

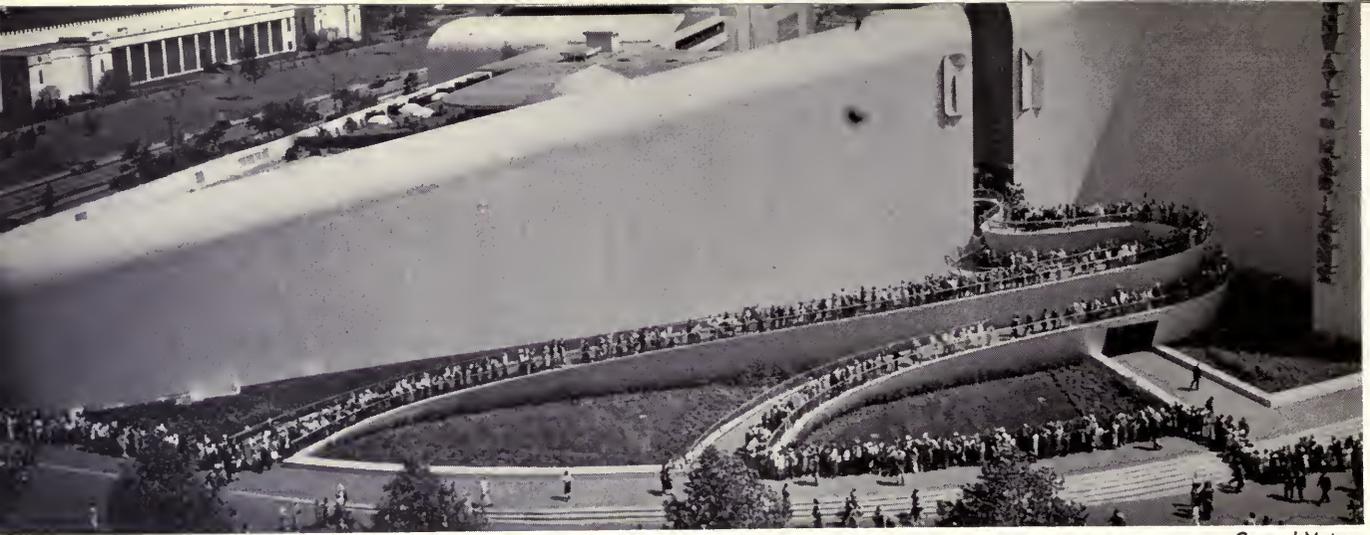
HIGHWAYS AND HORIZONS





FIVE million people saw the Futurama of the General Motors Highways and Horizons Exhibit at the New York World's Fair during the summer of 1939. In long queues that often stretched more than a mile, from 5,000 to 15,000 men, women and children at a time, stood, all day long every day, under the hot sun and in the rain, waiting more than an hour for their turn to get a sixteen-minute glimpse at the motorways of the world of tomorrow. There have been hit shows and sporting events in the past which had waiting lines for a few days, but never before had there been a line as long as this, renewing itself continuously, month after month, as there was every day at the Fair.

The people who conduct polls to find out why other people do things, and the editorial writers, newspaper men and columnists who report daily on the doings of the human race, all had their theory as to why the Futurama was the most popular show of any Fair in history. And most of them agreed that the explanation was really very simple: All of these thousands of people who stood in line ride in motor cars and therefore are harassed by the daily task of



ENTRANCE RAMPS TO GENERAL MOTORS WORLD'S FAIR FUTURAMA EXHIBIT

General Motors

getting from one place to another, by the nuisances of intersectional jams, narrow, congested bottlenecks, dangerous night driving, annoying policemen's whistles, honking horns, blinking traffic lights, confusing highway signs, and irritating traffic regulations; they are appalled by the daily toll of highway accidents and deaths; and they are eager to find a sensible way out of this planless, suicidal mess. The Futurama gave them a dramatic and graphic solution to a problem which they all faced.

Masses of people can never find a solution to a problem until they are shown the way. Each unit of the mass may have a knowledge of the problem, and each may have his own solution, but until mass opinion is crystallized, brought into focus and made articulate, it amounts to nothing but vague grumbling. One of the best ways to make a solution understandable to everybody is to make it visual, to dramatize it. The Futurama did just this: it was a visual dramatization of a solution to the complex tangle of American roadways.

As all those who saw it know, the Futurama is a large-scale model representing almost every type of terrain in America and illustrating how a motorway system may be laid down over the entire country—across mountains, over rivers and lakes, through cities and past towns—never deviating from a direct course and always adhering to the four basic principles of highway design: safety, comfort, speed and economy. The motorways which stretch across the model



Futurama Photo by Richard Garrison

THROUGH MOUNTAINS



Futurama Photo by Richard Garrison

SPANNING RIVERS



Futurama Photo by Richard Garrison

SKIRTING CITIES



Futurama Photo by Richard Garrison

PAST TOWNS

are exact replicas, in small scale, of motorways which may be built in America in the near future. They are designed to make automobile collisions impossible and to eliminate completely traffic congestion. Particular features of the motorways may perhaps be improved on, details of future road construction and engineering may differ, but the design of these motorways has been carefully and thoughtfully worked out and is suggestive of probable future developments.

Much of the initial appeal of the Futurama was due to its imaginative quality. But the reason that its popularity never diminished was that its boldness was based on soundness. The plan it presented appealed to the practical engineer as much as to the idle day-dreamer. The motorways which it featured were not only desirable, but practical.

As each spectator rode around the model in his comfortable, upholstered armchair, he listened to a description of it in a voice which came from a small speaker built into the back of the chair. This recorded description synchronized with the movement of the chairs and explained the main features of what was passing before the spectator's eyes. It directed his attention to the great arterial highways which were segregated into different speed lanes and which looked so different from the roads of today. It pointed out the overpasses, high-speed intersections and wide bridges over which tear-drop motor cars whisked by at a hundred miles an hour. It commented in passing on the surrounding scenery, the planned cities, decentralized communities and experimental farms. But it did not describe in detail how any of this was to be accomplished. It did not explain how the highway system worked. It could not dwell at length on any specific points of interest because of the short time available.

There was much more to see, and no time to see it. There was much more to explain, and no time to explain it. Millions of people, by waiting patiently for



Futurama Photo by Richard Garrison

STREET INTERSECTION—CITY OF TOMORROW—WORLD'S FAIR 1939

their turn in the chairs, demonstrated that the prospects of America's future concern them. They showed that the problems of transportation vitally interest them. But there was no time to satisfy that interest fully. They saw the world of tomorrow lying there invitingly before them—a world that looked like Utopia and that did not seem to have a very close relation to the world they knew. But they weren't let in on the secret of how it had developed; they weren't told how it worked.

This book will take you backstage. It will answer the many questions which the Futurama left unanswered. The Futurama and this book are two different treatments of the same material. The book is a description of the exhibit, just as the exhibit is an illustration of this text. And the book will do two things which the Futurama could not do. First, it will describe the premises, based on American experience, on which such a future transportation system is built; and second, it will suggest the consequences, technical and economic and social, which will result from such a future transportation system. Starting from the facts of congestion, confusion, waste and accidents, we have gone through analysis and blueprints until we have come out on the other side with an over-all plan. We have come out with transcontinental roads built for a maximum of one hundred and a minimum of fifty miles an hour. We have come out with cars that are automatically controlled, which can be driven safely even with the driver's hands off the wheel. We have discovered that people could be driving from San Francisco to New York in twenty-four hours if roads were properly designed. Peering through the haze of the present toward 1960 is a great adventure. It is an adventure so broad in its attack and so far-reaching in its consequences that there is no reason why each reader, layman as well as expert, should not repeat it now for himself and discover where it leads.



Futurama Photo by Richard Garrison

PLANNED MIDWEST METROPOLIS 20 YEARS FROM NOW

In designing the Futurama, we reproduced actual sections of the country—Wyoming, Pennsylvania, California, Missouri, New York, Idaho, Virginia—combining them into a continuous terrain. We used actual American cities—St. Louis, Council Bluffs, Reading, New Bedford, Concord, Rutland, Omaha, Colorado Springs—projecting them twenty years ahead. And we of course took already existing highways into account, making use of their most advanced features and, at the same time, projecting them also twenty years ahead.

There are many highways which strike us today as excellent—among others, the Merritt Parkway in Connecticut, the boulevard through the Great Smokies in the Southeast, the highway over the Santa Cruz Mountains in California, and New York City's great system of approaches and peripheral

highways. In comparison with what we have had in the past, these are fine roads, representing a tremendous advance over the roads of yesterday. But the roads of tomorrow will represent an equally great advance over those of the present, and it is toward this future development that the Futurama pointed the way.

The Motorway System as visualized in the Futurama and described in this book has been arbitrarily dated ahead to 1960—twenty years from now. But it could be built today. It is not too large a job for a generation which has replaced the plodding horse and buggy with the swift-moving automobile, which has grown wings and spanned the world with them, which has built skyscrapers a thousand feet high. Modern engineering is capable of magnificent accomplishments.

Already the automobile has done great things for people. It has taken man out beyond the small confines of the world in which he used to live. Distant communities have been brought closer together. Throughout all recorded history, man has made repeated efforts to reach out farther and to communicate with other men more easily and quickly, and these efforts have reached the climax of their success in the twentieth century. This increasing freedom of movement makes possible a magnificently full, rich life for the people of our time. A free-flowing movement of people and goods across our nation is a requirement of modern living and prosperity.

People who have achieved a partial success are often inclined to sit back self-satisfied and blind themselves to the fact that the success is only partial. Because we today move more freely than our ancestors, we have a tendency to overlook the fact that we should be able to move ten times more freely. We are satisfied with the mere possession of

MEN, MACHINES OR SHEEP?

Ewing Gall



the automobile, and fail to make use of its full potentialities. Many of us do not realize that our cars can reliably do up to eighty-five miles an hour, but that the average speed of motor traffic in the United States is twenty miles an hour; that although our cars have been designed for efficiency and economy, the loss due to traffic congestion in New York City alone is a million dollars a day; that although our cars have been designed for safety, there is a death toll on American roads today of almost four lives every hour, ninety every single day, 2,700 a month, and 32,400 a year! Until recently, we have been told that the cure for these paradoxes lies in hit-or-miss, spasmodic road "improvements" and catchy safety slogans. But we are due to open our eyes any day now, and demand a comprehensive, basic solution to a comprehensive, basic problem.

If a word-association psychologist asked you to speak the first word that comes into your head after you hear the word "traffic," you would probably answer, not "flow" or "movement," but "congestion." You would get a mental picture of the crowded approach to the Eads Bridge in St. Louis over the Mississippi, or of cars jammed bumper to bumper at the intersection of State and Madison in Chicago, or perhaps just of a suburban crossroad and the accident that occurred there last Saturday after the Country Club dance. The word "traffic" is usually taken to mean "too many cars." But, actually, traffic is simply the flow of cars along a road, and roads are supposed to be built to accommodate that traffic. When traffic is congested, the answer is not that there are too many cars, but that the roads have not been designed to perform





LOGS IN TRAFFIC

Margaret Bourke-White

their function properly. Their construction and design are inefficient.

The real trouble with American highways is the simple fact that they are not designed for the traffic they bear. The automobile has advanced in much greater strides than have roads. It has attained a far greater point of perfection. Automobiles are in no way responsible for our traffic problem. The

entire responsibility lies in the faulty roads, which are behind the times.

When the horse was discarded, the winding roads over which he joggled were not discarded with him. The automobile inherited them. Some of them have been "improved" from time to time, but their basic features have remained unchanged. The result of pushing motor cars out over these old roads was at first simply a mild havoc and runaway horses, but later, the Traffic Problem. Today we are still rebuilding old roads that were constructed for another vehicle, instead of starting to build special roads for the special needs of the automobile.

This simple fact is the key to the whole present-day traffic problem.

A brief glance at the history of road building in this country will make clear how vitally this anachronism has affected the development of American automotive transportation.