MITOCW | 10. Transformations III: Vienna and Barcelona

JULIAN BEINART: We'll focus on the third and fourth case study. These case studies which were concluded on Thursday with Chicago are all examples of what 19th century urbanism or more premodern urbanism contended with. They all contended more or less with similar circumstances-- the rise of industrial poverty, the weakening of the aristocracy and the royal presence, in some cases the existence of walls or fortification, which is becoming redundant.

Chicago is very different. Chicago has no royalty, no autocracy, no walls. So Thursday we will look at Chicago comparatively. Today, I want to look at two case studies, one of Vienna, which has a great deal to do with walls. And the second is Barcelona, which we're going to focus on the most common emancipation in the 19th century from some of these problems. That is to leave the center of city alone and build on new land outside.

Cerda's plan for Barcelona is the largest planned housing project in the world. Certainly the largest housing project in Europe. Let's start with Vienna. Vienna was the major bastion. Well, let me try to explain what I gave you.

The first diagram is the replacement of the walls and the various sectors of the continuous 2 and 1/2 mile road, which became the urban symbol of the post-feudal city. The second is innovation of Karl Marx-Hof, which is this, an element in the third stage of the city from the feudal city, to the liberal city, to the socialist city for a relatively short time from 1919 onward. The next page is the ensanche of that part of Barcelona which is based on the 1859 plan of Ildefons Cerda is called the ensanche. You can see the extended pattern of the similar block.

The next page are the two [? completely ?] winning two finalists in the competition. Cerda's plan on the north. The print is a little obscured, and the alternative plan, Antoni Rovira i Trias's plan. We'll discuss this in some detail.

The next page is an element of Cerda's plan. [? He erected ?] the same square block, 113 meters by 113 meters, with options for development to create a flexible environment in which only a portion of the block is built. And lastly, the town in Apulia in Southern Italy showing the conventional plan, which exists in smaller towns, maintaining the central area, developing a grid system outside the central area connected to the central area by the gates of the walls.

OK. Vienna. Who threatened Vienna from the 16th century to the 17th century?

AUDIENCE: [INAUDIBLE]

JULIAN BEINART: Yeah. Islam focused its threat on the West. I'm forgetting about Islam in North Africa and Spain, but in Central Europe, Islam made to major attacks on Vienna. 1529. They were repelled, causing the building of walls, enormous wall system, 20 years later in Vienna, a wall system which had 11 bastions, a moat, and an area called the glacis, G-L-A-C-I-S. It refers to the open space around the walls to create an arena for military firepower, gun firepower.

You understand the concept. So you have not only the walls, but you have a span of free space like a green belt around the walls, which enables improved fortification. These walls were subjected to another major larger attack by Islam in 1683, in which case for two months Vienna was on its last legs. They managed to subvert [? them ?] by tunneling under the walls, breaking through from the south, and Vienna was within a morning of collapsing when all of the forces galvanized by the pope in Rome to the extent that he still had support couldn't deflect the energy of the Islam attack.

An extraordinary event in history. The Polish Catholic King of Poland, John Sobieski, had refused to take part in the defense of Vienna for reasons I don't know. The last morning, Vienna had already being penetrated. The old city had been virtually-- either all the people had been killed or left. Sobieski decided to send his cavalry south to Vienna. They arrived, and Islam had concentrated its attack on the south of the city. It didn't expect any attack from the north, so it was completely vulnerable in the north.

Sobieski saved Vienna in one morning. There's a wonderful book on the story of this whole episode. If you're interested in the book, tell me and I'll give you the title. It's an extraordinary idea of the scale of an Islamic attack, the organization in Istanbul of the army, and all the food, and all of the prostitutes that accompanied the army as they moved through Hungary to Vienna.

That is one of the signal events in the urban history of Europe. Had Islam succeeded, there might have been no-- I don't know. Certainly probably no Freud. Perhaps no Beethoven, Mozart, and Haydn, et cetera, et cetera. I don't know how to claim Islam's contribution had it captured Vienna. I don't know what would have happened to Europe, but Vienna was the fourth largest city in Europe-- Vienna, London, Paris, Berlin-- and in many respects, certainly in the last years of the 19th century, one of the major artistic centers of European culture.

What year do you think Brahms died? Take a guess. Brahms was born in about 1830. He died in 1897, as late as that. He was the tutor of the philosopher Wittgenstein's sister. Taught him the piano. Gustav Mahler played music in the Wittgensteins' houses. The Wittgenstein family owned 12 houses in Vienna itself.

Wittgenstein-- do you know anything about the history of modern philosophy? Wittgenstein is one of the-- Bertrand Russell, the British philosopher, called him the greatest philosophical genius who ever lived. He was interested in architecture, and he had his-- oh, forget about that. It's off on a tangent. But Ludwig Wittgenstein is an art product of the culture of Vienna.

So we have a setting in which Vienna survives in 1683. Royal presence maintains itself until about 1860, in which the liberals win in the government, take over the government, and start a process of modernizing the city. What I didn't mention in the case of Haussmann in Paris was the number of things that Haussmann did in the provision of parks, open space, unifying the bus system, improving the infrastructure of the city as a whole. Other than the building of these roads, he's known only for the avenues that he built, the housing that he built on either side of the avenues, and for the major monuments.

But at the same time, he built a repertoire of infrastructure improvements. The same year, the Danube constantly flooded the city. The city's always been on the southern part of the Danube. The walls were on the-- as you can see.

Today, the Danube fringes the northern boundary of the southern city by a canal. The water flooding problem was bypassed, and in the same sense-- at the same time, there was improvements in the health system, the first public hospital, and a whole set of improvements, but nothing as major as the decision to isolate the center of the city and to build a new environment. Instead of the new environment being similar to the plan of Cerda for Barcelona, he took the extraordinary opportunity for using the glacis and the remnants of the walls to build a single container around the outskirts of the old city. This was a container in which almost all the sectors of a new middle-class economy could be satisfied.

Number one, from the diagram-- textile warehouses and offices on the Danube canal. Number two, financial center on the Stock Exchange. Number three, a university.

Number four, the famous connection of the parliament, the town hall, the president's palace. Number five, museums, number six, music, number seven, private apartments. Nowhere in the connected structure of urbanism has there ever been an attempt to build one continuous movement system accompanied by surroundings as diverse as making up virtually the components of a whole city. It's a dramatic idea, an incredible idea.

It had many of its manifestations. First of all, the buildings are not oriented to each other but oriented to the street. The street is everything that animates the performance of the buildings on its sides. Secondly, instead of as in England, every effort was made to connect the space beyond the old city with its center city. In this case, the old city was where workers lived and-- sorry, not the old city. This is the old city, where people were poor, where there were factories, where hygiene was unclean and untaken care of.

[INAUDIBLE] from here to here is equivalent in size to the whole city. To the old city. Sorry. I'm talking badly this morning. To the old city. So you've constructed a new city along one line 2 and 1/2 miles long.

It should come therefore as no surprise that in 1919 when socialists took over the city that they would concentrate their efforts in the area beyond the Ringstrasse. Karl Marx-Hof-- we took a look at in a little detail-- exists outside of the ring. The ring didn't contain the elements of the feudal city.

Since Stephen's Church was not replaced in the ring, the vote of church in the ring is simply a thanksgiving for Vienna's victories. The royal palace ensemble, which is a large part of the old city, attempted to penetrate onto the ring. Gottfried Semper did a plan for the extension of the royal palace site to the ring, which has sort of softly connected but not. The presence on the ring is everything to do with a middle-class economy.

It's the classic example of a road space dominating everything that surrounds it. In a few minutes time when-- towards the end of our story, then I will concentrate on the difference between proponents of archaism like Camillo Sitte and Otto Wagner, the great modernist. It's interesting, though, Wagner the modernist was fascinated by the possibility that one could move along a street and the street could be there primarily because it supports the significant phenomenon of movement.

The buildings on the side of the street had no unifying architecture. In the complex-- I'll quote you from somebody who liked the complex, which is the city hall, the theater, the university, and parliament. I quote-- I ran from one object of interest to another. For hours, I would gaze at the parliament. The whole ring boulevard seemed to me like an enchantment from the 1,001 nights. Who was this?

He became a significant figure in history. Even you might know who he is. Adolf Hitler. He wanted to study architecture in Vienna, and they wouldn't let him. Pity.

[LAUGHTER]

There was something about this complex which exemplifies the interest in-- not the interest in, but the fact that there was no consuming architectural style which could unify a street. For instance, in this complex, expression then was used. The town hall is compared to a free medieval commune and is built in Gothic style. The theater exemplifies the aesthetic enthusiasm and is therefore given the Baroque style.

The university is the symbol of enlightened culture. It's given the Renaissance style. Parliament is democracy. It's given the Greek style.

We did some work in Bratislava in Slovakia. Bratislava and Vienna are the two closest capitals in the world of neighboring countries. We had meetings with the deputy mayor of Vienna, who is the chief of Vienna's planning. To find his office in this Gothic construction, this large Gothic construction, takes almost a supporting dog.

[LAUGHTER]

It is still an amazing construction. Camillo Sitte archaism was to counter the flow of continuous movement in cities. For him, he would break up the continuity by creating plazas, had significant intervals along the street. I'll show you a slide for his proposal for one of the plazas. There was no such enthusiasm for curtailing the emphasis of this middle-class continuity.

I'll just-- imagine choosing to build buildings according to an image of the essential performance and therefore to choose the historical style which supports that. I can't think of it being done anywhere else. By concentrating on the power of a street, perhaps it frees you from any-- it allows you to accept any device to create the architecture along it.

There's something about a system of streets, a simple system of public ways which may enable the environment or which supports it to be free of having to perform those functions, a continuous facade functions. It's a thought which strikes me from Vienna. If you allowed Zaha Hadid to build in Vienna in the old city of Vienna, at least you'd have the Ringstrasse to hold you into some public format.

The trouble with the new Vienna on the north side of the river is that it has no armature either of the old city or of the ring structure to hold it together. You have buildings which the entrances to the buildings are unidentifiable. It is the biggest load of garbage I've ever seen, done by some of Europe's great architects. This organization in the ring structure of buildings knowing and showing where you enter them-- this is true of all of the buildings of the old city.

There's a logic to where a street is-- that the street is public, that once you leave the street you are directed by a building [INAUDIBLE] performance. It's a powerful conjunction. The Ringstrasse is about 200 feet wide, which is about the width of Commonwealth Avenue, if I remember. The housing on both on the Ringstrasse was private housing. Again, the tradition of the middle class emulating formally the facade idea of the royalty occurs.

I will show you slides of the facades of something called a [INAUDIBLE] house. This is a condominium building. The lots were large, and the accumulated building of a kind which we now to accept is common was accepted as the mode. The financing of the Ringstrasse was largely state, but also the land was free. So when it-- because of the glacis and the walls belonged to nobody but the state. So the money made in privatizing the parts of the Ringstrasse for housing or offices meant a return of income to the city, which they could use for parks and other public facilities.

It's interesting that throughout the formal agenda of buildings in the various cities, from the feudal city to the Ringstrasse of the city to the socialist city, certain archetypal ideas-- for instance Karl Marx-Hof has sculpture on the facade. There's flags on the facade. This is a Marxist socialist environment, which still pays tribute to the Royal appurtenances. There's a strong sense of the need to maintain continuity throughout the history of this modern city, or certainly from 1860 onward.

A few words about archaism versus modernism. Camillo Sitte was an architect and critic who wrote a book which had a lot of influence. He was against the evident preoccupation of modernism with economic progress, with speed, with fluidity, with movement against the rationalization of traffic, and hygiene, and the technology which is appropriate for that kind of performance. He was much more interested in the world of the artisan, the world of the guilds, much like [? Raskin ?] perhaps in London.

He was attracted by the labor quality of the guild, the disappearance of the guild and the artisan. He was a great admirer of Richard Wagner. He was fascinated by [INAUDIBLE] [? work, ?] the idea of bringing a genuine folk art to bear on the city. For him, the Ringstrasse, which was a continuous open space, was a form of enclosure which was antithetical to his view of what a city needed. A city needed places, public enclosure, continuity, understanding, a kind of psychometric condition in which everything which was close to you would fit to your emotional.

So if you saw a big building, you would appreciate its bigness because it had a purpose, and you had a continuous space, a public space from which you could appreciate its emotional circumstance rather than being disrupted by the continuous flow of an open-ended system. Richard Otto Wagner, on the other hand-- I might point out that Camillo Sitte was not the only person. He was an advocate of the picturesque, of the effect of the emotional, but he was one of the people who started worrying about the fact that city planning in Europe was [? wissenschaft, ?] was moving in its representation only of the two-dimensional surface of the city.

For Sitte, the third dimension was being excluded. Referring to Baumeister's, the German books on traffic engineering. Baumeister's book of 1876 and Heinrich Steuben's book of 1907. Quote, the traffic systems and direction of their flow form the basis of the plan of construction of cities. So city growth, city enlargement, city planning was seen as a two-dimensional exercise of the organization of movement.

Wagner was too sensitive an architect. In fact, he was a kind of hybrid personality. The demands of efficiency, economy, and physics were attractive to him. He was a modern man. He believed the city could expand, and his project for the expansion of Vienna are reproductions of the old city of Vienna, about 100,000 to 150,000 units all linked by movement systems.

He spent his time building buildings for the new Danube canal sluice gates. He did the wonderful subway stop, the [? car ?] [? plots ?] and a number of the subway stops in the new Vienna subway system. At the same time, he designed neoclassical monuments. His great [INAUDIBLE] Vienna should go to see his small church in the medical facility, housing facility in the city.

It's been restored with a golden dome and doesn't look like anything that a modernist would have anything to do with. Perhaps his most significant building is the Postal Savings Bank on the Ringstrasse, the only building that he built on the ring dresser, which has a rectangular grid set of windows. But between the grid of windows, there are [? French ?] tiles decorated with floral decorations, sinews, floral decorations.

You know, I've said most of the things that I want to say. Amongst Otto Wagner's fascination was what he called the painless uncertainty of modernism, which is an extraordinary kind of comment that if you pay-- Wagner in my mind was a brilliantly confused man at the time of the intersection of traditionalism with modernism. For those of you who want to study his architecture, look at the work of a great architect. He had an enormous influence for a number of his students were involved in the building of the hofs after 1919.

But the idea of painless uncertainty, that one is not going to be sure about what is going to happen over time. In fact, it is impossible to know what's going to happen over time, and therefore you have to try to understand how to deal with uncertainty. This is the first time that I think a 19th century architect or city person makes an important statement about what preoccupies a lot of the thinking in the 20th century and still does today-- that is open-mindedness, diversity, change, and a number of the associated phenomena. We'll see in Cerda's plan for Barcelona an attempt to allow for that to take place.

But just two other stories. The post-1919 story. The real estate speculation after the rebuilding of the Ringstrasse had resulted in enormous increases in rent for porting housing conditions for working class. And the 1917 census showed that 73% of Vienna housing was quote, in unspeakable conditions of overcrowding and hygiene.

Workers were paying 25% of their income to housing. In 1919, Vienna became Red Vienna with the socialist majority, and Red Vienna has remained. There's a book by Eve Blau at Harvard on Red Vienna which is worth looking at, but this was a time when the London County Council in London was established a similar planning operation in Berlin. From 1919 to 1925, they invested in a radical policy of land acquisition, law controlling rent, and the building of new apartments.

By 1934, they had built 63,700 dwellings, equivalent to 70% of the entire production between the wars. Housing was something like a tenth of the city's population. There was a controversy about what form these new socialist housing should take place. Adolf Loos and a number of other architects proposed following the German example of the [? siedlungen. ?] The siedlungen, but the famous siedlungen in Stuttgart and so on were examples of housing the poor in green circumstances with houses which were single family with gardens and self-sufficiency that deprived from the center of the city.

Another group of people felt that it was about time that the workers made their presence felt, and the way they could make their presence felt was to develop a pugnacious housing response to the market housing. This took the form of the hof, H-O-F. "Hof" is the same word in German as "court". So by calling their housing a court, they have another reflection back to the feudal city.

It seems to me that revolutionists never abandon everything. They abandoned the key variable, or they destroy the key variable, the market, and maintain everything else of a secondary order. We look at this when we discuss the post-revolutionary work in Russia from 1917, particularly to 1932, in the work of the disurbanists, and urbanists, and others.

Karl Marx-Hof of is the largest of the enterprises. There were a number of them-- [INAUDIBLE], [? Viessmann ?] Hof, [INAUDIBLE] Hof, [INAUDIBLE] Hof, [INAUDIBLE] Hof-- built between 1924 and 1927. Karl Ehn, the architect for Karl Marx-Hof, is a rather undistinguished figure. He worked in the city government. He had done some housing. Unfortunately, stayed on and worked for the Nazis as well, so maybe his vocabulary was very widespread.

Karl Marx-Hof was a pugnacious island which built apartments, 1,380 apartments, plus a large interior space containing nurseries, collective laundries, library, offices shops, clinic, and so on. This period didn't last very long, and Karl Marx-Hof and Red Vienna remained as a kind of intellectual fascination for our urbanists afterwards. Karl Marx-Hof is still worth visiting today. It's located connected to the center of the city by light rail, by heavy rail, by bus.

It's easy to get to. It's extraordinarily large. Has anybody been to Vienna? What did you see in Vienna?

AUDIENCE: Museum [INAUDIBLE].

[LAUGHTER]

JULIAN BEINART: I don't blame you. Wonderful museum. You couldn't go to a concert, I suppose.

AUDIENCE: No, I just--

JULIAN BEINART: There's no democracy of tickets in Vienna. I had to listen to the Vienna Philharmonic play in Cleveland because I've always wanted to hear the Vienna Philharmonic play. Vienna Philharmonic didn't include women in the [INAUDIBLE] until relatively recently, so there are a lot of throwbacks.

Their attitude towards Jews is signally despicable. Gustav Mahler who was born a Jew and a bohemian. In order to become the conductor of the Vienna [? Philharmonic, ?] he had become Catholic temporarily so that he could play music. Extraordinary stories.

You should go to the Judenplatz in the old city, where the Jews were massacred. There's a wonderful sculpture by the British sculptor. A woman-- I forget her name-- built a concrete sculpture made of books as a remnant. There's one last thing about Vienna.

The last 10, 20 years of the end of that century, Vienna underwent one of the great cultural performance spans which we associate with great cities. We associate it with 15th century Florence, the great painters, the great sculptors, the Medici family. This is a similar period in the West.

We have the transference from 19th century romantic music to modern music. Brahms died in 1897. Schoenberg lived from 1874 to 1951, Alban Berg from 1885 to 1935, Anton Webern 1852 to 1945, Gustav Mahler from 1860 to 1911. These were the people who invented the post-romantic music for us.

You may not like the music. Amongst them, only Mahlers are now conventionally played by the Boston [INAUDIBLE]. Very few people play Schoenberg except in their living rooms. [INAUDIBLE] opera is performed now and then, Alban Berg's music. But this the significance of a city, that it can transform culture in significant ways. Why it happens in cities-- Austria. Vienna was not it economic after the separation of the-- no, that took place-- it was later.

There are a number of theories as to why this happened. Peter Hall, the British urbanist, has written about this in one of his books. There's a sort of culmination of the coming together of all of the elements of good culture in a place. This despite anti-Semitism, violent anti-Semitism which was taken over by the Nazis when they took over Austria.

It happened in New York from 1945 to 1970 with the invention of a number of new forms of modern art. The great painters, Jackson Pollock and others. I just mentioned it because it's something that is not indulged in. Not many cities in the world grabbed the world by its-- and it's very difficult to explain what in the history of Vienna predicted this. It's certainly true that the great romantic composers-- Mozart, Haydn, and Beethoven-- spent time in Vienna.

Their music was constantly performed. People learned to play the music. Wittgenstein's sister, as an example. There were small groups of philosophy. The Vienna Circle, the philosophers in the 1920s, was significant. There was music played in houses.

People were familiar. Wittgenstein's father had a large set of children. Three of them committed suicide. They were all musically attuned. One of them as a child could, according to a biography, distinguish between-- when a band played outside their house, he could tell what was wrong with the band's playing. He could tell which instruments were playing the wrong music.

So there was a culture of music built into the society. I don't know if Freud had anything to do with music. He probably was too busy with his trying to understand the psychic mind. So the Vienna story is an art story of a number of things-- the move from a feudal to a liberal to a socialist city and then back to a modern city. A number of things that I've touched on.

It's one of the great cities in history. It's the only city which built a single road to dedicate itself to a new environment, economically and socially. And what else can one say about Vienna? It's still a city which is remarkably well cared for planning-wise.

The deputy mayor had a staff of something like 1,500 people in his planning transportation section. It has a journey to work, which is 60%, I think, in public transportation, 40% in private transportation. It's done very well. Barcelona is a smaller city out on the fringes. All of these cities of course were Roman cities-- London, Paris, Vienna, and Barcelona.

The story of Barcelona, Cerda, and the ensanche is a complicated story and requires a lot of time, so I'll jump very quickly. The old city of Barcelona with its Roman walls and then its enlarged walls was the densest in Europe in 1830. It had 300 inhabitants per hectare. It was twice the density of the very dense Paris.

It suffered from epidemics in 1834, 1854, 1864, and 1870. Between 1837 and 1847, average life expectancy amongst men was 38.9 for the rich and 19.7 for the poor. It's difficult to believe that the average life expectancy could be under 20 years of age, but if you include the infant mortality in that, infant mortality takes a large number of deaths.

So we have the condition of an old city. No apparent market for the wealthy occupying the old city. No program is in Paris or London for the transformation of the old city. There was no royalty in Barcelona. Royalty was in Madrid.

There was a constant tension between Barcelona and Madrid. In fact, Barcelona claimed a certain independence for Catalonia, and Catalonia has always been stuck between Spain and France. Perhaps that's why Picasso comes from Catalonia.

I want to jump into the story of the extension. The extension is the mark of one man's thinking. It was [INAUDIBLE] Ildefons Cerda born in 1845-- sorry. 1815. Decided to study engineering, and at the age of 19 went to Madrid-- he comes from Barcelona, went to Madrid to study. Graduated in 1847.

Enlisted in the national militia from 1841 to 1848. He did projects in cities in Spain, highways infrastructure for the ministry of engineering. He developed a powerful political base in Madrid. He returned to Barcelona in 1849. In 1854, the walls began to be taken down.

Cerda did something extraordinary. He first of all decided to do research in the old city. In volume three of his book *General Themes of Urbanization,* written in 1858, he details patterns of food consumption, compares the old city with other cities, detailed maps, mortality rates.

He found that the bourgeois had an average of 3.6 cubic meters of space, where the working class only had 0.9. That's four times less. Imagine this man going into the old city and doing all of this work. I don't know what his ambitions were, but this example of research before plan stands as the first time somebody has taken the obligation to study existing facts, especially above poverty.

Remember that Booth's map in London was 1789. No. 1879. This was before Booth's map of London.

This is not Engels studying Manchester. [INAUDIBLE] studied Manchester partly to gather the facts on which to base a large universal theory of society. It's unclear what Cerda was doing. He just wanted to know facts. He wanted to know reality. He had no large theory. Apparently he didn't have.

In 1859, there was a competition for designing a plan outside the old city. Cerda and a man called Rovira i Trias competed for the final of architects in general. And most of the people of Barcelona preferred Rovira i Trias's plan. Rovira i Trias took the old city as the center, created the [INAUDIBLE] [? republica ?] north of it, and from that point radiated out five avenues out to the perimeter. This is a neoclassical plan which was relatively common in city expansion.

Cerda's plan was a series of 113 meters by 113 meters blocks, all identical except for the disposition of the buildings on them. So there was a grid system laid out over an extensive area. It could continue without disruption. Roads were 20 meters, 35 meters, or 50 meters wide.

There was six cubic meters of space per person. It was double the middle income level at the time. It was part of Cerda that was extremely rational. That formula that is on the left is his formula for the width of the road, x being the side of the block, 2b being the width of the street, f being the depth of the building site, v being the number of inhabitants per house, p equals the squared meters size per person, d equals the height of the facade, all rationally calculated to produce it. The detail of the formula is not important. It's nonsense, but it shows something about the mind of a person who-- what's going on in his mind?

He's trained as an engineer. He's worked in cities all over Spain. He returns to Barcelona, spends his efforts documenting poverty, then emerges with a plan.

There's an interesting side story to this. The critics and writers about the ensanche in Barcelona were extraordinarily loyal to the Barcelona and to Ildefons Cerda, who is considered a national hero. By the way, the reason the city chose Cerda's plan over Trias's plan was because of pressure from Madrid. Cerda in his years in Madrid working for the national militia had made friends, and his radical plan was forced on Barcelona.

Now Barcelona cannot be happier about the plan. Cerda is a great hero. There's an aspect of Cerda which comes through not from Barcelonans. I don't know the Barcelona literature extensively, but a man has recently written a book pointing out that Cerda belonged to a small group of people, intellectuals in Barcelona who were attracted to socialism. Amongst their members was a man called [INAUDIBLE], who was one of the designers of the modern submarine. Strange people. Poets.

Apparently, they were very influenced by French intellectual utopianist called Etienne Cabet, C-A-B-E-T, who wrote a book called *A Voyage to Icaria.* Cabet proposed in his ideal city a center with the capital, and then an equal distribution of space every 360 degrees around the center.

Cabet worked in the British Museum reading room just like Marx did. I don't think they knew each other. They were years apart. Cabet insisted that the United States was the place to build a utopia, as many Europeans did. Fourier, for instance.

There's a paradox about Fourier and the Fourierist community in the United States, but that's for another class when you talk about utopianism next week. Cabet bought land in New Orleans and took 79 Cabetians with him to New Orleans.

They hated New Orleans. The climate was awful. They didn't know anything about the land they bought. They were sold a piece of land which was really bad. They moved north to Nauvoo, N-A-U-V-O-O, Illinois, which is one of the sequence of places that the Mormons capitalized on on the trek from the East Coast to Salt Lake City.

They took over Nauvoo, Illinois, which didn't succeed. [INAUDIBLE], for instance, wanted to join them. He wrote to Etienne Cabet, but Cabet had died in the meantime, and the whole enterprise suffered terribly. How much of this Cerda knew or how much of this Cerda was interested in is difficult to know. He remains an enigmatic figure but a man who achieved enormous amounts.

His plan was built, built to a certain degree. The grid system was maintained, but the amount and disposition of this site changed. It's in the diagram on one of the pages I gave you. We'll see Cerda's wish to have a fluctuating system, where the site was either occupied by two buildings, three buildings, or four completely enclosed by four buildings.

For Cerda, the height of the facade was to be limited to three floors. There were no elevators in existence yet. Anyway.

The height of the blocks were 16 meters maximum. That's a ground floor and three floors, and the maximum coverage was 50%. Cerda had very little to do with the application of the plan. Here there was no accompanying policy to make sure who lived in the space.

The number of devices which we've invented since Cerda's time to make sure that we have a mixed population in space sometimes as simply as putting a percentage, 15% on new development in Cambridge, Massachusetts to be allocated to affordable housing as a part of any building of new housing. There was nothing like that. Cerda envisioned an equal spatial plan, and isotropic plan spatially, but he didn't understand how to get an isotropic distribution of population.

He envisioned baker's living next to bankers, communities within this grid, each with their own school, and so on, and so on, and so on, but he played little role that I know in the execution of the plan. There's a great-- oh, I've got to rush. There's a great paradox here.

Over time, ensanche has become developed at a much greater density. Coverage was increased from 50% to 70%, even more than 70%. Height was increased to 24 meters. The volume of Cerda's plan was supposed to be 67,000 meters squared. The 1958 volume of what has being built on his plan is over three times as much, 290,000 square meters.

The paradox is that if you go down the [INAUDIBLE], which is the great road built through the ensanche, this great avenue which I'll show you an image of, you can feel the pedestrian volume. He allowed five meters of pedestrian width throughout the scheme. There's an intensity of urban intensity in this area, which is part of its charm.

Cerda's plan was so pro forma in a sense that it allowed so many things to happen after his time, such as the increase of density and still, except for automobile traffic, able to cope with the world. The fact that he made sideways sidewalks that were all that wide was an indication of some thinking about the advent of density. He didn't include techniques which could frustrate subsequent development.

What happened is that, as you'll see-- let's look at the pictures now. The Danube, and Vienna below on the southern border of the Danube next. The walls as walkways and pedestrian perambulation zones prior to their being removed. The glacis on the right. Next.

The clear space after the walls have been taken down, and the filling in of this space with a single spine. Next. The parliament, town hall, university, theater, accommodation. That's Hitler's drawing of the parliament, by the way. Not bad. He should've got into architecture school. Next.

The medieval town hall, which still exists. Next. A [INAUDIBLE], an apartment building. Large blocks, large volume, and the phenomenon [? again in ?] [? the ?] facade of decorating the facade with sculpture. This is not a flat facade. Next.

The entrance to the apartment building has this zone of almost regal or royal pertinence. Again, these decorative system which is open and free, giving spatial quality to the extrinsic experience. Next. And Camillo Sitte, a critique of the what he calls the turbine plaza, a plaza in which you enter and move-- a plaza which is correctly organized, where you enter and leave only in special places. In the center of the plaza is a space for emotional contemplation.

His proposal in the shaded zones for recreating a proper appearance in front of the [? votive ?] [? church, ?] breaking down the openness, which is credited to actors called [INAUDIBLE]. He was afraid of open space, demarcating space in relation to particular buildings. Next.

Otto Wagner's impression for the expansion of the city is a series of zones that articulated by a kind of expansionist line. Here is his design for one of the-- sorry-- or one of the proposed extension expansion areas. Next. His preoccupation with designing industrial buildings. This is sluice building on the Danube canal. You can see these are-- can you see the wavelike decoration up on the right?

This is a man who's carrying a kind of hybrid system in his head, on the one hand, wanting to make something as decidedly modern as possible. On the other, decorating it with a frieze facade decoration. His subway stop, the Karlsplatz. Next. His buildings in the railways [INAUDIBLE] new railway system. At the same time, this is a competition entry of his.

I can't remember what the building was. I think the Academy of Fine Arts, and this is the Postal Savings Bank building, where the decorative system is on the facade in between the regular machine-like windows. Next. I didn't have time to go into this in greater detail, but this is Joseph Hoffman's work in the industrial design sector in the great advances in modern design, using new materials.

This is a list of the theater performances for the weekend in Vienna. Next. Mahler's great Symphony Number Six, and, to my mind, greatest book of Freud's interpretation of dreams in 1911. Next.

Karl Marx-Hof and some of the other hof blocks. Karl Marx-Hof on the left. I think it's 1 and 1/2 kilometers long. Next. The abiding preoccupation with sculpture and a flag. These arches are not entrances. They're zones of penetration. These are the entrance zones. Again, they decorate.

Apartments are very small. Once when I was visiting this building, the taxi driver had lived in this Karl Marx-Hof, and he said he left because he couldn't swing a cat in his apartment. Those were his words.

[LAUGHTER]

An enormously powerful manifestation. Michael Graves must have looked at this architecture to gain some inspiration for his buildings. Next. Barcelona. Look at the size of the ensanche compared to the old city, and you can imagine what Cerda would have done to Paris, the [INAUDIBLE] of Paris.

It's worth spending 10 minutes to talk about that as an alternative model for what the post-modern Paris competition's entries did. Next. Cerda's vision, a three-floor set of blocks differentiating between two blocks which only had one arm on them, others which had two buildings, some which had three buildings, some where the square was enclosed. What was actually built is represented on the right-- enclosed space in the center, not public space, but ambiguous space, sometimes space which was taken over by residents, sometimes space which was made into parking lots, sometimes space which is just dilapidated, but no resolution of the internal space [? of a ?] consolidated four-sided block. Next.

You can see some of the interior of the-- there's a difference between making Karl Marx-Hof interior space as a space for the community with clinics, shops, medical facilities, schools, and so on as a concept. This is a concept which enclosed a block in order to galvanize the quality of the street, to increase density, but left the whole completely unavailable. Next. Cerda's plan calls for the blocks to be truncated on the corners. Here you can see an intersection of the four corners, leaving a messy transportation intersection problem there.

One of the arguments made by the Barcelonans today is that this creates another facade, and each of these small square intersections have unique facades facing onto them. Next. [INAUDIBLE], the medieval public walk, and the [INAUDIBLE], this great avenue which links to the town of Gracia in the hills. Next.

The [INAUDIBLE] [? guardian. ?] Sorry. [INAUDIBLE] on the left, the [INAUDIBLE] on the right. Next. A great unfinished cathedral, an attempt to modernize the ensanche. Next.

The Barcelona Games is the only games that position the center of the city as central to the four sides-- the [INAUDIBLE] side on the top left, the [INAUDIBLE] side for the athletes' housing. Of all the Olympic sites, from Munich, to Tokyo, to Sydney, to Melbourne, London, and so on, none of [INAUDIBLE] incorporated the proposition within the central city system. Next.

Two post-Cerda propositions. Could you just focus this one please? Thank you. This is Corbusier's and a group called [INAUDIBLE], a modern version of the extension of the Cerda system.

The streets are gone, or they ignored the [INAUDIBLE] system of Corbusier's engaged in housing. There's a huge amount of open space which is not allocated to anybody in particular. One prefers the scheme on the left infinitely.

A crazy man, Léon Krier, saying that the problem with Cerda's plan is the 113 meter size is too large. Krier has a dislike of anything continuous, so he suggests that the clock be broken up into four modules of 25 meters each, where he believed the market is for all of the shopping on these little corners, and the confusion caused by creating as many corners as you like. Léon Krier should visit Tel Aviv and see what happens when you subdivide blocks into two smaller distance. It's a silly diagram, but two examples of post-Cerda thinking. I think that's a lot.

AUDIENCE: [INAUDIBLE]

JULIAN BEINART: Oh, sorry. The idea of expanding from-- by leaving the center allowed an expanding outwards. This is Antonelli's plan for Torino. That is Custer's plan for Madrid. Next. This is [INAUDIBLE] plan for [INAUDIBLE], and this is [? Kritanthis's ?] plan-- [? Krianthis-Schubert's ?] plan for Athens. All suggest in the dark gray that you maintain the core of the city, take away the walls if necessary, and produce a free zone outside. Next.

Here in the small town of Altamura in Apulia, you see the system operating in a small town. Radiating outwards are gates to the old city. I haven't got time to go into the detail. Here you see a grid system employed almost throughout the surroundings of the existing walled city. If the walls are taken away or replaced by a boulevard surrounding the city, nothing like the boulevard of the Ringstrasse. OK. Sorry it's so rushed, but the world is full of information.