

**Interviewer:** What do you think was the biggest effect of the Interstate Highway Act?

**Lewis:** Okay. There are two important implications and effects of the Interstate Highway Bill of 1956. The first in the positive way is that the Interstate Highway System changed the economic landscape of the United States. There are sixteen thousand interchanges on the forty-two thousand miles of highway. If you think that each of those interchanges has four quadrants on it, it means that there were sixty-four thousand economic opportunities; that is, nodes where commerce can be developed...at every interchange. And that land went up dramatically. And it is at those places where shopping centers were built – not just gas stations and restaurants, but also factories and small corporate parks. And if you think about the number of economic opportunities that were developed (because of course we were talking about roads connecting to those interstate interchanges that were developed just a few miles away) it is a staggering number. So the interstate highway system enabled the United States to grow economically in ways that nobody could ever dream of them doing. But, with every development, there is also a downside, and the Interstate Highway System really changed not only the landscape of America, but at times it had a horrible effect on the landscape. It was one thing to build a highway in a develop[ed] southwestern city such as Houston or Dallas, Texas, but it was quite another to drive [on] an interstate through a city like Boston or New York or Chicago. And if you take these older cities, say, Boston, which was built for the age of horse and wagon and goods moving at three or four miles per hour over the streets, and then put in automobiles which would go fifty-five and sixty and seventy miles per hour through the heart of downtown Boston, you had a recipe for disaster. Highways are enormously large structures in width and in length, of course. But the width created real impediments to urban communication. So it's one thing to cross a street. It's another thing to cross a four-lane interstate highway, or a six-lane interstate highway, or an eight-lane interstate highway with the median strips, with the breakdown lanes. So it made it very, very difficult for communities to stay together. These highways very often cut communities in half, and therefore cut people in half. And that has had a terrible effect upon the face of America and upon the spirit of America.

**Interviewer:** How did the public respond to the Interstate Highway System initially?

**Lewis:** Initially, Americans welcomed the Interstate Highway System, or the idea of the Interstate Highway System – it gave us mobility. We all came to the United States to resolve our destiny in the great spaces of our landscape; those of us who might have come by the Mayflower, or we might have come more recently from Vietnam or Laos (and the only exception to this would be those who came in chains.) But once those chains were split asunder, and especially after the Interstate Highway Act of 1956, people of all races and creeds and colors were able to move about the landscape as never before. So that was the idea of the Interstate Highway System: that it would enable Americans to zip about. But I'm not sure they really thought so much about the economic opportunities that were afforded them and how the interstates would change the country. But after the interstates started to be built... as they started to enter cities, especially cities in the East, like New York and Philadelphia and Boston, that's when the trouble began because the interstates, people began to realize, were going to split cities asunder, and the

people in those cities asunder. And that became where the great contingence of the interstate development came about in the late 60's and the early 1970's.

**Interviewer:** How did suburbs come to be?

**Lewis:** After the Second World War, G.I.'s returned to America victorious. But they also returned to cramped American cities, and cities that were filled with disease, and polio was an extraordinary scourge in the United States in the late 40's and 50's, especially in the summers. And so at the same time, there were highways that began to lead out of the cities too – new developments that were suburbs. The most famous of which is Levittown on Long Island. And what the Levitt brothers decided was that they could create a city of houses, building about a house a day across a landscape of potato fields, former potato fields, on Long Island. And what happened was those houses were largely financed with low-interest loans and, in addition to the loans, were funded by the G.I. bills in many cases. So, you had enormous federal subsidies of these loans. The other thing to mention, however, was that Levittown was entirely... segregated; no blacks were allowed to live in Levittown, to own property in Levittown, and so it became a [completely] white society... Though I'm not sure that there were Levitt brothers, and I'm not sure the G.I. bill funded the actual mortgages – the houses were subsidized with government-financed mortgages, and they were, they were FHA mortgages. But again, they were not open to blacks.

**Interviewer:** How did the Interstate Highway Bill come to be?

**Lewis:** In 1954, Dwight Eisenhower was faced with a small economic recession. Eisenhower was more fearful of tanking the economy than any other president since Herbert Hoover; because he was the first Republican president since Herbert Hoover, he didn't want to be tagged as a Depression president. What Eisenhower did in 1954 was he created a small highway bill which enabled him to get a lot of people back to work. He realized in absolute terms exactly what the implications of the highway bill would be. And so, by 1955, he really took some of the ideas of the Bureau of Public Roads for a national system of highways and brought it to a committee that he had created with General Lucius Clay as the head. The Clay Committee came up with an idea for a large highway system (roughly what you see if you look at the map of the interstate highways of the United States). It was no surprise that the committee would come up with that as it had on it people like the head of [companies], which made enormous road-building equipment; it had on it Steven Bechtel, who was the head of the largest engineering firm in the world. It had people like that on it, but it was people who could do a big job and get a big job done, and that was the sort of people that Eisenhower wanted to be on that committee. And what happened was, the committee came up with a good idea, but they didn't have a great plan of financing it. And it wasn't until two things happened; the first highway bill was voted down in 1955 because the funding of it was so murky... There was the thought that a lot of bonds would be sold and then paid down. It wasn't until 1956 that two things happened; one of them was that every member of Congress receives, after the bill was voted down in 1955, a book called the "yellow book". The yellow book has very few words [in] it, but it has maps of every city in the country where the

interstate highway would go, and it showed those interstate highways circling cities, going through cities, leading from one city to another, and every Congressman in the United States Congress saw the possibilities – the extraordinary possibilities – of what this would do. There would be funding for his city, for his populous; there would be ways to keep people working for a long, long time, so they were very excited by that. And then they found out a way to fund the Interstate Highway System, which was to add four cents onto the gasoline tax – this was something that was a little scary at the time – they were going to raise the gasoline tax to four cents, I should have said – so they raised the gasoline tax to four cents. What they did at that point was they created what would be, in effect, an economic Mobius Strip. It was an endless cycle of money that would go from the gas that was being pumped into the gas tanks, which allowed you to drive more miles over better highways, which were indeed funded by the gasoline tax. And so you drove more miles, you put more gas in your car, you built more highways. It was as simple as that. And it was a funding system that really worked quite well through most of the life of the interstate.

**Interviewer:** How much did Eisenhower influence the conception of the bill? (The bill, not the idea.)

**Lewis:** The bill? I think Eisenhower pushed for the bill beginning in 1954. In 1954, Eisenhower was to give a speech at Bolton Landing, New York, to the National Governor's Conference, and he was to give a speech – he never gave the speech because his brother's wife was dying and he had to tend to that – but what he did instead was he sent Richard Nixon to give the speech and the speech outlined broadly what is the interstate system. Now, it wasn't as though Eisenhower went to bed one night and woke up the next morning and said 'I've had a vision of the Interstate Highway System'. It wasn't that; it had been on the books for years; it went back to the 1930's and 40's; FDR had considered a version of an interstate system, very different in structure and land-taking and things like that. But what happened was Eisenhower understood the economics of what the interstate highway would do. And that's where he really realized it. And frankly I think he realized it in ways that few in America did; America at that time had about [a] 160 or 165 million people in it. And it's a very different America today; I can't imagine an America today with the wonderful mix of races and ethnic backgrounds that we have in this country existing without the communication that was afforded by an Interstate Highway System – it's really impossible to think that way. And I wonder what the American economy would look like without the Interstate Highway System; I don't think it would be nearly as rich and diverse as it is. Because Eisenhower couldn't have understood that by the time he was dead, but nevertheless while they were still building interstates, we would have satellites and GPS systems which would enable people to create "just-in-time" trucking. And what that was it made the Interstate Highway System a huge rolling warehouse. It used to be before the interstates that major companies would stockpile huge inventories of parts, and after the Interstate Highway System was built they decided they really didn't need that. So if a car maker in Tennessee is building Hondas, or whatever cars they might build there, and needs a certain amount of cars coming off the assembly line every hour, there will be trucks continually rolling into that factory with car seats in it, and another truck will come in with enough batteries just for a day's production, or

perhaps a day and a half's production. So there's very little inventory on-site; it's on the interstate highways, and it's rolling around right now.

**Interviewer:** How did the Interstate Highway System lead to racial segregation?

**Lewis:** In 1956 when the Interstate Highway Bill was passed, America was a segregated society in many parts of the land. It is true that the *Brown v. Board of Education* decision had come down from the Supreme Court earlier, but nevertheless, cities across the country were segregated, either by law or de facto. And the interstate highway engineers believed, quite unconsciously, that what they would do would be to put down highways, which served as barriers, between desirable neighborhoods and undesirable neighborhoods. And so if you look at cities across the country, you will see areas where bam, that highway has been laid right down on a divide between a black neighborhood and a white neighborhood. You can see this in Austen, Texas, for example; you can see it in Houston, and that highway is often brimmed on the sides, so there are only a few ways for people to get from one side of the town to the other. This served so the highways, interestingly enough, served not only to bring people together across the land, but by design sometimes to keep people apart. And that was a dark and sad moment, I think, in American history, and one redesign of highways has been to mitigate that. The greatest story of mitigation is the Big Dig in Boston, which divided the Italian section of the city from the rest of the city; it sundered the neighborhood, it split it, it destroyed the neighborhood with what was thought of as a great interstate highway achievement. Now that was just before the interstates, or the bill was completed, but it did get interstate money, and it did become part of the interstate system. And so what had happened was they had to bury what people in Boston had called the "Green Monster" after the green wall at Fenway Park, they had to bury that highway beneath the city and reunite the neighborhoods.

**Interviewer:** How does the Interstate Highway System differ from transportation systems of other countries? Better? Worse?

**Lewis:** Well, the difference between the Interstate Highway System and the systems of the rest of the world, or other parts of the world, is that the Interstate Highway System allows for far more flexibility. You can go wherever you want, whenever you want, in whatever vehicle you want. Of course, the downside of that [is] it in some ways separates us. We no longer sit in train cars for the most part as we cross the country, and therefore we don't meet people from other ethnicities. If you think about it, Chaucer's *Canterbury Tales*, which is the story of the Pilgrims going on their pilgrimage to Canterbury in April, and exchanging stories along their route, which makes the trip go faster, would never take place. You can't exchange stories; you don't meet diverse people on the Interstate Highway System because you're all driving around in separate pods. Now, that's of course a downside. But the upside of it [is] that it's in some ways very much an American, or North American, phenomenon that it allows for mobility over very, very large landscapes. If you compare the Interstate Highway System with the other modes of transportation in places like Japan or Russia, you'll find that the society itself has a different outlook about personal values. Not that American values are in any way superior, but they are

different. So in Russia, the government, of course, did not wish people to have cars because it allowed for greater communication and mobility that the Russians during the Soviet era did not appreciate. And Japan has the demand to move large number of peoples from very crowded cities to other very crowded places – it's a very different sense of how communication and transportation should come about. Final thing: the Interstate Highway System, and it's unfortunate in this case, was the creation of a mindset that said 'Well, we can abandon all other forms of transportation, public transportation and trains.' And this was a very great downside, as far as I'm concerned. I think we should have the other kinds of transportation as well, and we should be willing to subsidize our trains and our buses and our other modes of transportation in the ways that we subsidize our highways. The great myth of the interstate highway is that it's free; it's not free in any way, shape or form. We pay for it through our gasoline tax and our state taxes, but we also pay for it through our insurance and cost of owning a car, tires, maintenance, and things of that sort. And finally, we pay it through very little, hidden things, like the fact of dirt and pollution, the cost to clean our highways – to make them clean is really quite dramatic. So we're paying for the Interstate Highway System, but the costs are mostly hidden so we don't recognize them the way we do when we step on an Amtrak or a city bus. And that's a shame, because Amtrak deserves the same kind of government subsidies as the highway system. The answer is you can't have one kind of transportation; transportation has to be intermodal to be successful.

**Interviewer:** Why highways? We could have done trains or anything else, but why highways specifically?

**Lewis:** Highways are the quintessential expression of America's desire to move, more so than any other way of transportation. Highways in America lead really from cities to other parts of the country. Puckville observed that Americans builds highways into the wilderness and then populate them. And this was the case with the Interstate Highway System. Americans built into the wilderness and then people came; people came with money to create... businesses, communities along the Interstate. And that's a great point about the Interstate Highway System. They are American. And they are an expression of all of America's virtues, and not a few of its vices.

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**Interviewer:** All right, I think we can use pretty much all of that.

**Lewis:** All right, if there's anything that you need between now and Thursday can you give me a call. Ok?

**Interviewer:** Thank you so much!

**Lewis:** Glad to help you – I like these projects! Good luck with it!

**Interviewer:** Thank you so much Dr. Lewis!

**Lewis:** Bye.