STUDENT EXPERIMENTS IN CITY PLANNING

Star-shaped plan centres around lake

By Linda Lawson
and
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INTRODUCTION

Man is not an island. He is not isolated from society by a sea. He is not a rock. He can not close his eyes and pretend that he is just a part of an inanimate mass. He is not invulnerable, alone he is weak and defenseless and invaders- may easily overpower him. Man is a collective unit not a single body. He thrives by the beat of a million hearts. His mind pulsates with the thoughts of a million minds.

Thus through the ages man has lived in groups; first of all for defense purposes but later on the reasons became both social and economic; in general, a means for survival.

As these "so called groups" become larger and larger they grew complex and mechanical. There was now a definite "Man-Land" relationship. The whole environment generated a systematic impulse which unified a huge body called "The City"; non-agricultural specialists including a literate elite! A model city is a duplicate of a city in miniature. It displays different zones and regions, transportation systems and functions in a city. A model city is a plan or pattern which illustrates a city or portion of a city to be built.

A model helps the planner visualize how the city will work and it will enable him to see that the functions operate in unison and that the city as a whole will be coherent. If any of the functions conflict or a problem arises it is easier to rebuild a model than it is to rebuild a city.

PROBLEMS IN THE CITY

Today's cities are by no means perfect. In building a model city one must be aware of the present problems in order to try to overcome them in the model. There are numerous small problems, such as the city tends to be too noisy, which are almost impossible to solve yet they must not be overlooked.

Problems of transportation in the city seems to be a number one problem. A planner must chose carefully the modes of transportation and the design of his city must include an adequate and efficient system of routes. His main aim is to limit

WHAT IS A MODEL CITY?

A city is defined as a community of substantial size and population density that shelters a variety of congestion and thus the peak problem.

In order to solve this problem the center of the city must not become a focal point. The main nucleus should be broken down into smaller nuclei. Also the problems of air and water pollution are a city's daily death warrant.

The housing problem seems like a never ending struggle. What is the answer? People need homes. A city of high rise apartments would create a monotonous vertical city. Town houses would only invite conformity. Therefore the housing problem has become a little more serious than where to build them, people are afraid that the city will become a concrete monster that will destroy their identity.

The City has become rigid, there is a lack of openness. The individual must be engaged in an interchange of activities, to use it, change it, organize it and even destroy it. The surroundings must be challenging and responsive to effort. Each city has a definite personality of its own, therefore, the planner must sharpen what ever is unique in the physical character of each center and also increase diversity between centers. The locational drift must also be limited. Urban sprawl is a problem because the size of an urban agglomeration limits its economic functions.

The city has been associated with hot, dry stretches of pavement, tall shapeless, forboding buildings, crowded residential sections, slums and dirty industrial centers. It represents an ugly place in which to live. The word "City" leaves a bad taste in most people's mouths. The city must be beautiful. Its surroundings must enhance its personality. Thus the word "city" should be associated with beauty. The city should not become in the future a little more than a concrete prison.

SOLUTIONS

The transportation problem is mainly caused by the automobile. One solution would be to ban the automobile from the center of the city. A vertical separation of traffic might also end the problem. Here the expressways are sunk below street level or are completely automobile subways, the street level is chiefly for storage of vehicles, and pedestrians are lifted to a mezzanine level above the storage level. Limiting the peak problem would also decrease congestion.

Diversity of centers would create a diversity of congestion. For example a city that has one central nucleus is going to have greater congestion than a city that has split the nucleus into smaller nuclei. Such a city hasn't a pull towards the center.

If people are expected to use transportation systems other than the automobile, the services must be convenient, comfortable and reliable. Subways and street buses are very efficient in the city but perhaps we shall see the monorail in use in the future.

Everything within the system of the city must constitute a distinct pattern. A pattern which is not complex for it must be readily distinguished by the people. A pattern must be regular for an irregularity causes mass confusion. If the city presents a confusing pattern the people will also become confused.

Man and the city must be co-workers. Man must understand his surroundings. Lack of understanding eludes a lack of identity. Society then becomes rigid and the people lose interest in the role they play within the city.

To instil interest the city must become not only a place of work and a place to live but also a place to play; to grow. Activities must be close at hand, they must be varied and challenging.

Beauty can only evolve out of the efforts of the populus. Man works with his hands, through his heart. If man can seek beauty in something that is shrouded in ugly cloaks he will strive to attain it but if he passes by the ugly only to find the beauty his city is doomed.

The City now lacks the magic that is needed to stir men's blood. Man must project fresh forms into which his own energies must be freely poured. The city must be beautiful rather than practical.

"Many of our cities are in need of major surgery to overcome decay. New suburban sprawl reaches out into the countryside. The old, the poor, the discriminated against are increasingly concentrated in central city ghettos; while others move to the suburbs leaving the central city to battle against immense odds.

Physical decay, with obsolescent schools to polluted water and air, helps breed social decay. It casts a pall of ugliness and despair on the spirits of the people and this is reflected in rising crime rates, school drop outs, delinquency, and social disorganization."

LAY OUT OF THE CITY

Name of City: We decided that we would call our city, the City of Eden since we are aiming for perfection. If a city nears perfection it should seem almost like paradise compared to cities of today.

LOCATION

Relative -It was decided that we would place the City of Eden in Acton's location in order to see how Acton might function as a city. Approximately 50 miles SW Toronto.

Absolute: Longitude 80 -02"-00 West, Latitude 43 -38 -00 North, Elevation 1150 ft. A.S.L. Sun Time Greenwich minus 5 hrs. 20 minutes, 8 seconds.

PHYSICAL FEATURES:

This seems like a perfect site for a city as it would have room to grow. The land is generally flat with the exception of the eastern portions where the topography is rolling (knob and kettle top). There are quite a few swamps but these could be filled in. There are temperate mixed forests and rich farming soils. It is a good situation for industry as it is near many large centers.

The lake is located in the center of the city and is used only for recreational purposes. Size- 600 square miles, Population: 48,000 people, Density: 80 1 square mile.

PATTERN

The pattern chosen for this city was the "Star of David". This pattern creates a central area from which sub regions and regions radiate. Since one problem that we are trying to solve is traffic congestion the central nucleus no longer exists. It has been broken down and focus is outward. The only functions that have been placed in the central area are the educational, recreational and administrative. The Industrial areas are found outside of the city on the outer ring. Therefore there is a daily influx of students and administrative officials into the central area while there is a moving out of the city to the industrial areas.

RECREATIONAL OR OPEN SPACE

Areas are very important, these areas should constitute approximate 35 percent of land use. The one large central recreational area provides numerous activities such as golfing, swimming, nature trails, race track and other large activities. This area is close to all residential areas. Still the sub regions must have open space areas. Each residential area should have small parks used as play areas for the neighbourhood children. Each residential area should have its own central plaza or small shopping area. As a result each residential area becomes a functioning zone or a self serving area.

The Housing must suit the needs of all people. In the future it is probable that the problem will be solved by "Apartment Parks," or town houses. Each apartment park will have its own open space area including gardens and a play area for the children.

COMMERCIAL VS RESIDENTIAL

Each residential area in turn is adjacent to a commercial region because a split of the commercial region into smaller sub regions again causes a split from one main nucleus. This would certainly limit congestion. This however, might prove to be a problem in itself as the commercial function might become incoherent and less efficient. In each commercial area there is a C.B.D. Each area has a large parking area. Automobiles do not enter into the commercial area itself as monorails and buses make it possible to travel easier in the center. The city of Eden is basically a horizontal city. It is not a concentrated city yet it has all of the areas with easy access to functions. The commercial area is close to the Industrial and the agricultural. This close proximity creates a definite interrelationship which limits the distribution factor.

SYSTEMATIC ORGANIZATION OF FUNCTIONS

The city displays a system of ideas or relationships. Each function must harmonize with another in order to produce a system. The transportation system must connect all other functions to create unity. Recreational areas and residential areas must be organized as they are of primary importance in the everyday lives of the people. Thus the city system becomes more or less a machine. Its inertia causes it to expand and grow beyond its past dimensions.

Each function becomes a moving valve within a gigantic machine. Each part is charged with a different response and each one does its own job. However if a flaw occurs in one part of the machine or in the product that it produces the system slows down. e.g. If one part happens to breakdown the machine stops such as a city would if one of its functions came to a disastrous halt.

AIM OF THE CITY

The aims of a city exist with in the minds of the people. The planners who design the city also create a personality. This personality determines the aims of the city. The city we have designed is basically residential in personality. The aims are to eliminate major problems within the city. But most important we ate interested in making the people satisfied with their environment. Therefore our main aim was to provide activities, adequate housing and beautiful surroundings.

FUTURE

The future of this city or any city depends upon its people and how they are able to handle the problems that so often crop up. There is a lot of space to accommodate the growth of residential and industrial areas. Open space areas have been left for recreational areas and parks.

The industry and the agricultural functions make the area economically stable. In the future as the dimensions of the city grow so will the influence of its already predominate umland.

CONCLUSIONS

The City of Eden may not be a paradise as the Garden of Eden but then again, a city much like the people who live within its stretching limits can never be perfect. There will always be problems which will puzzle the planners of the future for they will always be searching for something new and better. Old problems will be solved but new ones will evolve out of the old.

The city must become more personalized in order to keep the people. If they suddenly find that conformity and loss of identification have smothered them along with the pollution of the air, there may be surprising decrease of population in large cities in the future. Today the city only represents a place to work, it has lost its protective function and it is in some cases a very poor place to live.

A city is a place of culture, majesty, a reminder of a great history and a promise of a successful future. Not a future of massive concrete obstructions nor a clandestine jungle but one of beauty and harmony. Man will never be lost; his environment will be easily explained by reason. Thus man and the city will work together and their personality will become one.

The basic shape for this city is a star of David, and unlike most plans which converge to the centre, the aim is to decentralize activity.

The focal point is a lake and park area with the university, schools and recreation facilities. Within the arms of the star are detached homes while between the arms of the star are duplex and apartment buildings. The circle areas at the star points are high cost housing. Each striped teardrop is a shopping plaza with medical facilities. The green tear-drops are parks. Beyond the residential section is the commercial district. Since no cars are allowed in this area, there are parking spaces surrounding the hexagram. Each of the dark squares in the commercial district represents transportation outlets for the subway and buses. In the top right corner is the industrial park. Should the city grow, the same pattern could repeat itself forming a star within a star.

Urban geography as he terms it, has been one of Mr. Martindale's pet innovations in the course of study for high school students in Acton, and as a special project, members of his 12A class were invited to plan a model city.

During the year the students examined major cities of the world, and groups visited the city planners in Hamilton and New York.

Among the best projects handed in, were a centralized tourist-oriented city by Jackie Palmer, and a decentralized star-patterned city by Linda Lawson and Olga Hnatiw. Both show originality and foresight and both are intent on making cities nice places for people to live.

Linda and Olga admit that they began their project with the intent of planning Acton's future and it blossomed into the complex city of 48,000. Both plans have a lake in the centre.

The girls agreed that they learned far more from the project than they would have in straight lectures. "We did some work on our own for a change," says Olga. "I think we learned a lot more this way because we had to plan and discover things for ourselves," Linda agreed.

At a time when Acton is in a constant state of expansion, both projects could hold ideas for local planners. Though perhaps not entirely accurate or logical in their construction, the plans are an indication of the advanced thinking going on within the confines of the high school.

CENTRALIZED EFFICIENCY FOR TOURISTS

By Jackie Palmer

The name I have chosen for this city is "Mea Villa" which when translated is "my villa". I named it this, basically so that the people living in it would feel that their home was like their cottage or country house when actually they lived in a city. For this reason, I have built my city along certain lines and I hope I have done it successfully.

Where is my city? The absolute location is irrelevant, but it could be on the west coast near Vancouver. The population is 77,000.

To analyse Mea Villa, I shall begin in the CBD which is the central business district. The personality of this one mile square is quite unusual. The most unusual part is that no cars are allowed in this area. By not allowing cars, the CBD is left as a pleasant area to shop, carry on financial business and mostly have fun.

The profile as you have probably guessed is vertical in the CBD. There are two buildings of 100 stories each. The five yellow buildings, as well as the two huge ones, are used for commercial purposes. But at least the first two floors of all these buildings are devoted to entertainment and shopping areas.

The so-called green ball in the CBD is for city administration, Mea' Villa's city hall. It is approximately 20 stories high. Although my model shows conformity, I really wanted each and every building different in shape and size.

Another unusual thing about the CBD is the lake situated in the centre of its district. Around the lake, the country atmosphere doesn't seem so far off in the city. Three arcades of trees lead to the three most important buildings, the city hall and the 100 story complexes. Also, the trees are in a circle around the lake to add to this beautiful site.

The latitude and the geographic situation of Mea Villa allow it to have flowers almost year round. Again nature is fulfilling my purpose in creating a pleasant place to live.

Since no cars are allowed in the CBD, this presents two major problems. The first concerns the fire hazard and what to do. To solve this, the sidewalks were built to handle a fire truck if the need arose.

The second problem was where to put all the cars, so I tried this solution. The area adjacent to the CBD is open space. Since eight roads radiate into the CBD, congestion might be a problem so no matter which road a car enters, he must merge to the right and park in the closest parking zone.

As I have previously mentioned, there are eight roads coming into the CBD parking zone. The wide road that hits the CBD at a 90 degree angle is a super highway. Visitors from outside the city, or just residents heading to CBD can travel without unnecessary turns or any danger of getting lost.

There are four other super highways, two running north and south and two running east and west. The west serves the Mea Villa harbour and the east serves the tourist region along the water (lower right on model).

The narrower roads are just ordinary highways, servicing the major residential districts.

The second major form of transportation is the go-transit or subway. Again the subway aids in reducing congestion, as it serves the industrial park, the CBD, the tourist area, and the residential districts. The city tries to have a beautiful subway.

The third method of city transportation is the air system. Mea Villa has one airport. It is a very large international airport to bring in tourists which is the main source of revenue in the city.

The area on the model with scattered red squares is residential. The profile is horizontal to keep my goal of a rural setting, and hence the effect is scattered, not concentrated like the CBD. Included in the residential areas are four hospitals, one large university, one commercial college, four high schools, and sixteen public schools. There are also cemeteries, firehalls, shopping plazas and drive-ins.

The area outside of the CBD could be separated into four major sub-regions. Three are residential and one is industrial. Each of these four regions has a large lake and a beautiful park to go with it. All of these parks are shaped differently as I have demonstrated in my model. There are more parks than are shown in the model.

Northwest of the CBD is the industrial park. Here there are only three major plants. Why? My city is not an industrial city. These plants are used for processing food which is primarily consumed in the city itself.

As you can see, there is a lake in the industrial park as well. One important reason is so the employees can have their lunch in a beautiful surrounding and thus cut down on congestions travelling home for lunch. A happy, healthy environment will encourage people to work well and enjoy the work they do.

Involved in the every day world of the industrial park is the harbour. Some food is imported along with machinery and fuel which is then trucked to the plants. Mea Villa's harbour can dock 50 ships. It also serves as an inlet for tourists.
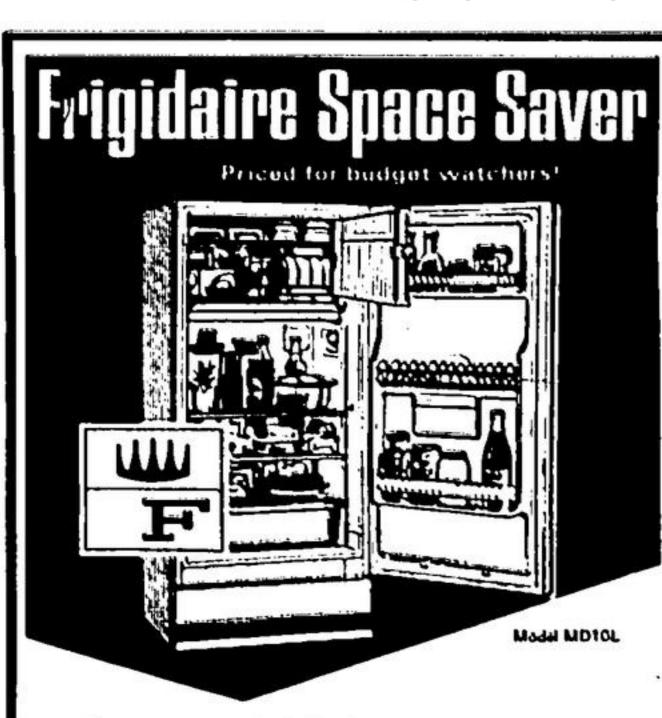
Last but not least is the most important area for the economy of Mea Villa- the tourist region south east of the CBD. Here we find the profile sometimes vertical with a few skyline hotels. However, to keep the country setting, motels and cottages are a must. Trees and greenery are not forgotten. Also shopping plazas and other necessary buildings are located here.

Since I have never wanted to live in a city for as long as I can remember, I have built my city to resemble the country. I visited many different cities in Europe on my trip with Mr. Martindale last summer and none really impressed me.

People who live in a city must be proud of it and hence keep it clean and obey the laws against pollution. That is what is wrong with cities today. I think people live in cities to make money, and while I realize you can't live without it, there are more important things in life than money.

I have enjoyed building a model city because you get to express your own ideas on the perfect set up. You come to realize all the problems of city planning. You have to think about the people mainly, and how they can make money and still enjoy life.