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URBAN AND ENVIRONMENTAL STUDIES

NORTHERN EUROPEAN STUDY TOUR

INTRODUCTION

The following article is a result of a Northern European Study Tour in which I participated. My trip was financed through a grant from Rensselaer Polytechnic Institute for the purpose of studying city planning and new towns in Europe. The Tour was promoted by Urban America, Inc., because of their concern for an Urban Growth Policy in the United States. The Study Tour took place from May 28 to June 14, 1970, and we visited the following cities:

Paris - where we reviewed the Paris Regional Plan, visited La Defense (a new town "in town" for 800,000 people); Parly II (a new community outside Paris); toured the Coignet industrialized housing factory.

Helsinki - where we reviewed the planning and development of Tapiola (a new town outside Helsinki) and visited the community itself.

Moscow - where we reviewed the revised plan for the development and redevelopment of Moscow, toured several housing construction sites and were given a presentation of

of the national housing policy.

Stockholm - where we reviewed the greater Stockholm regional plan and visited several satellite new towns. (Vallingby, Farsta, and Skarholmen)

London - where we reviewed the Greater London Regional Plan and visited the new towns of Welwyn Garden City, Stevenage, and Thamesmead.

This is an account of my personal experiences in each country, interviews and informal discussions with officials, government publications received from the various countries and my own personal research.

Paul G. VanBuskirk

Paul G. VanBuskirk
Lecturer and Coordinator
Urban-Environmental Studies Program
Rensselaer Polytechnic Institute

"EUROPEAN NATIONS ARE SOLVING THEIR URBAN PROBLEMS"

by

Paul VanBuskirk

Lecturer and Coordinator, Urban-Environmental Studies

Rensselaer Polytechnic Institute

Several European nations are building new communities, mass producing housing, developing unique mass transportation systems, and are deeply concerned with the total environment and quality of living of their people. Europe has been commonly referred to as the "Old World"; in the near future, it may be called the "New World". Conversely, if the United States maintains its fragmented, disorganized approach to solving urban problems, we may be referred to as the "Old World".

Why have the Europeans succeeded in solving their problems? They have a sense of national commitment of resources, foresight in planning, a high level of competency in government and the confidence and concern of their people. Constraints, such as land speculation, zoning, codes, and the unwillingness of political subdivisions to cooperate, have in several cases been removed.

SWEDEN

Stockholm is an outstanding example of how a metropolitan area has planned and developed orderly urban growth. Today, Stockholm probably has a population of 800,000, and that of Greater Stockholm is 1.3 million.

In 1905, the Stockholm City Council began to buy up agricultural land outside the old city limits. Land was purchased as the opportunity arose and the result is that today, most of the new communities are built on municipally-owned land. The land, after purchase was leased for agricultural purposes and the rent was used by the city to pay the interest on the capital borrowed for purchase. As a result, the purchase of land had little effect on the local income tax. From 1945 to 1950, a Master Plan was drawn up for the development of the administrative area of Stockholm. It was decided to build an underground railway system in 1941 and work commenced in 1945. It was decided to develop new communities (referred to as suburbs in Sweden) along a finger-like pattern, extending from Stockholm, on previously purchased municipal land. The areas between the fingers are greenbelts and are reserved for motor traffic routes.

The underground railway was designed and constructed to follow the axis of the fingers. Stations were placed at intervals along the underground lines to serve a series of suburbs, usually having a population of between 10,000 and 15,000 people. Also, a small center was created around each station to provide everyday goods within walking distance of the population. A main center, to serve the suburb, is developed around the station considered to have the most favorable location. A main center is designed to serve a population of from 50,000 to 300,000 people, living within a ten minute ride by car or a short trip by underground. In addition to several shops,

the main center contains banks, health clinics, cinemas, restaurants, welfare offices, schools, etc.

In 1948, work started on the first suburban units and, since that time, twenty units have been completed and are located within four fingers, each with its own main center. They are Vallingby, Higdalen, Farsta, and Skarholmen. Nearly 250,000 people are living in these new areas.

The main centers give the appearance of a huge shopping center, with a high degree of urban design. The largest main center is Skarholmen, which contains 785,000 square feet of gross floor space, for commercial services and is designed to serve 300,000 people with space for 4,000 cars.

Traffic segregation is complete in the centers and, as far as possible, in the residential areas. Service deliveries to the centers, as well as the mass transportation system, are underground. Several bridges and underpasses serve pedestrian traffic and separate the vehicular traffic. The main centers have supervised wading pools for small children's enjoyment while the mothers shop. Elevators from adjacent residential areas, built on hills near the centers, serve for vertical transportation to the center. The Swedes design and build for people, maintaining the environment. High-rise housing is constructed within 550 yards of the underground stations, with terrace and detached houses beyond this radius, up to a distance of 1,000 yards.

The concept for the Uncle Sam Mall in Troy could be called a "Main Center" in town because of its similarity to the

to the Swedish Concept. The Uncle Sam Mall calls for 450,000 square feet of basement area for delivery and storage of goods, one million square feet of commercial area, 1.5 to 2 million square feet of office space and parking for 7,289 cars. The total estimated cost of the Mall is $96 million.

These new suburbs in Sweden were not designed to be self contained. Residents are within a twenty minute ride by way of the underground from downtown Stockholm and approximately fifty per cent of the working population commutes daily to Stockholm.

In developing the new towns, or suburbs, the City of Stockholm utilized the lease hold system. The land is leased for development of housing and for commercial and industrial buildings for an unlimited period. However, the city can give a termination notice after the first sixty year period if the land is needed for another purpose. Otherwise, the contract is automatically prolonged for another forty year period.

The Swedes cite the advantages of municipal land ownership and of the lease hold system as follows:

(1) The municipality can decide where and when the different areas have to be built and see to it that public transportation, traffic routes, sewerage, etc., are planned together.

(2) It enables the City to control the size of shopping centers to cover a suitable number of customers and provide the social and cultural institutions.

(3) The City has continuous control over built up areas which makes it more practical to arrange common facilities; such as heating plants, parking places, and underground service roads.

(4) The increase in land value goes to the municipality and they are able to put the money back into the new towns to maintain a high degree of urban environment and quality of living.

The Swedes admit that, under modern legislation, such arrangement could be imposed but it is easier to supervise the utilization of these arrangements if the land remains in the possession of the City.

Under the lease hold system, the cost of development of streets, parks, foot paths, water and sewage system, as well as the administration, are included in the annual rent for the land. These annual rents are adjusted every ten years. For a one family detached house, this would amount to about five hundred dollars annually.

The national government is committed to house the entire population adequately. This is maintained by giving priority to financial and economic policies for construction. Credit policy has been deliberately set to assure that private mortgage money will be available for housing production. Through the National Bank, the state finances all building enterprises, private and public. There is no public housing in the American sense of the word.

A family housing allowance is available for the aged, handicapped, and for low-income families with children. The

family is then able, through its housing allowance, to rent from the private sector. Whereas the Finns encourage home-ownership, the Swedes encourage rented construction on the basis of increasing affluence. The two family home is becoming more common, reducing the need for home-ownership in the City.

FINLAND

In downtown Helsinki, buses leave every ten minutes for a fifteen minute ride to Tapiola, Finland's showcase of new town development. Tapiola, a private venture, consists of 670 acres and is designed for its present population of 17,000, and to serve as a nucleus for a city of 80,000. The town has one of the most pleasing environments ever seen. Its many fir trees, white birches, and rock outcrops make it very difficult to capture its buildings with a camera. It has a population density of twenty-five persons per acre. Tapiola is a truly self-contained city with employment opportunities for eighty per cent of its working population. At present, fifty-five per cent of the working residents are white collar with forty-five per cent, blue collar. It contains a variety of small industries which are separated by green belts from the residential areas, keeping these areas free from smoke, noise and odors.

Tapiola is designed around a Town Center having three neighborhoods. The Center is separated from the neighborhoods by green belts with promenades leading from the neighborhoods to the Center. All through-traffic, by way of the Town Center,

is eliminated. There are three independent neighborhood centers, consisting of grocery and food shops, to serve a population of from five to six thousand people. These centers are within a two-hundred and fifty yard radius of the residential units. The Town Center consists of a Central Administrative Tower, a Shopping Center, a Church, a Youth Center, an artificial pool, a Health Center, and a Sports Hall.

The planning and building of Tapiola started in 1952 under the leadership of Heikki von Hertzen. A private, non-profit enterprise called the Housing Foundation was created, to acquire, plan, build and administer Tapiola. This undertaking meant the building of a whole new urban complex from scratch. It meant the creating of streets, a water supply system, a sewerage system, street lighting, parks, and a central power plant to provide light, heat and hot water to all buildings.

The leading design principle in the planning of Tapiola was the mixing of high, medium and low density housing. This is contrary to the conventional planning, which requires the separation of residential structures according to density. The purpose of this revolutionary idea is the sharing of common facilities and the provision of a degree of spaciousness and variety between high-density buildings. Every effort has been made by the Finns to preserve the natural beauty of the environment and the original shape of the landscape. The design of Tapiola is the result of team work, with the membership made up of experts in the fields of architecture, sociology, engineering, landscaping, domestic science, and

child and youth welfare.

Half of Tapiola's housing units are three and four story walk-ups. High-rise buildings account for eighteen per cent and terrace and one-family, for fifteen per cent of the total units. The average density is approximately eight units per acre.

The apartment sizes are: four rooms, kitchen, etc., 935 square feet; three rooms, kitchen etc., 625 to 775 square feet; and two rooms, kitchen, etc., 500 to 600 square feet. A single family dwelling or a semi-detached house consists of five rooms and kitchen, bathroom, and sauna for 1,075 square feet.

Tapiola is controlled by its resident-owners, ninety per cent of its people, who are stockholders in the housing companies who built the apartments. A Finnish housing company is analogous to housing co-operatives, with shareholders entitled to permanent ownership of a unit. In Tapiola, the housing companies are themselves stockholders in various service companies, supplying heat, hot water, electricity, street repairs, solid waste collection and disposal, snow removal, etc.

For production of owner-occupied units, supplemental government loans are available. These are called basic and additional loans. Basic loans are, at the maximum, for thirty per cent at three per cent interest for twenty-five years. Both housing companies and families may receive basic loans. In the case of families, they may be used either to construct a single-family home, or to purchase shares, entitling the

family to own a unit in a non-subsidized housing project.

The additional loans are for low-income families and range from ten to thirty per cent of dwelling cost, with the same interest and duration as the basic loan. A typical example of a home purchase for a very low income family is: thirty per cent private loan at eight per cent; thirty per cent basic loan at three per cent; thirty per cent additional loan at three per cent; ten per cent down payment.

About ninety per cent of Tapiola's dwelling units and commercial spaces are sold to private occupants, either directly or by condominium. This enables the Asuntosaatio (Housing Foundation) to receive its initial capital investment as quickly as possible. Cost of acquiring a dwelling unit varies from $6,000 for a two room unit with kitchenette, to $18,000 for a five room unit with kitchen.

Tapiola is unique from other new towns in several ways. First, it was developed through private enterprise, with a tight money market in Finland and no government support. Its greatest strength was in the quality of social and economic planning. The social and economic mix was carefully prepared in advance of planning and, as a result, the physical plan itself was a tool for social programming.

It might be said that the Finns have developed the formula we have been looking for; that is, the welding of the economic, social, and physical disciplines into a successful urban design.

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ENGLAND

Over fifty years before Heikki Von Hertzen started his garden city of Tapiola, an Englishman, Ebenezer Howard, wrote a book called "Garden Cities of Tomorrow." He was concerned with the urban problems growing in London and devised the concept of having a green belt around London to prevent urban sprawl. He felt that urban sprawl would have a disastrous effect in long daily work journeys, transportation problems, and traffic congestion which we are now aware of. He was concerned with reducing overcrowded, decaying, and densely built-up inner city districts. Howard's idea was to build new garden cities, outside London and beyond the green belt. These would be moderate sized towns, in country surroundings, where people would have pleasant homes, near their place of employment, as well as modern services and facilities. His approach was a means of decongesting London, and, in 1903, the first new town, Litchworth, was founded.

Howard founded a corporation and, through private capital, purchased 3,300 acres of county land twenty miles north of London. Investors accepted a five per cent limitation on dividends, with all surpluses being plowed back into the communities. In 1920, construction began on Welwyn Garden, one of today's outstanding new towns, and the tone was set for new town planning in England.

Today, Welwyn Garden City covers an area of 4,317 acres, has a population of 41,500 and has over one hundred firms, providing employment for 18,000 people. Densities

vary from six units per acre for private dwellings to twelve units per acre for weekly tenancies, for a net average of ten units per acre. Welwyn is focused around a town center, a campus, which is similar to a village green or New England Town Common, and a green mall extending from the campus, past the Town Center, into the residential areas. The Town Center consists of administrative buildings for local and national government offices; cultural, educational and recreational buildings, including a college of further education; a central library; commercial buildings, such as shops, banks, hotels, etc. In all, there are seventy-six shops in the Town Center. Pedestrian underpasses lead to it and, eventually, it will become a pedestrian area. There are also eight minor unit centers to provide day-to-day shopping for various neighborhoods. There are 1,500 acres of open spaces for a rate of thirty acres per one thousand population. (The standard in the United States is ten acres per one thousand population.) When you consider that England is one of the most densely populated countries in the world, this is an amazing feat. (If California had the same density of population as England, it would have a population of 150 million people.)

Industry is separated from the residential areas but its appearance blends in with the residential esthetics. Welwyn is truly a garden city with the main style being red brick Georgian architecture. A walk through the town is a pleasing experience. There are duplexes and garden apartments with each family having its own garden, of which they are

very proud. All neighborhoods are neat and clean. The shopping center would remind you of a Colonial type you might find in Virginia. On the village green and near the Center, many of the towns people relax on the grass. A majority of the residents were formerly housed in congested sections of London and seem to appreciate the environment. This city is financially in the black.

At present, England has the most progressive new town legislation. During World War II, the British Central Government recognized the problem of postwar reconstruction and population growth and combined these efforts with the cities and their surrounding counties to commission comprehensive plans, incorporating new towns and town-expansion programs. These plans were approved and the following legislative program was adopted to provide the tools for successful implementation:

The 1946 Distribution of Industry Act gave authority to the Board of Trade to insure that new industries were steered to specific areas, that new factories were not built in overcrowded city districts, and that plant investment was concentrated on essential industries. Incentives such as grants to cover 25 per cent of building cost, 40 per cent of new machinery and $24 per week for each employee being trained for a new job were available and amount to six hundred million dollars annually.

The 1947 Town and County Planning Act gave power to county councils to plan urban growth and to control development in accordance with their plans.

The 1946 New Towns Act gives the Minister of Housing and Local Government the power to designate any area of land, including an existing town or village, as a site for a new town. The purpose and population of the proposed areas are made public and public inquiries are held to consider objections from interested parties. The Minister then appoints a development corporation for each new town, who is responsible for its planning and development. The Corporation consists of seven members who have a wide variety of experience and knowledge. It has the power to acquire, manage and dispose of land; to carry out building, including homes, factories, and schools; and provide public services, such as water, sewerage and electricity.

The New York State Urban Development Corporation (UDC) is similar to the English Development Corporation for a new town. UDC has the authority to acquire land and develop it, construct facilities for housing and industry, etc., and lease, sell or manage them. UDC also has the authority to create local development corporations with similar authority.

New Town Act of 1959, creating a Commission for New Towns, was set up to supervise the final stages of a new town development, as it passes from the development corporation to the commission. So far, it has the responsibility of four new towns.

There are twenty-four new towns in Great Britain in various stages of development and all but eight achieved a revenue surplus. The capital works undertaken by new town

development corporations are financed by advances made to them by the Ministry in the form of sixty year loans and the current level of investment is approximately $180 million per year.

There are eight new towns which lie in open country twenty to thirty miles from London. Their planned population is 614,000 and their present population is about 451,000; (population of the towns vary from 29,000 to 140,000). About 75 per cent of the new families come from London and half of these either occupy public housing or were on lists of families in need of housing, because of overcrowding, slum conditions, etc. The total population of the new towns is expected to reach three million by the year 2000.

About twenty per cent of the dwelling units are owner-occupied at present. To meet an increasing demand in home-ownership, a target of fifty per cent has been set by the government. Development corporations build some houses especially for sale or make existing rented houses available to tenants for sale; others provide land for houses to be built by private development. The new towns are able to benefit from industrialized housing systems. About one-third of the dwellings are, at present, built according to these methods. Private capital and private development play a major role in new towns. Aoout half of the new houses will be built for sale, mostly by private firms. Half of the investment in sites and buildings for industry and commerce will come from the private sector. After all, it was private

enterprise that first showed the way for new town planning in England.

One of the basic ideas derived from Howard's Garden City was that England's new towns should be self-contained, balanced communities. An important undertaking of a development corporation is to attract a number of diverse industrial and commercial firms to its town. The corporation either builds factories and leases them, or leases sites on which firms build their own plants. It is estimated that more than eighty per cent of the people living in new towns are under forty-five years of age and only four per cent, over sixty.

New Towns in England have been successful both financially and socially. This is due to the self containment approach, early pioneering, comprehensive planning, legislative commitment, good working relations between the national and local government, private enterprise and a national understanding of the problem.

I had the opportunity, while in England, of visiting Welwyn Garden City, Stevenage, and Thamesmead, a new town In-Town.

FRANCE

Parisians are building a new town "in-town" for 800,000 people called "La Defense." La Defense lies on a natural axis beginning at the Louvre, running through the Place de Concord, up the Champs Elysees, to the Arch of Triumph; then, across the Siene River to La Defense. It occupies the land where the historical western entrance to Paris was defended in 1870,

and consists of the areas of Nanterre, Puteaux, and Courbeirre.

La Defense consists of two project areas. One, the commercial and business center, lies on a rise of sloping ground toward the Siene and facing the axis toward the Arch of Triumph. The commercial area, built on an elevated platform under which highway traffic passes, is a mass transportation center for buses, trains and subway at different levels. It is a convenient point between the center of Paris and seven suburbs. Also, underground parking is available for 20,000 cars at various levels. It takes three and one-half minutes by express subway to the Arch of Triumph. The railroad line and station can accommodate 50,000 people an hour in any direction.

Several buildings are above the platform. The commercial and business complex will consist of fifteen million square feet of office area, three million square feet of commercial floor space and six thousand apartments. The area will employ over one hundred thousand people.

The area, when completed, will have twenty buildings, half of which at present are in various stages of development, ranging in height to forty floors; apartment houses; and twelve acres of hanging gardens. Other facilities included are an exhibit hall, cinema, night clubs, hotel, recreation and culture centers. The total commercial and business area is two hundred and fifty acres. This project has been underway since 1964 and is estimated to cost 450 million dollars. Costs include the acquisition, relocation, installation of

of utilities, and construction. The South Mall Project in Albany is ninety-nine acres and is estimated to cost one billion dollars, has 3.2 million square feet of office space, parking for 3,300 cars and a total of 5 million square feet of space.

West of the commercial and business district, on the other side of the rise, is a 1,700 acre residential development on the plain of Nanterre. Several high-rise buildings have been completed and are occupied. Others are under construction. The buildings are constructed by industrialized housing systems and stairs are precast, wall and floor panels are cast in the factory or on the site. A crane is assembled on one side of a building and the panels are lifted into position, building floor upon floor, until completed. The quality of construction is excellent and the buildings are very attractive. A few old three and four story brick dwelling units still standing in the area indicate the blighted, slum housing that occupied the area prior to clearance. Also, several "shanty towns" made up of tin shacks, similar to those seen in Puerto Rico, still remain in the area and are slated for removal.

La Defense is similar to the Swedish Main Centers and their residential areas, except that they lack the pleasing environment of Sweden and are not designed toward people. However, it is a tremendous undertaking, since it is within a city and is scheduled for completion in 1975.

This isn't all the French are doing in and around Paris.