36. *The Meat Ax*

THE TREMENDOUS EXTENT of Robert Moses' power, and the extent to which, with that power, he shaped the greatest city in the New World and the great suburbs stretching out from it, is demonstrated by the roads he built during the quarter of a century following World War II.

These were roads like no other roads in history, for these were roads through a city.

Most of the great roads of antiquity—the 1,500-mile Royal Road of Persia, laid across three mountain ranges and lined with artificial oases at which relays of horses were kept shaded and fresh so that the royal couriers of Darius could cross Asia Minor in nine days instead of three months ("There is nothing in the world that could be faster than these couriers," Herodotus exclaimed); the three "silk roads," the longest roads ever built, laid out centuries before the birth of Christ so that caravans emerging from a gate in the Great Wall of China could carry bales of the material all the way to Europe, where it was valued so highly that it was weighed against gold; the post roads with which Genghis Khan tied together the vast Mongol empire; the twenty-nine military highways of Rome which, built by "the greatest men of the republic" ("None but those of the highest rank were even eligible to the office of superintending them") and radiating from Rome to which all roads led, ran with Roman directness (to avoid curves, mountains were cut through at enormous expense, marshes were bridged or simply filled up with solid masses of concrete) to the most remote provinces ("Even seas did not stop their progress, for the roads were built up to the water's edge and then continued upon the opposite shore") to speed the marches of the legions and engines of war which kept Rome mistress of the known earth—were roads through open country. Their builders may have had to contend with mountains and marshes, with the snow of the Alps and the heat of deserts, but they did not have to evict from their homes tens of thousands of protesting voters, demolish those homes, tunnel under or cut across subways and elevated railroads, sewers and water mains and gas mains and telephone and electric conduits and cables, all of which, providing a city with essential services, had to be kept in operation during construction. They did not have to solve these problems in space almost unbearably constricted because to obtain a single extra foot of width would require additional thousands of evictions. A few major roads were built

within ancient cities (some of the Roman highways ran right up to the golden milestone in the Forum, for example), but ancient cities did not have subways and gas mains. These were, moreover, cities on a different scale from modern cities—imperial Rome was one-eighth the size of New York; Athens at the height of its glory was never larger than Yonkers—so the problem of eviction was on a different scale. And since the traffic for which these roads were designed was different from modern traffic—not only in volume but in size and speed—they were constructed on a different scale. The major roads in Rome, the widest paved highways in any ancient city, were, even including their "service roads," the *margines* to which carriages were restricted to keep the central portion free for infantry and pedestrians, only sixty-five and a half feet wide at their widest point; the highways Moses was proposing to build were two hundred feet wide. A horse-drawn carriage can turn fairly sharply; the monster tractor-trailers of the twentieth century require a turning radius so great that a single interchange connecting one highway to another can cover eighty acres. Not only did these roads of antiquity have no underpasses or overpasses to carry intersecting roads across them—access to these roads was not controlled; they could be entered from any intersecting thoroughfare—their very dimensions were so much smaller than those of modern highways that they were really comparable not to those highways at all but only to modern streets or avenues. Nor were the roads even of modern times—of the swollen cities of the nineteenth century and the Industrial Revolution. The greatest intracity road development of modern times before Robert Moses was the boulevarding of Paris envisioned by Emperor Napoleon III and carried out by his Prefect of the Seine, the "brawny Alsatian" Georges-Eugène Haussmann, between 1852 and 1870. But the roads of Haussmann, impressive though they were, were nonetheless still roads designed for the carriage rather than the car.

The automobile age created in the twentieth century a need for roads of a new dimension, roads a hundred feet or more across, roads with underpasses and overpasses and with interchanges so immense that to create them hundreds of acres of earth must be covered over with concrete—gigantic roads, not highways but superhighways. But the greatest of these roads—Mussolini's *autostrade* and Hitler's *Autobahnen* and the Long Island parkways (which predated *autostrade* and *Autobahnen*), Belt Parkway and West Side Highway of Robert Moses—had been built around the edges of cities and between cities. Except for rare instances and short stretches, no superhighways had been built within cities. And even those short stretches of superhighways that *had* been built within cities had almost invariably followed open paths within them—undeveloped river banks, for example, or sparsely populated corridors—as if their creators had shied away from pushing huge roads through the city's dense fabric. The most noticeable exception had been the Triborough Bridge approach highways Moses had built through Astoria and the East Bronx—but the total length of these highways had been no more than eight miles. Now Moses was proposing to

build through the heart of the city more than a hundred miles. No one had dared lay superhighways through a heavily populated modern city on anything like such a scale: lump together all the superhighways in existence in all the cities on earth in 1945, and their mileage would not add up to as many miles as Robert Moses was planning in 1945 to build in one city.

The immensity of the physical difficulties in Moses' path could be grasped only "on the ground," and on the ground they made even engineers accustomed to immense difficulties quail.

One of his proposed superhighways, for example, was the "Cross-Bronx Expressway," a seven-mile-long road that would run straight across that densely populated borough. The Cross-Bronx Expressway would be a huge trench gouged across a city. And it would have to be gouged across the city without disturbing the city's lifelines, the water and gas mains, electric cables and telephone wires, sewers and steam pipes, streets and subways, that supplied hundreds of thousands of residents of the Bronx with services too essential to be interrupted for the long months it would take to build each section of the expressway. General Thomas F. Farrell, builder of World War II's legendary Burma Road, did not fully comprehend what that meant until, now a Moses consultant, he was sent out to look over the proposed route.

Standing on a bluff in Highbridge Park in Manhattan looking across the Harlem River at the Bronx, Farrell saw staring back at him from the top of the bluffs across the river a wall, a wall sixty and eighty and a hundred feet high, a wall of apartment houses. And crossing the river, entering the Bronx, Farrell saw that the wall was seven miles deep. Athwart the route Moses had chosen for his road stood literally hundreds of buildings, close to half of them apartment houses.

And an engineer like Farrell, accustomed to grasping at a glance the essentials of even the largest engineering problems, could see on his first tour of the route that apartment houses were the least of those problems.

Stepping out of his limousine at a high spot on Jesup Avenue to look out over a half-mile valley to the east, the general saw that apartment houses crammed that valley solid—a staggering panorama of massed brick and mortar and iron and steel. Looking down at the map Moses had given him, he saw that the Coordinator was preparing to gouge the huge trench of the expressway straight across the valley's heart. But what staggered Farrell most was not what was in the valley but what was on the other side of it, glaring down at him from the high ridge on its far side, a ridge even higher than the one on which he was standing.

On top of that ridge was not only a wall of apartment houses, big, luxurious buildings of a notable sturdiness, for on top of that ridge was the Grand Boulevard and Concourse, the "Park Avenue of the Bronx," but, running along the top of the ridge, a steady stream of automobiles, toy-sized in the distance. For the Concourse—built at the turn of the century in

imitation of Haussmann's boulevards with separate, tree-shaded lanes for pedestrians, bicyclists and horse-drawn carriages—was now a major automobile thoroughfare. Construction of an expressway would take years, Farrell knew; the stream atop the ridge could not possibly be dammed for that long: the Cross-Bronx Expressway could not cross the Grand Concourse at grade. A glance told the general that carrying the expressway over the Concourse on a gigantic viaduct was unfeasible; the ascent up from the valley floor would be almost three hundred feet, far too steep for the big trucks that would be using the expressway. The expressway would have to avoid the Concourse by diving beneath it, by diving down through the ridge, tunneling through with dynamite while not disturbing the apartment houses and road above. And, from a cross-section map he had been given, Farrell knew what was inside that ridge—not merely a huge storm sewer and a maze of smaller utility mains, but another utility somewhat more formidable. What was inside that ridge was a railroad, the Concourse line of the Independent Subway. Tens of thousands of persons rode that subway every day; it, too, would have to be kept in operation. And its triple tracks lay sixty feet below the top of the ridge; to get beneath them while going through the ridge, the expressway would have to dive deep indeed. And "deep" in the Bronx, Farrell knew, as all New York engineers knew, meant Fordham gneiss, a rock that combined layers of unusual hardness, requiring intensive and prolonged blasting, with frightening instability that caused sliding and slipping of the rocks on even the simplest engineering jobs. The engineers building the expressway would have to blast it through the ridge while holding up above it—holding absolutely steady even while igniting dynamite blasts that would shake a mountain—not only a tangle of sewers and mains but a boulevard, a subway and a row of apartment houses. And they would have to hold boulevard, buildings and subway steady while trying to find a footing for the necessary massive supports in unstable rock.

Because the expressway had to dive under the subway, it couldn't go over the valley on a viaduct; that would make the dive beneath the subway too steep. It couldn't cross the valley at grade; that would mean closing the north-south streets in it that cut across the expressway's path, and among those streets in the valley were no fewer than five major thoroughfares that couldn't be closed for long. It would have to burrow across the valley, and that meant holding up those streets while struggling through another maze of mains. And atop one of those streets, Farrell saw a distant skeleton of steel, the girders and tracks of the Jerome Avenue elevated rapid transit line, that would have to be kept running. While building the expressway under Jerome Avenue, Farrell realized, Moses would somehow have to hold up, for months if not for years, not only the broad, heavy avenue but the spindly elevated structure above it—and hold it steady enough for the trains to run along it in safety.

The ridge and valley, in fact, were only a microcosm of the physical difficulties in the way of the Cross-Bronx Expressway. The path of the great road lay across 113 streets, avenues and boulevards; sewers and water and

utility mains numbering in the hundreds; one subway and three railroads;* five elevated rapid transit lines,† and seven other expressways or parkways, some of which were being built by Moses simultaneously.‡ All had to be kept in operation while the expressway ran below or above them. This would be a difficult enough engineering task if the engineers had sufficient space in which to work. But on the Cross-Bronx Expressway, there was, Farrell could see, never going to be enough room. Blasting a tunnel and building a road while holding up above it a major street that itself is holding up a transit line is difficult enough. But holding it up when the girders which held up the transit line turned out to be resting on the spots—seemingly the only spots—capable of holding the weight of the tunnel required the fastening to those girders of "needle beams" of immense strength, beams built with legs stretching out to either side that could be sunk into the next available firm rock to hold the weight. The rock was blasted and chiseled out from under the girders so carefully that the road's designer, Ernie Clark, would recall years later that "we took the stuff out with a teaspoon." In one 466-foot section, the expressway ran under four major avenues and an elevated rapid transit line. Working with girders some of which were a hundred feet long and weighed nineteen tons, the engineers were constantly hemmed in on either side by the foundations of apartment buildings that could not be condemned because the condemnation would add additional millions to the cost and that were in constant danger of being damaged—some of them *were* damaged—by the blasting. Blasting a tunnel under a rapid transit line is difficult enough. Building a viaduct over the street and under the rapid transit line is less difficult—if there is thirty feet, the required clearance for streets and expressway, between the top of the asphalt of the street and the bottom of the steel of the transit line. When there isn't, the room can be created only by lifting the rapid transit line into the air—so delicately that its operation is not disturbed—by jacking it into the air, three-tenths of an inch at a time, with immense hydraulic jacks and holding it solid, until new girders of the right height can be installed, with timbers so huge that one man who lived near the Third Avenue jacking operation said, "I never knew there were trees like that in the world before." Throughout the construction of the massive superhighway, Ernie Clark says, "we were always figuring in inches and tenths of inches." In the face of such difficulties, moving a river five hundred feet, a job required where the expressway crossed the Bronx River, was a feat so insignificant that in the speeches Clark made to the delegations of engineers who came from all over the United States and Europe to hear him describe the expressway's engineering, he hardly bothered to mention it.

* The subway, of course, is the Concourse line of the IND under the Grand Concourse. The railroads are two branches of the New York Central and one of the New York, New Haven and Hartford.

† The Pelham, Lenox–White Plains Road, Dyre Avenue, Third Avenue and Jerome Avenue rapid transit lines.

‡ The Harlem River Drive, the Major Deegan, Bruckner, Sheridan and Throgs Neck expressways, the Hutchinson River Parkway Extension and the New England Thruway.

If building the huge new highways was tough, tying them together was tougher—for the knots, the interchanges between them, required so much space that even what looked like immense amounts turned out to be insufficient.

So immense was the mass of swirling, intertwined lanes of links between great roads that had to be built between and up the sides of those rocky 170-foot-high cliffs along the Harlem River that the unassuming Clark once ventured to suggest to an engineering convention, in his quiet way, that a new word would have to be invented to describe it: " 'interchange' does not adequately describe the construction in this area."

Two great north-south roads—the Major Deegan Expressway and the Harlem River Drive—were being built by Moses along the two banks of the Harlem. They would have to be linked up with the Alexander Hamilton Bridge, which Moses was building 170 feet above them to carry the expressway across the river valley—and both the bridge and the two river-bank highways would have to be linked as well to local streets on both sides of the river, as well as to the old Washington Bridge which crossed the river a few hundred feet to the north of the Hamilton. A total of twenty-two separate ramps and eighteen separate viaduct structures would be required to carry the thirty-one lanes of roadway necessary for the links. Making the rise in the links shallow enough so that huge tractor-trailers could negotiate them would have been simple if there had been sufficient room to work in: just start the climb far enough away so that the rise in grade could be gradual. But there wasn't nearly enough room. Two thousand feet south of the Washington Bridge was another nineteenth-century structure, the Highbridge Aqueduct, and the massive steel and stone piers of both these structures plunged down to the river banks, so the Hamilton Bridge—and its connecting links—would have to be built between those piers, and two thousand feet was a pittance in terms of the size required. On the Manhattan side of the river, moreover, was an existing roadway resembling an ancient Roman aqueduct, rising from the river to a tunnel cut beneath 178th Street as a connection under Manhattan to the George Washington Bridge. That roadway was supported on columns one hundred feet high. Knock out one of those columns and the roadway might collapse. The Cross-Bronx Expressway would have to be fitted between them, and the expressway's width was only five feet less than the space between the columns; there was practically no room for maneuver at all in the placing of those twenty-two ramps with their thirty-one lanes. The grades could not be kept shallow; to keep them from being impossibly steep, they would have to wind around and around each other; visualizing it in his mind's eye, Clark knew that the interchanges with which Moses would be filling the air on both sides of the deep valley would be the largest bowl of concrete "spaghetti" cooked up to that time by any highway builder in history. Some of the strands in the bowl would have to be almost incredibly thin and long. Because of the space limitations, normal-sized columns could not be used; the diameter of some, in fact, could be no more than 78½ inches. And some of these slender columns, needed to support immense weights, would have to be 100

feet high! Radically new column designs would have to be evolved, Moses' engineers saw. The ingredients in the sauce, moreover, would have to be varied, indeed; as it turned out, no two strands of spaghetti curved exactly alike, so that each piece of steel for the dozens of columns involved, for the girders supporting the roadbeds which sat atop the columns, for the beams which formed the floor of those roadbeds, for the brackets which held those beams and girders in place, had to be fabricated individually.

The Cross-Bronx was one of thirteen expressways Robert Moses rammed across New York City. Its seven miles were seven out of 130. The physical problems presented by its construction were by no means unique. Even for the "easiest" of those monster roads, those traversing relatively "open" areas of the city, there were always private homes, small apartment houses—and whole factories—which had to be picked up and moved bodily to new locations. For most of these roads, Moses had to hack paths through jungles of tenements and apartment houses, to slash aqueducts in two and push sewers aside, to lift railroads into the air or shove them underground. For one expressway, the Van Wyck, he had to hold up in the air the busiest stretch of railroad in the world, the switching yard through which thirteen tracks and sidings of the Long Island Rail Road pass over Atlantic Avenue in Jamaica—hold it up and hold it steady enough so that during the seven months it took to slide the huge expressway underneath, the 1,100 train movements which took place daily in that yard could continue uninterrupted.

None of Moses' previous feats of urban construction—immense though they had been—compared with the roads he was planning now; as is demonstrated by the cost. Highways had always cost millions of dollars. In the whole world, only a handful had cost as much as $10,000,000. These new highways would cost $10,000,000 per mile. One mile, the most expensive mile of road ever built, cost $40,000,000. Their total cost would be computed not in tens but hundreds of millions of dollars. The total cost of the roads Robert Moses built within the borders of New York City after World War II was over two *billion* dollars.

The roads, of course, were not the largest elements in his transportation program. They were, in fact, in one sense only links between the water crossings he was planning to carry their users over or under the water that divided the city into boroughs.

The scale of these crossings made the mind boggle. No suspension bridge anywhere in the world would be as long (or expensive) as the Verrazano-Narrows Bridge; it would be the longest such bridge ever built, its towers so far apart that in designing them allowance had to be made for the curvature of the earth: their tops are one and five eighths inches further apart than their bases. There would be enough wire in the Verrazano's cables to circle the earth five times around at the equator or to reach halfway to the moon, enough concrete in its anchorages to pave a single-lane highway reaching

all the way from New York to Washington, and more steel in its towers—taller than seventy-story skyscrapers—and girders than was used in the construction of the Empire State Building. No underwater vehicular tunnel in the Western Hemisphere—and only one underwater vehicular tunnel anywhere in the world—would be as long as the Brooklyn-Battery Tunnel. The tile used to line it would have tiled 4,500 bathrooms; to ventilate it adequately against the fumes of 60,000 cars and trucks per day, air would have to be driven through huge ducts at the velocity of a Force Twelve hurricane, and the fans which drove that air would consume daily as much electricity as is used daily by a small city. Among such marvels even a huge suspension bridge like the $92,000,000 Throgs Neck—itself an engineering feat that would make most cities proud—would hardly be noticed by New York. Comparisons among public works of different types are difficult. In terms of size, however, Moses' road-building program was certainly comparable to any public works feat in history. In terms of physical difficulty, his program would dwarf them all.

Immense as were the physical obstacles in Moses' path, however, the Coordinator was equal to them.

A technological system—engineering and construction techniques and equipment—capable of solving those physical problems was already in existence. The methods and machines required to build mammoth highways even within a congested city had been perfected, even if they had never been used to the capacity Moses was planning to use them.

As for the tangle of red tape in his way—every main and cable and sewer relocation, for example, required approval by several city departments—that was sliced through with his customary directness. Moses' aides were under standing orders to go straight to the department head at the first sign of resistance from any underling. Most city agencies closed up tight at five o'clock—or earlier. Working weekends was unheard of. But hours and weekends meant nothing to men who knew that when their boss wanted something done, "he wanted it done—period—he didn't care how it was done." Commissioners were routed out of bed at midnight—and long after midnight—by their telephone calls. Watching a Broadway play, a commissioner would feel a tap on the shoulder, and, in the flickering darkness of the theater, would see the tall form of Arthur Hodgkiss or Bill Chapin beckoning him peremptorily to the rear of the theater. One refused to leave his seat; he found himself signing forms on his lap in the third row of a darkened theater. And if some commissioner balked at overruling an underling who had refused, say, to O.K. a Chapin-proposed sewer relocation, his secretary would soon be telling him: "Commissioner Moses is on the line—himself!" And if—as almost never happened—some commissioner remained recalcitrant, the next call his secretary would announce would probably be from the Mayor. Frustration might be piled on frustration; Moses faced them all down. After he had whipped into line behind the vast over-all expressway program—after years of effort that can only be guessed at—Mayor, Governor, Legislature, Board of Estimate, City Council, Federal Bureau of Public Roads, State DPW and

an army of city bureaucrats, after all agreements were signed and the bidding for contracts under way, inflation of unforeseen dimensions raised the bids to levels beyond the state's ability to pay its share. Painstakingly, he worked out and obtained legislative and voter approval for a $500,000,000 bond issue which allowed him to get many of the expressways under way and even to finish a few. But costs continued to soar. He had underestimated the city's share so drastically that it could not even assume those minor costs that, by law, neither state nor federal government could assume. For years the expressways lay stalled—until the Federal Interstate Highway Act of 1956 allowed the feds to pick up 90 instead of 50 percent. Working through his banking allies, Moses persuaded Congress to include in the Act—despite the fact that it would circumvent its drafters' original intent of creating a toll-free system—clauses allowing roads linked to toll bridges to be included in the system, thus making his expressways eligible. Then, through a dozen ingenious subterfuges, he persuaded the state to use some of its own highway building funds, freed by the reduction in the share of the costs it was to assume, to pick up some of the city costs. There were other minor—but irritating—inconveniences: wars, for example. The Korean conflict was a source of real irritation. Steel was the precious metal to the highway builder, and the National Production Administration was obstinately insisting that available steel should go first to the war effort. Other cities accepted the situation without protest; Moses fired off telegrams to and pulled strings in Washington. Federal officials believed they would placate him by allocating his highways well over 10 percent of all steel available for civilian use, but they didn't know their man. Moses fired his next shot on the front page of *The New York Times,* charging that the officials were turning civilian defense efforts into a "monstrous joke" by sabotaging construction of arterials needed "to prepare for bombing evacuation, troop and supply movements." When federal officials tried to counter his charges with facts, Moses termed their statements "gobbledygook," the *Times* editorialized that roads are "essential in wartime . . . [the federal decision] mustn't be the last word"—and New York's allocation was quickly increased by another 10,000 tons. Next it was copper. Another attack, another victory. Then a strike kept the copper he had been allocated in the warehouses. But he intervened—and the warehouse doors opened.

To obtain his precious rights-of-way, Moses dealt with other giant city real estate holders—insurance companies, railroads, banks, the Catholic Church—as if the city were a giant Monopoly board, shuffling properties as casually as if they were playing cards, giving the Catholic Church, for example, space for an addition to a Fordham campus in the Bronx in exchange for an easement in Queens, handing Con Ed half a square block for a new gas storage tank (complete with guarantees of Board of Estimate easements for the concomitant underground pipeline) in exchange for two hundred feet of right-of-way through a Con Ed open storage area. At Randall's Island luncheons he made himself the broker between a dozen disparate interests, reaping, always, the commission in right-of-way that he wanted. At one location

near Fordham Road, for example, the path of the Major Deegan Expressway was blocked by both a housing development being built by the Equitable Life Assurance Society and a 217-foot-tall Con Ed gas storage tank. Negotiations were stalled—until a luncheon. By dessert, in a complicated land exchange, Equitable had been served up even more land for its development, Con Ed had agreed to "rearrange its distribution facilities" to "eliminate the necessity of the tank," and Moses was savoring the taste not only of the necessary right-of-way but of sufficient additional land adjoining it to create a park and playground for the residents of the Equitable development.

Robert Moses didn't merely solve these "physical" problems. He gloried in solving them. A reporter who was permitted to drive around with him on one highway inspection tour saw Moses "mentally readjusting houses as though they were so many toy building blocks." One of the blocks was a three-story factory—Moses turned it around and reset it on the same plot at a different angle. Another was a church—he turned it sideways. Another was an apartment house six stories high, which—with highway officials who had flown in from all over the country watching in awe, most of them expecting the structure to collapse—was inched a hundred yards out of the Van Wyck Expressway right-of-way with the possessions of thirty-five families still inside it. It cost at least as much—and possibly more—to move the building than it would have cost to demolish it, and in later years, Moses was quite frank about why he had decided to move it. "I moved it because everybody said you couldn't do it," he would tell the author. "I'll never do that again, broke a lot of gas mains . . . That was an absolutely crazy stunt, you know." But at the recollection, a broad, genuine grin spread across Moses' face, a grin of achievement and pride. He was overflowing with pride at his construction feats. The reporter painted a picture of a man happy as he played with his toy blocks. When the limousine reached Van Cortlandt Park, the reporter wrote, Moses began chuckling over reminiscences of the attempt by "the bird lovers" to stop him from running the Major Deegan Expressway through a swamp in the park that they had wanted preserved as a bird sanctuary. They had tried to obtain an injunction, he said, "but we just filled in a little faster." During construction of the Brooklyn-Queens Expressway, Moses rented the penthouse floor of the Marguerite Hotel—an old, sedate establishment right next to the expressway's route—and used it as an office. It had two advantages: only a very few people knew of its existence, so he was interrupted by few telephone calls, and he could look down on the construction as he worked. And he spent a lot of time looking down at it, watching the cranes and derricks and earth-moving machines that looked like toys far below him moving about in the giant trench being cut through mile after mile of densely packed houses, a big black figure against the sunset in the late afternoon, like a giant gazing down on the giant road he was molding. "And I'll tell you," says one of the men who spent a lot of time at the old hotel with him, "I never saw RM look happier than he did when he was looking down out of that window."

* * *

It was not the physical problems that were the most difficult to solve, however, but the political.

A technology for solving the physical problems had been perfected, but not the methods and machinery for the creation of large-scale urban public works in a democratic society; the American system of government almost seemed designed to make such creation as difficult as possible.

It is no coincidence that, as Raymond Moley puts it, "from the pyramids of Egypt, the rebuilding of Rome after Nero's fire, to the creation of the great medieval cathedrals . . . all great public works have been somehow associated with autocratic power." It was no accident that most of the world's great roads—ancient and modern alike—had been associated with totalitarian regimes, that it took a great Khan to build the great roads of Asia, a Darius to build the Royal Road across Asia Minor, a Hitler and a Mussolini to build the *Autobahnen* and *autostrade* of Europe, that during the four hundred years in which Rome was a republic it built relatively few major roads, its broad highways beginning to march across the known earth only after the decrees calling for their construction began to be sent forth from the Capitol by a Caesar rather than a Senate. Whether or not it is true, as Moley claims, that "pure democracy has neither the imagination, nor the energy, nor the disciplined mentality to create major improvements," it is indisputably true that it is far easier for a totalitarian regime to take the probably unpopular decision to allocate a disproportionate share of its resources to such improvements, far easier for it to mobilize the men necessary to plan and build them; the great highways of antiquity awaited the formation of regimes capable of assigning to their construction great masses of men (Rome's were built in large part by the legions who were to tramp along them); at times, the great highways of the modern age seemed to be awaiting some force capable of assigning to their planning the hundreds of engineers, architects and technicians necessary to plan them. And most important, it is far easier for a totalitarian regime to ignore the wishes of its people, for its power does not derive from the people. Under such a regime it is not necessary for masses of people to be persuaded of an improvement's worth; the persuasion of a single mind is sufficient.

This last point has especial significance for the construction of public works in a city. For in a city such construction requires the eviction of people from their homes. Even when the public agrees in theory that a work is needed, no members of the public want to lose their homes for it. People never want *their* neighborhood disturbed by it. If it is to be built, they inevitably feel, let it be built somewhere else. A totalitarian regime can ignore such feelings, which is why the great city rebuildings of history—not only Haussmann's of Paris but St. Peterburg's by Peter the Great, and Rome's first by Nero and later by Augustus—have almost invariably been carried out by such regimes, the notable exceptions being cases (such as the great London fire of 1666 or the saturation bombings of the German cities in 1944) in which a monumental catastrophe destroyed so much of a city

that it had no choice but to rebuild—and in which the catastrophe had removed from the scene the people who might have objected.

But Moses was not building under a totalitarian regime. Moses was building under a system in which permission to build could be granted only by officials who derived their power from the people. And, in that light, what was most significant about the Cross-Bronx Expressway was not that seven miles of brick and mortar and steel and iron had to be removed from its path but that seven miles of people had to be removed, removed from homes which in a time of terrible housing crisis in New York were simply irreplaceable. "People said that [the route] was so built up that you'd never get the politicians to say okay," Ernie Clark would later recall, and engineers who had built bigger roads even than Ernie Clark agreed. Farrell and Chapin's legendary Burma Road would symbolize to history the epitome of difficulty in construction. But Chapin understood political as well as engineering problems. Years later, he would recall the feeling that had swept over him when he had stood on Jesup Avenue staring down at that valley in the Bronx packed edge to edge with voters' homes. "I said to myself: 'The [Burma] Road was tough. But that was *nothing* compared to this son of a bitch.' " People—the people whose homes stood in the path of all Moses' urban expressways—were the most difficult problem of all.

But Moses solved this problem, too.

Democracy had not solved the problem of building large-scale urban public works, so Moses solved it by ignoring democracy.

Critics who said the Coordinator simply ignored the people in his path oversimplified; he may have wanted to, but political considerations, the considerations that mattered to other public officials, made it impossible for him to do so—at least until after Bill-O had been safely returned to office in 1949, Moses *tried* to take the people into account—tried hard. It was he who, to persuade apartment dwellers (hitherto uncompensated for eviction since they did not own the land involved) to move, persuaded the Legislature to provide for their reimbursement: $100 per room and $100 for moving expenses. Finding that they still balked—for middle- and lower-class families in New York, no few hundreds of dollars could compensate for the loss of a comfortable apartment they could afford—he even moved a few apartment houses smaller than the one on the Van Wyck. He moved entire blocks of private homes—263 homes on the Van Wyck Expressway alone—where there was room to move them. But along most of his routes, there was no room. And, as even his admirer Jacob Lutsky puts it: "He thought about people. But if it came to a project or people, he'd take the project."

He had the power to do so—to ignore or override the procedures democratic government establishes to govern the planning of public works. Was it mostly dictators who had built great urban public works of the past? In road-building in and around New York, he had a dictator's powers. And he used them.

He enjoyed using them—for using them gave him what was his greatest pleasure: the imposition of his will on other people. One evening, he was

sitting with Sid Shapiro and several other aides in his limousine parked on a side street in Queens, studying possible locations for the Clearview Expressway. Suddenly there appeared at the end of the street hundreds of citizens bearing torches and a scarecrow effigy labeled, in large letters, ROBERT MOSES. The aides realized that they had happened upon an anti-expressway torchlight rally. The big black car sat at the end of the street unnoticed in the dusk by anyone in the crowd as the effigy was hoisted to a lamppost and set afire. "I didn't dare look at RM," Shapiro recalls. But to his surprise, his boss threw back his head and roared with laughter. And when someone suggested they drive away, RM said no. He wanted to stay for a while. He didn't want to miss a thing. He sat there all through the speeches comparing him to a "dictator," "a Hitler," "a Stalin." And, says Shapiro, "he laughed and laughed. RM really got a kick out of it."

When he replied to protests about the hardships caused by his road-building programs, he generally replied that succeeding generations would be grateful. It was the end that counted, not the means. "You can't make an omelet without breaking eggs." Once, in a speech, he said:

> You can draw any kind of picture you like on a clean slate and indulge your every whim in the wilderness in laying out a New Delhi, Canberra or Brasília, but when you operate in an overbuilt metropolis, you have to hack your way with a meat ax.

The metaphor, like most Moses metaphors, was vivid. But it was incomplete. It expressed his philosophy, but it was not philosophy but feelings that dictated Moses' actions. He didn't just feel that he *had* to swing a meat ax. He *loved* to swing it.