

MITOCW | 24. Cases III: Post-urbanism and Resource Conservation

The following content is provided under a Creative Commons license. Your support will help MIT OpenCourseWare continue to offer high quality educational resources for free. To make a donation or view additional materials from hundreds of MIT courses, visit MIT OpenCourseWare at ocw.mit.edu.

JULIAN

Let me first explain what the end art is. The cover of *The Economist* talks about a fundamental change in

BEINART:

economic use of distance, arguing that, if telephonic communication becomes free, what would its impact be on societal life and space?

The second part is a book, which now not very popular, called *Explorations Into Urban Structure*. It follows a book called *Cities In Space*, which contains Melvin Webber's classic article, which I'll refer to, order within diversity. It's in the reading. It's in the required reading, so don't worry about it.

But the diagram on Figure 4 is taken from *Explorations Into Urban Structure*. This was an attempt to make sense of the complexity of interchanges in a contemporary city, particularly in the United States where there are levels of-- this is an attempt to mark a kind of new geography of communication.

It's best read about in the text. I just put in this diagram to remind you that, if you ever got interested seriously in the creations of metropolitan form and its options, this is material that you should access, not that it promises any solutions. But like Melvin Webber's argument, it says that we need to take more seriously a different kind of attitude towards metropolitan form than that which is conventionally supplied by-- I would use Webber's term a bit later in a few minutes.

The next page is two pieces of my own written for the one conference in New York on the downtown conference from the Rockefeller Foundation for Urban Journalists. So it's written in the kind of hip way for discussion, but it deals with material on the American downtown and the change.

It ends up with a hypothesis that one of the relationships between downtown and suburbs is a homeostatic relationship, arguably, crudely speaking, that the more you move away, the more you will counterbalance homeostatically.

And the growth of the exurb in America has been correlated to a growth of the center because the center has grown rather idiosyncratically, given that 25 years ago it was the absolute destination of disuse and [INAUDIBLE].

And the last piece is a response I was asked to give at a symposium here at MIT where Manuel Castells was awarded the Kevin Lynch award. And I took a kind of nasty turn and had to deal with the question of whether information technology would help improve city and regional form.

I said some nasty things. And a lot of people thought that I was more correct than the panelists. But you can read it in your spare time. These are just notes on the subject that we're dealing with in some ways or other.

Look, throughout this class, I've been giving you material not for the sake of adding paper to your compendium of stuff. It's really got a couple of reasons behind it. Number one, there's not enough time to deal with all of the stuff that I want to deal with.

And showing slides is not an adequate way of representing verbal dialogue. It works when you are depicting certain formal material. And when you're not, it's difficult.

Secondly, for those who believe that this class will teach you that there is a single theory of city form, I debunk that proposition. We started this class with a comment I made about the fact that 1,000 miles from where I was born archaeologists named Broom, Dart and Tobias discovered *Australopithecus africanus*, the first major transition from animal to human dated 4 million years ago.

Brain size was 400 cubic centimeters. Brain size today is 1,450. I went through Robin Dunbar's gossip theory about brain size in 150 size communities and so on.

Discussions about the city are very recent. City's only 12,000 years old even if we stretch the time by 2,000 years. I'd say it's more like 10,000 years as opposed to 4 million.

It took 4 million years for the human brain to decide to settle permanently in a place. And we are now 10,000 years in advance of the first human settlement. It's nonsense to assume that we have worked out everything.

Boston has improved in the period of time that I've lived in Boston significantly for most people. For some people, it hasn't. There is no single practice of urban design in Boston, which deals with the metropolitan problems of the city.

When the New England Patriots decided to build a new stadium, they didn't appeal to a metropolitan authority to decide where the maximum location would be to benefit the metropolitan area. They went around to every small town. And they ended up in Foxborough because Foxborough gave them the best deal.

They then applied to the state to pay for improvements in road transportation to the stadium. This is the way we do. This is as much theory as there is.

And you have to live with us as practitioners and theorists. God alone knows that they'll be a consummate one theory. We'll need a certain set of agreements that I can't foresee it. Two of the topics that I'm going to deal with today, the one deal with the technology, current technology, and its effect on metropolitan form.

One is the technology of reducing distance by virtue of systems. And the other is the advent of notions that the way we are operating at the moment in urbanism is increasing the carbon dioxide content of the atmosphere and posing, if contested, risks to the planet, which can only be dealt with through universal action.

You remember that I said Woodrow Wilson arrived in Paris in 1918, 1919, advocating that the world join forces in the League of Nations. He received the largest crowd gathering in the history of Paris. Of course, the League of Nations didn't do-- we've done well in controlling what my generation took to the street. And that was atomic nuclear energy. The nuclear bomb was our threat.

Computers weren't even part of the human activity in any mass way, but the threat of the nuclear bomb caused our taking to the street. There would be no significant use of nuclear bombs since that time. How is that we can agree on-- one of the questions I would ask is, what constitutes agreement on matters which emanate out of general goodness?

And our history of responding to threats is very short. Over the last month in the United States, we've tried to cause people to remember the death of 27 people. I think it's 27 in Connecticut, hoping that the death of small children at the hands of guns would arouse enough enthusiasm for some modest controls on gun use in this country.

The Congress, which is elected by the majority of the population, refused to even debate it. As far as I know, given that the mayor of New York is on his last legs, not bodily, but in terms of his tenure, I would like to watch over the next few years what Hurricane Sandy is going to cause in climate prevention in New York.

I'd like to see all of New York's suburbs undergo an enormously expensive proposition of putting all the power lines underground instead of in the air, which causes enormous disturbance of power supply and so on and so on. We're going to watch people rebuilding on land which should be used to soak up water. This is still happening in Florida.

We're very poor at making decisions even when we have significant threat. Climate change has no immediate significant threat except for hurricanes in New York and New Orleans. But the correlation between that and public response, even when the body of science is vectored to agreement, let me just-- while we're talking about that.

There's a Professor called Michael Mann at Yale University. He's one of the most outspoken theorists. He's a professor of meteorology and geosciences.

Mann recently wrote a book about his experiences called *The Hockey Stick and the Climate Wars*. Over the last 15 years, as his research has gained prominence, he has been called a liar, a charlatan, and a scumbag. His critics have demanded his erased.

Blogger Marc Morano called for him to be publicly flogged. Morano's former boss, Rush Limbaugh, said they should be drawn and quartered. This is in a democratic society.

His office at Yale has been girded with police and taped as a crime scene. He's received threats to himself and his family. He has been the focus of lawsuits seeking the public release of his emails. Mann is arguably the nation's most hated climate scientist.

I will argue that there are two threats to urbanism in the form that we are practicing it. One of them is fundamental change in climate and its repercussions, particularly in the poor world. The region around the [INAUDIBLE] is particularly susceptible and one of the poorest regions in the world, from Bangladesh all the way to Iraq around to Southern China.

And secondly, the question of social equity, which I'll discuss somewhat on next Tuesday, these are the two unresolved world problems. The one is new, human engineered. The other is old and human engineered as well.

There have been thousands of books written about the right of us to achieve wealth at the expense of others. Marx contended with that argument, but didn't take into account the pursuit of wealth and power by the people who put his theory into practice. But I'll try to do some of this summary more extensively next Thursday. Let's go back to the American city and distance.

In my little comment with Castells, I quote from an article in *Time* magazine, February 21st, 2000. I quote, this is from the architect Wes Jones's work. "Computers promote a dramatic trend towards decentralization, allowing people to spread out and live and work anywhere."

Now, my comment is this-- despite the fact that downtown residential growth in US cities is now at the same rate as for metropolitan areas. Secondly, the vastness of cyberspace increasingly satisfies the craving for more space. So the house and yard will shrink to a more supportable size, this despite the fact that the average US house is now 50% larger than in 1970 while family sizes declined by 20%.

It's unfortunately true that architecture borrows a lot of its ideas for complex reasons from people who decide to make a solution to a problem and then state it as fact. It's impossible to take Corbusier's writing on the base of factual evidence, yet he's the world's greatest architect of the 20th century.

This discrepancy is interesting because it is associated with factual observations such as these made by young and claiming to be on his way to fame young architect. Polemic and manifestos and pamphleteering don't reach the level of Goebbels in Nazi Germany, but they come close to-- I think it's part of the notion of the whole complex act of the brain in producing architecture. It involves so many domains of knowledge, which have to be brought together and traded off.

And what gets traded off in favor of many others is the notion of creativity. the notion of producing unique resolutions. When I did the architecture education study, it was interesting to see how many young people, young architects or students, say they chose architecture because it was both creative and respectable. They had ability to be creative, not work in a large corporation and take orders from above, which most architects have to do.

But they pitted the life in law and corporate business against architecture because architecture was creative, but on the safe side of creativity. It wasn't playing jazz or going to the theater or going into painting or going into media, whatever. It combined rationality, science, and art in a unique way.

This has been the dogma of architecture almost since it started. And it's created a world of greatest. Architecture is not to be denounced.

But when it comes to urbanism, the truths that come from architectural statements, Mel Webber asks the question, which is an interesting question-- he says, "we have often heard, I believe, in taking the visual symbols of urbanization to be the marks of the important qualities of urban society.

We have compared these symbols with the ideological precepts of order and found that they do not conform. And so we have mistaken for urban chaos what is more likely to be a newly emerging order to signal qualities of complexity and diversity."

He's the limited geometry that we have, and I don't know how limited it is given advances in computer understanding, to blame for the fact that we consider to be chaotic in urban form what doesn't conform to our ability to make formal sense out of it. I don't know. It's an irritating question.

I've had theses which have looked at this over the years and come to the conclusion that it may be true. But one of the advantages of computational systems is that it may yet be able to associate form with complexity.

But as long as architects keep on being trained to work on the notions of face to face contact and visual order as opposed to having order as equivalent to architectural order, I think we'll constantly have problems of focus.

So Webber, who's a great social scientist professor at the University of Berkeley, now retired, raises this kind of question. He says that-- I like to quote from writers rather than paraphrase. "It is now becoming apparent that it is accessibility rather than propinquity that is the necessary condition.

As accessibility becomes further freed from propinquity, cohabitation of a territorial place, whether it be a neighborhood, a suburb, a metropolitan region or nation, is becoming less important to the maintenance of social communities."

A fundamental question, which is not yet resolved, is the relationship between the value of face to face contact and machine interposed contact. Machine interposed Goliaths claim a minimum residue of importance for face to face contact.

Although urbanists, particularly architectural urbanists, claim that higher density, even the new urbanists who don't even claim for higher density, claim that the geometric propositions will cause people to meet more frequently and be friendly and have accessibility and so on and so on.

Suburban life has not lobotomized young Americans. Most of you Americans grew up in suburbs. I'm not arguing for the fulfillment of life in suburban America, but I'm arguing against the proposition that they are dead.

There are other reasons why American urbanists-- urbanism doesn't work. There's a history to the growth of suburbs in America. They didn't occur all at once.

In fact, the latest advent of computation and virtual communication is only a new layer on a set of facts that already the first was already occurred before the 20th century. That's the advent of the telephone. You read the book *The Social History of the Telephone*. I think a part of it's on your reading list.

Let me find it. OK.

The telephone was first introduced to make living in the non-city more tolerable, so that people on farms could have access to health care in emergency situations and communicate. They were seen as the people most deprived. The advent of the telephone created two contrasting situations. You couldn't have a skyscraper without a telephone. If you had to have people running up and down to communicate over 100 floors, you'd soon have a bunch of tired workers.

In fact, secondly, the rural population depending on telephones has become urbanized. At the time of the advent of the telephone-- it was prior to 1900-- 70% of Americans were farm workers who lived in distant rural places. Now, it's 3% of the population. I haven't got the text in front of me, so I don't know if these figures are absolutely correct.

Henry George Wells, the British futurist, almost exactly 100 years ago wrote that electronic dispersion would be accompanied by simultaneous decentralization, this binary notion that the more you do one thing the more the opposite is accomplished. Marshall McLuhan did it for the arguing for the fact that the cinema would not disappear given the advent of television, that you have a residual relationship which is binary. He specializes in cinema.

It becomes more of a spectacle. It becomes more of an art form. Television doesn't do that. It occupies another niche, although there are attempts on television to do both, provide spectacle and art at the same time.

H. G. Wells wrote this 100 years ago on electronic dispersion. "The businessmen may sit at home in his library and bargain, discuss, promise, hint, threaten, tell such lies as he dare not write and, in fact, do everything that once demanded a personal encounter," incredible insight. This is before telephone was even common.

"And so the center will be essentially a bazaar, a great gallery of shops and places, of concourse and rendezvous, a pedestrian place, its pathways reinforced by lifts and moving platforms and shielded from the weather and altogether very spacious, brilliant, and entertaining agglomeration." I couldn't think of a better verbal depiction of Moses King's depictions of New York, which we looked at on Tuesday.

And in fact, a Friday night at 6 o'clock in the evening in downtown Boston, when I was a graduate student of your age at MIT, Boston had virtually no European based restaurants, none of any quality. When I was visited by friends and family from outside, I had to struggle to find anything which wasn't made of white bread and hamburgers.

Now, the number the turn over of restaurants is so frequent that I cannot go to a restaurant which survives for longer than a couple of years. At least the number of restaurants that I used to go to that have diminished have turned over enormously rapidly.

What has caused downtown Boston to be attractive? I list, in my piece, a number of moves both introduced by the city and both introduced by the change in culture. Who would have predicted that the United States would invent the coffee bar, which you now find in Cambridge, England on the main street in one of the more conservative zones of the world?

Who conceived the idea of inventing a coffee distribution system in Seattle of all places? These are curious predictions, but they have something to say about the centralization and decentralization of the world. What seems to be happening is that the central parts of our cities are doing reasonably well compared to where they were.

Manhattan was virtually bankrupt 30 years ago. I'm not getting my dates absolutely correct, but I'm guessing back. At the same time, we have suburban growth. Suburban growth started with the streetcar suburbs according to the book by a professor in urban studies.

AUDIENCE: Warner, yeah.

JULIAN Sorry?

BEINART:

AUDIENCE: Sam Bass Warner.

JULIAN Sam Bass Warner, yes. I'm just confusing names for the moment. Sam Bass Warner's book is obligatory reading.

BEINART: The notion was that you could move to Newton, commute by street car suburb.

And if your wife needed help, she could telephone you in the central business area. And you could do something about it as far as possible. The moving outwards out of the center of cities has probably been a doctrine of space form since the beginning of cities where it was possible.

If you could overcome communication costs, if you could survive the onslaught from people who wish to take over your property, if you weakened [INAUDIBLE] premise that at the same time is archaic man took information from the celestial system, he also had a notion of centeredness, that the center was important.

We've reduced the notion of centeredness. I think in my slides of Boston City Hall Plaza and in Giorgio's, who's doing his paper on the perceptual space of Boston City Hall Plaza, you get a redundant configuration of the use of center.

This redundancy is part of a process of interchange between the outskirts and center. We've reduced the importance of centeredness. I could read you from Fishman's writing about a couple who live in New Jersey.

He travels to New York state every morning on the freeway where he has a job in White Plains, New York. He teaches in a school 20 minutes south from where they are in New Jersey. The kids get dropped off at school or picked up by automobile or buses.

They visit Manhattan, the center of the universe, once every six months to take the kids to a museum. They get *The New York Times*. They watch television 6 hours a day over weekends and so on. This is a typical contemporary suburban family.

They send their children to university, probably to good universities. Because if you take evidence from [INAUDIBLE], as I discussed on Tuesday, people spend more time on making sure that the kids get the right form of education in this class of people. The dilemma in this country is not that people don't care about education.

They either don't have the capacity to do anything about it and, therefore, education is-- how do you understand the paradox between the fact that without any doubt we have the best universities in the world. Duke University, which rates-- I mean, the rating system is flawed. But according to the rating system, Duke University is a second rate university in the United States, probably has one of the best medical schools in the world and so on.

How do you compare the binary quality of the higher level of performance in our university system and the weak, average performance in our school system, high school system? How do you connect the two?

I don't know. It's a proposition which has to do with a number of factors in this country. And we haven't got time to go into them.

But the move to the suburbs was accomplished by a number of things-- technology, the telephone initially, the septic tank, which allowed you to find a unit of occupation independent of a municipal system, waiting for a municipal system to come, the capacity of developers to operate quite freely to maximize profit, the advent of the federal government in believing that home ownership was an important stability factor in a good society.

Herbert Hoover and Roosevelt endlessly talk about the legislation which allows Americans to deduct real estate tax and interest paid on their house as factors in minimizing their federal and local tax payments.

This works against rentership, which is a more flexible system, which I pointed out on Tuesday has advantages for newcomers. Suburban growth, which manifests a potential profit in home ownership, must stand in the way of bringing in people of different color, different capacity to pay the-- Bob Fogelson in the Department of Urban Studies has wrote a very interesting book called *Bourgeois Nightmares*. I don't know if you know the book.

It's a history of the restricted system of American suburb. He focuses on Pacific Palisades, which is a couple of kilometers from downtown Los Angeles. It was one of the largest suburban developments in American history.

It was designed by the sons of Frederick William Olstead, the greatest American landscape architect. It would not allow renters. It would not like anybody but the Caucasian race.

It virtually did-- you had to conform to a profile of whiteness, income, et cetera. Restrictive conditions were a part of American suburban growth. And only court legislation much later on provided equal access to American suburbia.

So American suburbia, like Newton-- well, I don't know the history of Newton, but-- would be an adjunct for white well-to-do in the initial phases rescued by the telephone and the septic tank. With the greater liberalization of American space, the suburbs took on an independent economic force of their own and slowly disseminated the distance and time spent commuting to the center of the city.

The first shopping centers were in Framingham, Massachusetts that led to larger sized shopping centers, Mondawmin in Baltimore ending up with these gigantic complexes in Minnesota and so on.

Work followed. There are more offices in northern New Jersey than in Manhattan. Believe it. As the metropolitan space of New York includes northern New Jersey as a metropolitan space, as it should, there are more offices in northern New Jersey than in Manhattan, which is not part of the human perception.

There's more commutation. Over 50% of work commutation today is from suburb to suburb and not from suburb to central city. There are a number of these indices.

The suburban world has become a world of its own in one sense, not dependent on the central city. Now, who would do you expect to be in City Hall Plaza on a Sunday morning? Somebody living in Newton watching television for six hours having friendships which can be accomplished over large distances?

I want to recall an incident in London. A number of years ago, London contemplated London road system has never been expanded significantly despite the increase in automobile use quite [INAUDIBLE] large proportion. London proposed building a box highway to make transportation from southern parts of London to northern parts and eastern and western parts, as the city was expanding, more and more possible without crossing the center of the city.

All architects and environments opposed this move, saying highways were just opportunities for more automobiles, more negative consequences, aesthetic disfigurement, and so on. The *New Statesman* which I used to read and used to read because they wrote such good English-- I learned to write English from reading newspapers, good newspapers, not from any other source.

The first international publication I ever published, I rewrote 16 times. So those of you, especially those of you who are foreigners, believe you can write a thesis in a week in good English, forget about it. Learning to write, like learning to draw, is a slow process. You assume that you learn to draw as architects in five years and don't learn to use language properly.

Anyway, that's beside the point. But the *New Statesman* had an editorial which attacked the opponents on the grounds of social equity. It says that what we know about social trips is they're seldom done by public transportation. Social trips are generally done by automobile.

We are depriving the poor people who are now having access to automobiles for the first time of the right to access the metropolitan area socially. It would mean that a young man who lives in Wandsworth in southern London in a poor to middle income community who meets a woman who works in a same office who lives in Hampstead in northern London, if they wish to date and there are no roads to allow him to move freely, that date will not take place.

Of course, it's debunked by European examples of people dating as a result of subway encounters and so on. But this was the argument. The argument also applies to our thoughts about climate change.

We've arguably gone through a period of building an economy based on the profligate use of resources. Now, that we've established our state, we are now arguing for the diminishing of the poor world, who are arguing that the distinction for them is the choice between smoke and income and survival. It's an interesting dialectic between the search for social equity and the use of the metropolitan space.

Just a few facts about information technology and urban space-- in 1997, only 6.3% of the American population worked at home on a regular basis. On an average, these people only worked 19 hours a week. Only a fraction of them worked predominantly at home.

Less than half of the home workers use computers. The majority use telephones. That was 1997. I'm sure it has changed.

The notion of working at home, the increase home work, has an interesting counterpart effect on automobile use. Apparently, the more you work at home and the less you use roads, the more opportunity there is for the roads to be used by people who don't use them because of current congestion. So there's an extraordinary resonance between reducing automobile use on the one hand by working at home and the fact that those people who work at home don't use the automobiles, reducing the amount of use of the roads.

Therefore, the use of roads is an elastic commodity. Automobiles use roads when it's easy to use them and stop using them when there are enormous difficulties either in congestion or in parking costs. So one of the notions of reducing automobile congestion is having people live close to where they work.

This is absolutely antithesis to the idea of a liberal society. Again, you have a problem. You live in a metropolitan area because you have access to free economic opportunities.

Your husband and your wife work in different places. Much of this thinking comes from pre-women work, comes from suburbs such as Levittown or Framingham, where women didn't work and had time for social life.

If the family that I described from Fishman's article-- the husband maximized his work opportunity by working in White Plains, New York while they live in northern New Jersey. His wife teaches in school. And the best job she can get is 20 minutes south of where they live. So they have a 40 minute spread between the two of them.

Americans change jobs relatively frequently. If you live in a metropolitan area, changing a job might not mean changing a city or changing another part of the metropolitan area. Maybe if the road system were adequate, you could stay in your house and change your job because you can get freely through private automobile use.

We'll just look at one or two more, and then we'll look at some aspects of climate change. I quote, "so far, cell phones haven't directly altered the look of public space, but rather provided more flexible use patterns." A study done of Boston cab drivers says that cab drivers are relying more and more on information from cell phones than they are from teleradio.

They say it's full of static [INAUDIBLE] interference. The cell phone is more timely and accurate than anything that comes out of the static played radios. I never thought that cell phone would make taxi life better.

An analysis of households in North America that perform online activities weekly by activity shows that 85% of the internet is used for emailing. The world's poverty gap has doubled in 30 years during the rise of information communication technology.

Matthew Zook's analysis of internet domains in 2,500 cities across the world shows that the top five cities, accounting for 1% of the world's population, account for 20.4% over all internet domains. There's more evidence of the centralizing effect of information technology.

Our empirical work suggests that telecommunication may be a complement to at least not a strong substitute for cities and face-to-face interactions. This is not written by architects, but by urban theorists. So we are currently in a domain in which we have to try to find a reasonable balance between face-to-face communication and its advantages in machine interpersonal communication.

MIT is going crazy at the moment debating as to what extent it should reward students who learn electronically, from electronic information. They have propositions that it should shorten the residential time at MIT.

MIT is based solely on face-to-face communication, not solely. You're sitting with computers listening to face-to-face communication. But the central basis of the teaching is still face-to-face communication and the limited population who can benefit from it.

Over 36 years, I calculated there have been 1,200-- no, 36 times 30-- 1,080 students in this class. Each of them is not-- there are now versions of the class in India, in Moscow, in Indonesia, one at Penn State. A number of our graduates of this class are pleased about that, but it doesn't compare to the effect that the filming of the class might have published through MITx over time.

But the central domain that you're living in is to make sense in your work of the still unresolved balance between face-to-face contact, which most architects prefer and which most pre-computation theorists have accepted as the basis for their work.

Boston City Hall Plaza is a good example of reaching back into the past to take account of a development, which really is proposed to take account of the context of a modern metropolitan area rather than a historic center of a city where the density of the population and the amount of space the population has have probably arisen cultural tropes of association, face-to-face association, such as in the Camp in Siena.

The Campo in Siena has used the space not only for individual contact, but for communal contact. The Palio twice a year is a tourist event, but it's also a competition within the various neighbors of the city to make more of the center of the city than it normally even provides.

What is the answer to public space in the contemporary metropolitan area? No public space? Where is the public space in Los Angeles, one of the great cities of the contemporary world? Is there a square in Los Angeles? Yes, there is, but it's not significant.

AUDIENCE: [INAUDIBLE]

**JULIAN
BEINART:** It's not a significant part of the average Los Angelian work or social life. And yet it activates enormous economic production. It's not backward in its social life. It has one of the best symphony orchestras in the United States playing perhaps the most advanced music in this country.

Hollywood hasn't gone backward and died much though how Adolf Hitler thought it would because it didn't produce a movie about the '32 Games. These are fundamental things that you need to incorporate in your work as an urban designer.

Maybe [INAUDIBLE] thesis is a good substitution for there are now 125 farmer's markets in the metropolitan county area, metropolitan area of Los Angeles. These are new adventures which introduce a form of public activity, a decentralized form of public-- where commerce, which is still probably the foundation of American public life, is transformed into a capacity to imagine buying food from a healthier provider, a less-corporate provider.

There's a good thesis done here about four or five years ago on the farmer's market in Los Angeles as public space. So what I'm arguing is that, above all, the metropolitan area has enormous advantages to us.

None of you would want to live in small domains of 20,000 people unless if you choose to live in, unless you have enough wealth, to live in Aspen, Colorado where there are more private airplanes at the airport than any other city in the world per capita.

One of the problems about climate change is this. It's not threatening enough. *The New York Times*, and *Time* magazine, and most publications have had special issues on greenness. In *The New York Times* issue of-- I can't find the date. It doesn't matter. It's timeless.

This is a piece written by a man whose titles his piece "Why Bother?" question mark. "Let's say I do bother big time. I turn my life upside down, start biking to work, plant a big garden, turn down the thermostat so low I need the Jimmy Carter signature cardigan, forsake the clothes dryer for a laundry line across the yard, trading the station wagon for a hybrid, get off the beef, get completely local.

I would theoretically do all that, but what would be the point when I know full well that halfway around the world there lives my evil twin, some carbon footprint doppelganger in Shanghai or Chongqing who has just bought his first car. Chinese car ownership is where ours was back in 1918. I forswear and who's positively itching to replace- so exactly what do I have to show for all my trouble?"

Now, this is an argument in the developed world. This man is writing from his computer in New York for one of the world's leading newspapers what to do, contemplating how minimal his contribution is in relation to the [INAUDIBLE] problem.

The universality of climate change and the fact that it doesn't demonstrate itself in significant physical form are two problems. In the United States, there is no-- when this professor from Yale is attacked, when Rush Limbaugh's audience, who's millions of people in this country, argues that Professor Mann should be punished severely physically is a sense of what conditions occur when society wishes to impose its will for goodness on the economy or individually.

Maybe this man who writes for *The New Yorker* is wrong. If all of us did something-- I commute by car to work every day or every day that I work because there's no public transportation to account for where I live. I would have to walk a significant distance to get a bus. I would have to change the bus in Harvard Square. And I live in the center of the city.

[INAUDIBLE] has taken the trouble in Los Angeles in her thesis to take a trip from one of the poorest areas by public transportation to work. She took something like an hour and a half to get to work. So we have a problem.

Public transportation is a function of automobile use. This is the world in which you have to start working in six months time or two years time, depending on how long you're still going to be here. It's not a pleasant world.

I am as much a bad citizen as the man in New York City. And yet I morally proclaim a lot. 43% of carbon dioxide production comes from buildings, 25% from industry, and 32% from transportation.

The proposal to introduce congestion pricing in New York City within the metropolitan area of New York failed. Why? Because of democracy. As long as people in rural areas have significant votes in situations which largely are urban in character, there will be this disjunction.

Road congestion pricing in London, which was accepted largely because they had the best public transportation system in the world, as [INAUDIBLE] said, failed when Ken Livingstone, the mayor, proposed attempt to charge people by the amount of carbon dioxide the automobiles or the vehicles produced. Specialized congestion pricing failed in London.

Congesting pricing has been able to be imposed in societies which have very strict allegiances to the states, such as Singapore, and will become much more common. I expect congestion pricing to become a phenomenon of modern China, but have a slow advent in the United States. Just look at some of these images.

On the left is a typical proposition of mixed use growth in American inner suburb. "Steady on Judas," the phone is ringing at the Last Supper. And Botticelli's *Primavera* painting-- "he wants a word in your shell-like." Next.

One of the attempts to improve the monumental quality of the freeway on the left is a project to change the shape of the intersection in Italy, a rather glamorous and attractive infrastructure change.

Next-- the proposition which I mentioned on Tuesday, which we looked at at MIT for the introduction of small vehicles, which could operate on the distributed system which would be where the arrow points to and also could transfer to a line-haul system.

And it's an attempt to design a interchange to take the vehicle from the its resistance, its temporary use on the line-haul and its circularly use in the distributed system. It's never been applied. Next.

This is from the project of Christopher Alexander. "Every dwelling must be immediately next to a vehicular through--" This is the maximization of face-to-face contact. "Each dwelling must contain a transparent communal room with the following properties. On the one side, the room is directly adjacent to the street. On the opposite side, the room is directly adjacent" to something else.

So all rooms in houses in this project face onto the street. And they are transparent. And the road system is on a number of planes in order to maintain this notion of actual and symbolic face-to-face relationships. Of course, it's foolish in a silly.

But next, these are two sitcoms. On the left is *The Brady Bunch*, which produced 117 episodes between 1960 and 1970-something. It depicts urban condition. This was their house, which could have three, six children.

In suburbia, there was no conflict with the outside world. You spread yourself. This is a divorced husband who was an architect.

His wife Carol had three daughters. He had three sons. And the lady next to Carol is the housekeeper.

This is the tranquil American suburban situation. I can read you some of the episode stories. They deal with personal conflict growing up, how to live in a family, what to do when somebody, one of the children, is nasty and so on.

On the right is a subsequent television sitcom called *Diff'rent Strokes*. I don't know if any of you have seen these. *Diff'rent Strokes* deals with a man, a wealthy white man, an aged man, whose wife died.

He adopts two black kids. He has a natural born daughter who's standing there. The topics, the situation, is in downtown American site.

The topics deal with drugs, warning children not to be attracted in the street by strangers, sexuality, urban conditions. They are two images of the American, the center of American city and the good life in the American suburb, which is, of course, not attainable for all of these happy people.

Somebody should write a piece about the contrast between. Ricardo, you should take these two up and indicate what they say about American metropolitan life. Who influences the ideas?

AUDIENCE: [INAUDIBLE] in Mexico.

**JULIAN
BEINART:** Sorry?

AUDIENCE: I can give you a few romantic examples in Mexico.

**JULIAN
BEINART:** Yeah.

AUDIENCE: [INAUDIBLE]

**JULIAN
BEINART:**

These fascinate me because they're created by people who know America. They're very interesting. I mean, I had a friend in Hollywood who got me a site plan of the set for *The Brady Bunch*. I was going to write about these two, but I never did. Next.

Bill Mitchell's attempt to denote in a number of categories public space retail transactions. The category above is go there same time, go there different times, connect remotely, same time and different times. He's trying to indicate what the space is where we use face-to-face communication and space which can be connected remotely. Next.

He talks the same in work. The education-- classroom, lecture hall, teaching laboratory, design studio as opposed to live broadcast, videoconferencing class, shared interactive environments, Simnet. Different times-- non-circulating library, museum, language laboratory and so on. Next.

This is a project in Fort Worth, Texas, which is essentially a metropolitan project. It's for Alliance Airport, the first and only passenger-free airport in the world. It's an intersection in the metropolitan area of Fort Worth of the Highway 35, which runs all the way from Mexico to Canada, the Santa Fe railroad which connects Texas to the Pacific Ocean. Next.

An airport which the Perot group managed to get done politically-- on the brilliant idea that congestion of goods when associated with passengers makes transportation of goods very difficult. And next.

This is the American Airlines' largest repair facility in the world. Federal Express chose Alliance Airport as its-- after central headquarters in Memphis. Next.

I show this project not because I worked on it, but because it's one of the few positive things that could be produced in a metropolitan frame taking advantages of rail, air, and train.

Instead, what we now do in Boston is schlep high octane gas across the harbor to the embankments in Chelsea. This would reduce the friction of that kind of communication by locating facilities, new kinds of facilities such as transportation or such as goods only.

You cannot send goods electronically. I was at a conference in Euro Disney in Paris once where a physicist from British Telecom argued that he foresaw a future in which physical goods would be able to be dematerialized, sent electronically, and reassembled at the other end. That will wait for your generation. I don't see the physics being easy.

But this notion of using transportation where it works well, where it can connect in multimodal possibilities, is what Alliance. And Alliance has been very successful partly because it's been so well-designed.

It's got Texas steers on the landscape next to the runways, not in the way of the planes. But it paid a lot of money to making it a beautiful place. It has rules for what these industries can build, and it's attracted anomalous number of good clients.

OK. We'll deal with the rest of the world on next Tuesday. Have a good weekend.