New Roads for Old Cities: European Experience

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● CITY TRAFFIC and parking are troublesome the world over; whether they involve quantities of big vehicles on the straight roads of American cities, or a lot of little cars mixed with trucks, bicycles, horse and ox-carts on the winding streets of European towns. Many cities on the Continent had to be rebuilt following their wartime destruction. The opportunity existed to plan anew, to build, and to learn from the accomplishments and mistakes in rebuilding.

Invited by the Federal Republic of Germany to study reconstruction, the author was given an unusual insight into that country's planning efforts; therefore, this paper will be slanted toward German experience, but will also deal with impressions gained in Austria and Holland, where interesting things have been done.

European cities have as yet escaped many of the harmful consequences of automotive travel that are plaguing the urban centers of the United States. There is no outward evidence that business flees to the country leaving the downtown shopping streets to wither away. Railroads, streetcars and other common carriers are doing a good business and the service and equipment are improving, while they are deteriorating in this country. Farms and fields and woodlands are not being recklessly destroyed by an uncontrolled scattering of new developments in the country. For the most part the hearts of the urban areas are teeming with life, the stores are prospering in locations they have occupied for decades and over centuries, and the whole pattern of urban living conveys a sense of stability. These European conditions are comforting to Americans who hear and see a great deal of the threatening doom of cities.

Urban growth and the adjustment to new conditions have continued in Europe throughout the centuries of social and technological progress. Ancient, medieval, Renaissance and modern street patterns exist side by side—or have successively replaced each other without disrupting that delicate relationship between people and their environment that makes the public love and support their cities. The crooked foot paths and narrow shopping alleys of the towns of the middle ages are taking on a new significance under the realization that there should be shopping lanes exclusively for pedestrians. The broad and tree-lined avenues and the monumental squares of renaissance towns built in the grand manner make it possible today for undreamed of volumes of twentieth century motor cars to flow and to find at least once in a while a parking place. Past efforts to make cities beautiful and impressive are finding their reward today. Land-takings, demolition and boldness in planning, that even in this age of redevelopment seems astounding, have become more than justified. Millions of tourists spend their money to see these old accomplishments in urban design that rich America has been unable to achieve.

Modern cities that have risen on the hopeless heaps of rubble left by the bombings of the last war present fascinating laboratories for urban research. The rebuilding of German cities has brought about the opportunity to change the street plans and improve traffic. But this could only be done to the extent that the city architects provided the vision and leadership for the preparation of the plans, and the prevailing laws and financial limitations permitted their execution. The hampering forces to the achievement of ideals were the government's insistence to hold to the rights of individual property owners and the popular demand to rebuild along the old lines. In spite of it all, the reconstruction is now approaching completion, at least in West Germany, and the accomplishments in the repair to dreadful war damage are tremendous. Traffic and transportation, next to housing, have been the most important concerns of all cities in the process of reconstruction. Each town has it General Plan that establishes the transportation system; the use of land for housing, industry, etc.; the open spaces; forests and water; and various stages for the execution of improvements. (See Flaechernutzungs Plan, Stadt Stuttgart.)

The General Plan is developed in the city building office which combines all the departments needed for the planning and execution of an integrated program for improvements in the city. For example, the city of Hamburg has a building office with seven departments under a chief architect who has control over all building activity, the planning of the city and the design of public buildings. He directs and correlates the work of his departments of (1) town planning, (2) housing, (3) school and public building planning, (4) streets and utilities, (5) building inspection and zoning control, (6) parks, playgrounds, and cemeteries, and (7) surveys and deeds. Directly above him is the political government represented by two senators in charge of building who act as intermediaries between politics and planning. They have their contact with the voters through an elected fifteen-man building commission. Besides the seven technical departments, offices for personnel, the assessors, and the legal department are tied into the building office. This type of organization not only makes it possible to prepare comprehensive plans, but also to have them carried out. The director is a civil servant under tenure. In Germany, an awareness of the importance of the chief of building operations to the life and prestige of the city results in the choice of superior personnel for these posts. The positions are usually held by architects with training in city planning and experience in private practice and in some municipal building department. The men holding the job in larger cities are broadly educated, and have an understanding of the problems of the cities, the needs of people and the art of civic design gained through their work and extensive travel in Europe and other continents. Most of the European cities have a proportionately larger territory within their boundaries than do American cities. Annexation of bordering communities is going on all the time. Having the plans under full control in one political entity makes planning there easier than in so many American cities where a great number of local governments are involved, (for example, in metropolitan Boston, with over sixty separate cities and towns, it is virtually impossible to accomplish unified planning).

Germany started a network of superior highways for long-distance travel in the 1930's with the construction of the Autobahnen. These are limited-access roads that connect the outskirts of the principal cities and lead to the borders of the country. They were built primarily for military reasons. Their design standards were visionary at the time of their construction; now they seem antiquated and ready for widening and improvements at intersections. More of them are needed. The country has had to first rebuild practically all bridges on the road because they were blown up at the end of the war; it is now replacing pavements that have become worn under twenty years of hard usage which included five years of war. The increase in road construction for Germany in 1958 was 25 percent over 1957, while for the U. S. it was only 12.5 percent. The total length of the Autobahnen in 1955 was 2,175 kilometers—approximately 1,360 miles—and for a 12-yr construction program, an additional 2,000 kilometers (1,250 miles) are planned. To give the figures meaning, West Germany has an area of 94,252 square miles or approximately the equal of the combined states of New York and Pennsylvania. In function, the Autobahnen serve Germany as the Pennsylvania and New York turnpikes do their states. The other roads of the transportation network consist of state highways, country roads and local roads, much as it does in this country with one major exception; there are no ugly wooden telegraph poles and, in comparison to this country, practically no billboards. Wires are often carried in pre-cast concrete conduits in slabs that form the shoulders or bicycle paths of the roads. Cities are building high-speed feeder roads (Schnellwege) leading to the Autobahnen to improve the present hazardous and inadequate connections.

The street layout of European cities never follows the checkerboard gridiron pattern for which U. S. traffic engineers have developed their technique. Each of the old cities presents a special problem that is usually far more difficult to solve. Only one general principle remains in common with this country; that is, to keep all traffic out of the heart of the city that does not have to be there. Out of this premise grows the method for relieving downtown congestion that is rather generally applied in German cities. A curved highway, or a rectangular belt of tangential roads is developed around the core of the city to draw off the traffic. This is an old way of keeping the heart of the city alive. It was just as good at the end of the middle ages when horses and car-

riages replaced the beasts of burden as it is today when the motor cars are taking over. In some cities, the central area is still the original medieval town. When the old city walls were leveled, the areas cleared of fortifications were converted into a ring road; as, for example, at the famous Ring Strasse in Vienna, without which the city could not function today. From the businessman's point of view, these Ringstrassen—or Anlagen, as a similar park belt is called in Frankfurt—are the best "locations" in town. The park and the central position give the buildings a quiet yet prominent location with convenient access from all points of the city. Since the United States lost the "city beautiful movement," to which Chicago owes a tremendous debt of gratitude for its Michigan Avenue and Lake Shore Parks, its roadsides are being neglected.

Many opportunities to provide protective planting along inner belt roads were also lost in Europe in the pressure to create as much marketable and income-producing real estate as possible. The recently developed inner belts created as traffic roads are on the street level with only occasional grade separations at intersections; the major intersections are commonly handled with traffic circles. The city of Stuttgart is turning a difficult topography to the advantage of an interchange solution; it intends to dig into the hillside to create tunnels for the turning movements. Ordinarily traffic from the central area is led into the inner belt at intersections with a channelized traffic flow pattern which they have learned from the U. S.

There is a tendency to set aside streets exclusively for pedestrians in the shopping areas and in old cities where the space between buildings is too narrow for cars. The old, narrow roads have become lanes for stores; they have that subtle width that tempts pedestrians into becoming shoppers. In Vienna, a pedestrian underpass has been created in the form of a most attractive shopping area with a central cafe. The approaches are by escalator and the underground shops and restaurant deny all thought that an underpass must be that dirty, smelly and unsafe place for women known from experiences in this country.

Widening and straightening of roads, creating new frontage lines, establishing arcades along the shops are continuing operations to help traffic flow. Here is where the ingenuity, patience and persuasive power of the city planners come into play. Street widenings in this country are associated with ugly scars that never seem to cure themselves. However, if an architect is working with the city planner, some rather remarkable results can be achieved. Take for example Georg Strasse in Hannover. Here on a broad diagonal street a large public building was to be erected. Skillful maneuvering on the part of the city architect resulted in placing the building on the block behind the one cut diagonally, which was then cleared, planted and architecturally treated to enrich the setting for the new building and to form an attractive park for recreation with strips for parking on its fringes.

Downtown parking is the same problem the world over to which the present solutions are mere palliatives. Europe has the advantage of possessing public squares and market areas that offer parking spaces. Cities are building large garage structures, and in some places like Munich, underground areas or basements of commercial building groups are used for parking. Frankfurt closes the street crossings of one of its main streets (Kaiserstrasse) and devotes the side streets solely to parking and deliveries.

Each country solves its traffic and city planning problem in its own way.

Rotterdam in Holland has made the most of any city out of rebuilding a bombed-out central area. Immediately after the catastrophe in the spring of 1940, the city took over the entire damaged area. For five war years, the architects and planners of the city were busy developing the most farsighted plan that could be conceived. The required open space between buildings was increased by twenty percent. Dwellings were created in tall—high rise—slab structures. The famed pedestrian shopping streets called Ljinbahn were built. Now that reconstruction is nearly finished, the world finds that Rotterdam has the most modern downtown area; every problem has been most beautifully solved except for traffic and parking. Little did its planners—working in isolation during the war years—know about the post-war increases in cars and in car sizes.

The number of passenger vehicles has quadrupled in the last ten years in Western European countries. Adding further to the space problem, the small cars are becom-

ing medium sized and motor cyclists shift to cars as they now can afford them. The average number of persons per passenger car varies country by country, and even city by city; Sweden has 9 persons per car; Switzerland, 15; Austria, 20; Italy, 40; and Germany, an average of 19, with 8 to 12 in many cities, compared with 3 for the United States and 5 for Canada.

The increasing number of cars, combined with the concentration of an increasing number of people due to higher buildings in the central areas, cause the dilemma of cities. This fact is proved by experience in Europe as much as here. Germany is trying to do something about it.

A new law is being debated, which attempts to relieve congestion by setting a lower limit to the density of building. By requiring more open space, two things are aimed for: first, better housing and more healthful conditions to life in the city; second, less congestion on the roads. This new Federal Building Law of Germany proposes a sweeping reform to meet technological progress and to provide for improvement in the social and cultural life of the people.

While in this large country, it would be useless to attempt to imitate what Germany or other European countries have done in their smaller territories, it is nevertheless possible to draw important lessons from European experience: this paper has pointed to these:

1. The hearts of European cities are sound.
2. Transportation on common carriers flourishes.
3. Natural landscape and the source of water in the land around cities are being conserved.
4. Urban design with the aim to create a beautiful city has found its reward.
5. The increase of open space and the reduction in the density of development of urban land promises to keep cities alive and the roads functioning.

To sum up, the building of roads in cities is an integral part of the planning of cities. Results grow out of the coordinated attack of all problems related to bettering man's environment in this age of rapid technological progress.