly enhanced. These “places” now enable the town planner to group buildings into three distinct classes of “places”:—

(1) Government and Municipal “place.”
(2) Business “place.”
(3) Ornamental “place.”
The question now arises as to what form and proportion these "places" should take. When the streets enter at the four angles the square form is a very pleasing effect. The triangular form is not pleasing and has been very seldom used, as if one stands at the base of a triangle and looks towards the apex, the perspective is too much exaggerated and moreover the surrounding buildings do not get their true value of proportion. The circular form is too geometrical and is more often used rather to facilitate the circulation of traffic where streets meet than for architectural effect. The oblong is the most successful form and the proportion between the sides is as 1 to 3.

"Places" now practically becomes the principal architectural features in town planning. They should form as it were the focal points for the main traffic. There should be "places" of this description set out at the most important points of a town where the traffic is heaviest and should be connected to one another by means of thoroughfares. The principal railway station should be situated in one of these "places" and should be recessed, taking care to have no roads on either flank. This will give the arriving visitor time to look about and realise the direction he should take without being in any danger of busy vehicular traffic. The architectural treatment of these focal points is our next consideration.

The feeling of enclosure is necessary and this is obtained by continuous screens of buildings on all sides, taking great care that the connecting main thoroughfares, which I have already referred to, are not too conspicuous. A "place" broken up with main streets tends to isolate the buildings and proportion is immediately ruined, as size and scale of buildings are only possible when seen in relation to other buildings. Perhaps the best way in which this restfulness and sense of enclosure can be obtained, ensuring a sufficient background for the buildings, is by arranging the connecting thoroughfares at the main points where people stand to view the buildings. Direct long vistas should not be possible; the roads may pass out at right angles to the line of vision, but they should be diverted sufficiently for the vista to be closed by other groups of buildings. If it be planned as diagram No. II., then the group of buildings A will be sufficient to close the vista, the group of buildings in this case might with advantage be a
Memorial building and should be designed in proportion and to harmonise with the buildings in the "place." It is important to remember that owing to the nature of vision, a group of buildings taking a concave line is much more successful architecturally than one taking a convex line. A good illustration of this is the successful treatment of the Admiralty buildings at the entrance from Charing Cross to the Mall, designed by Sir Aston Webb, C.B., R.A., P.R.I.B.A. (see diagram III.) Here a vista is obtained through a main arch in the centre of the building showing the Queen Victoria Memorial (designed by the same architect) at the other end of the Mall. The sense of enclosure is obtained by the building above the main arch and yet giving effect of a Royal Approach to the Palace behind the memorial.

No statues or memorials should be placed in the centres of buildings with a concave line, but should be placed at the sides or in the angles, as in the Forum at Rome, they allow the buildings to be seen uninterrupted and in themselves are not isolated. Statues or monuments should not be placed in the centres of those "Places" not even for the regulation of traffic. If so placed, owing to busy traffic, they cannot be seen with comfort and advantage and besides being much too isolated, they show a lack of appreciation of the sculptor's art. In such cases where ground is expressly laid out for the viewing of a memorial and not for the regulation of traffic this isolation is permissible.

Public buildings give the designer the grandest opportunity for the display of his noblest sentiment and loftiest aspiration representing as they do the whole community. After all, the greatest architect is the man who can satisfy both the educated community and the profession, satisfying one of them alone is not sufficient.

Forecourts are a great essential to town planning, as they set off the buildings with more advantage and give a better perspective view, perhaps the finest example we have of this is the front of St. Peter's, Rome, designed by Bernini. A similar collonade was designed by Sir Christopher Wren for St. Paul's Cathedral and had it been executed it would have given even more dignity to that glorious edifice.

In the construction of streets the point should not be lost sight of that not only do they provide
highways for traffic, but also convenient situations for the buildings flanking them. We have already seen that long vistas are to be avoided, therefore our streets should be broken at desirable points either by an alteration in the line by change of direction or curve. Busy streets should not cross at right angles, this can be avoided by placing the opposite street to the right or left thereby bringing into prominence some building of importance and preserving the sense of enclosure. The American trilis form of street planning is very common, traffic and pedestrians have too often to travel along two sides of a triangle, therefore this type is not good; the introduction of diagonal streets is certainly an improvement, but I have already mentioned the acute angles caused thereby provide bad building plots...Sharp angles and abrupt changes of direction in our streets should be avoided. For the regulation of traffic a very convenient arrangement is to have "Places" with the traffic circulating in one direction. Vehicles coming from any one road can fall in with the line of traffic and fall out again when they come to the road they wish to turn down. To assist pedestrians to cross this circulating space, sub-ways could be provided from all footpaths to a space under where likewise the pedestrians can sort themselves out and depart along the sub-ways leading to whichever of the streets he may wish to reach. (See diagram II.) The German town planners argue that bringing streets at right angles into one another produces the minimum of collision and that a junction of more than four streets is to be avoided as dangerous.

Our English system of running trams down the centre of our road is extremely dangerous to pedestrians and we would do well to consider the American system of having the tracks run along a belt of grass (or gravel where grass will not grow) with footways on either side. This form of street is, of course, expensive, but could be adopted on our main thoroughfares.

In conclusion may I impress the importance of getting rid of our smoke, which I shall leave to the engineer whose duty it is to work out this problem.
DIAGRAM NO. II
SHOWING THE LAY OUT OF A PLACE
DIAGRAM SKETCH No. III.
ADMIRalTY BUILDINGS AT E: END OF MALL.
(SIR ASTON WEBB O.B.R.A. ARCHITECT)