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A Note on Design

The perception of AA Files that has been incrementally built since it was first printed in 1981 is one of quality, resilience and consistency. It is, after all, not a reactionary or disposable publication. It does not follow or address short-term trends. Instead, its relevance relies on the timelessness of its form and content, as well as the skill, intelligence and wit of its contributors. This means that alterations to the editorial and graphic direction of the journal have typically been determined and implemented fairly slowly.

Issue 80 is therefore a notable statement of intent. It has been designed and produced in-house by the Communications Studio, and its revised style and editorial structure is redolent of the clarity, focus and intent that the journal has historically embodied. While subtle nods to former incarnations will no doubt be discernible to enduring readers, they serve only as the waypoints of an altogether new graphic approach that is lean, clear and efficient, and that connects the future of the journal to its prodigious past.

Housing Teotihuacan

Linda Manzanilla in conversation with Alfredo Thiermann, Xavier Nueno and Pedro Correa

Xavier Nueno and Pedro Ge

- AT Alfredo Thiermann
- XN Xavier Nueno
- PC Pedro Correa
- ™ Linda Manzanilla

This interview was conducted on 12 March 2024 at the Laboratory for History and Theories of Architecture, Technology and Media (HITAM), at the École Polytechnique Fédérale in Lausanne. The text has been translated from Spanish by the authors.

Over the past three decades, the work of archaeologist Linda Manzanilla has profoundly changed our contemporary understanding of Teotihuacan, the most important known ancient metropolis of Mesoamerica. By placing the corporate politics of multi-family housing compounds at the very core of the city's metabolism, Manzanilla has also challenged some of the most deeply engrained narratives about urban formation more generally. As an interdisciplinary researcher, she often collaborates with physicists, chemists and geophysicists, as well as with physical anthropologists, geneticists, palynologists, palaeobotanists and palaeozoologists. Ultimately, however, her aim is to use architecture as both a source and a medium of research. Through Manzanilla's reading of Teotihuacan, it is possible to see how an extraordinary political project (within which decentralisation, local neighbourhood autonomy and government by consensus were tested) was not spelled out through texts, but rather 'written' in architecture.

A central premise of this conversation with Linda Manzanilla is that contemporary urgencies and anxieties have opened up new ways of understanding the past of our species and its relationship to the environment. The climate crisis has opened the eyes of historians, archaeologists and anthropologists to the long history of humanity's involvement in the transformation of nature. Agriculture, domestication, socialisation, accumulation, terraformation, ritualisation and other long standing processes of change that define our place in the world therefore seem ever more prescient, especially now that our relationship with nature is more critical and fragile than ever before. Have we really made architecture, or has architecture made us?

In this context, Manzanilla's study of Teotihuacan is a fundamental contribution to contemporary debate, as it destabilises many of the assumptions that historians typically apply to their understanding of early cities. Indeed, she came to see this case study as what she calls the 'Teotihuacan exception': it was one of the largest multi-ethnic urban concentrations of people in the world at the time, yet it existed and operated without any centralised governmental authority. It is from this core idea that our conversation with Manzanilla started, on an evening in March 2024.

AT We would like to start by asking what attracted you to working at Teotihuacan in the first place.

M Since before I worked at Teotihuacan, I was interested in the formation of archaic states and early cities, particularly in Mesopotamia. But in Egypt, archaeology was more about people than societies; an archaeology of kings and tombs, rather than settlements and dwellings. When I returned from completing my PhD on Egyptian state formation, I became interested in the first great American city: Teotihuacan, in central Mexico. Incidentally, I enjoy working in the highlands, while I can't stand the humidity of the Maya area. It makes me feel physically ill.

AT What are the main urban characteristics of Teotihuacan?

LM

I would say there are a few key traits that distinguish Teotihuacan from other premodern urban sites. First of all, its emergence had nothing to do with any previous local urban phenomenon. It is very rare to see a metropolis of 20 square kilometres appear quite so suddenly, without any evidence of its stages of growth from small-scale settlement to city. The second interesting factor is its orthogonal urban plan - a feature that is not present at any other Mesoamerican site apart from the Aztec city of Tenochtitlan, which flourished 800 years later. Thirdly, Teotihuacan was a metropolis surrounded by villages, without nearby secondary urban centres, which is again something very rare.

In conventional literature, the development of what V Gordon Childe called 'the urban revolution' in his 1950 essay of the same name is usually described as a series of stages. In Childe's account, when the city of Uruk arose in Mesopotamia between 4,000 and 3,200 BCE, it was surrounded by other urban formations that acted as administrative centres and possibly also held social and ritual importance. In the case of Teotihuacan, on the contrary, we only have traces of productive villages in the surrounding Basin of Mexico. This hierarchy of settlements was not the standard, anywhere in the world, and it was perhaps also linked to another interesting phenomenon that would have been unusual for a premodern metropolis: multi-ethnicity. Not only is Teotihuacan comprised of areas that were inhabited by specific ethnic groups at its periphery, but also shows signs that migrants were integrated into its neighbourhood structure. Finally, another striking feature of the city is the presence of multifamily housing compounds, which were possibly the first of their kind.

AT Could you elaborate further on how the evidence found in Teotihuacan challenges Gordon Childe's interpretation of the so-called 'urban revolution'? What is it that makes Teotihuacan enter into dialogue or conflict with (or be a kind of counterpoint to) that famous theory?

In his essay, Childe puts forward a clear argument. The early city, in his view, was characterised by not having food producers. It housed people working in other domains: the exchange of goods, various manufactures, services, bureaucracy, ritual and militia. Anything, in short, that had nothing to do with the production of food. Food production took place in rural areas; in the villages. So, who were Childe's early city dwellers? Well, they were people who came from rural areas to live in another kind of space and engage in new kinds of activities.

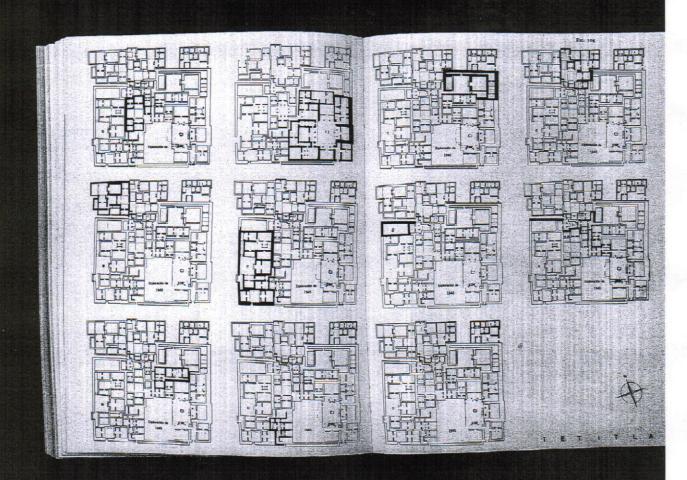
For an early city to be categorised as such, first, it must have had economic diversity and a diversity of interests among its population. In Childe's model, the city provided services to the rural areas around it and the rural areas provided subsistence products to the city in turn. Last but not least, generally speaking, cities were the places of institutions and rulers. If there was a diversity of settlements but no economic diversification, or no rulers, then you couldn't call that a city.

In this sense, would you say that the definition of the city that Childe offers doesn't correspond to the kind of settlement that we find in Teotihuacan? For example, Childe identifies the emergence of a priestly caste and a group of rulers that were clearly distinguished from the rest of the population as being characteristic of a city, and yet this was not the case at Teotihuacan. How do you interpret the absence of rulers in acts of government that are depicted in its murals?

In Teotihuacan, the institutional component of specific rituals is clearly portrayed in its murals. Members of the elite perform these rituals, acting as celebrants for specific groups, either at the scale of the neighbourhood or that of the city. There was unambiguously a priestly class. The problem, however, is understanding the institutional component of its government. This aspect of the city has been elusive so far. I'll give you my opinion, which is very personal. In Teotihuacan, there are no representations of rulers in the act of governing because those rulers, or co-rulers, personified deities. When they appeared before society, they belonged to a sphere that had nothing to do with the neighbourhood actors who produced, who moved, who competed. In other words, religious power did not coincide with economic power. They belonged to two very different spheres. Religious power was austere.

In the palace of Xalla, north of the Pyramid of the Sun, the wealth of objects that characterised smaller neighbourhood centres elsewhere in the city is nowhere to be found. Teotihuacan was a corporate, multi-ethnic society (an immensely diverse and complex one for its time), and so consensus would have to have been sought between its different districts. Government would therefore likely have operated through councils. And that's a big difference between Teotihuacan's society and the contexts that were analysed by Childe; in Mesopotamia, for example, we see the increasing importance of kings during the emergence of the early Sumerian dynasties.





Above: Plans of Tetitla highlighting the different spatial arrangements of its residential compounds. According to Séjourné, these compounds were the palaces of the local elite. Her interpretation, however, was contested by the work of 'new archeologists', such as René Millon, who proposed that most of the population of Teotihuacan had in fact lived in multi-family apartment compounds. From Laurette Séjourné, Arquitectura y Pintun en Teotihuacan, 1966. Image courtesy of the HITAM Collection.

Your work in Teotihuacan challenges one specific aspect of Gordon Childe's 'urban revolution' theory: namely, the assumption that cities naturally imply political centralisation.

That is very true, and it is an important difference between my work and much conventional interpretation of early cities. The state of which Teotihuacan was the capital between the 1st century BCE and the 6th century CE was very weak, because it was based on a multi-ethnic pact. It was not a territorial state, like the Egypt of the Pharaohs, which had a border police and strict control over who entered. Nor was it a secondary state, of the kind that would emerge under large-scale empires. Teotihuacan was a first-generation state. That is why it did not have a big central market like the Aztecs, many centuries later, had at Tlatelolco – a feature René Millon, a seminal figure in the study of Teotihuacan, hoped to find, yet never did.

Teotihuacan had neighbourhood markets we call tianguis de barrio, which were sites of barter exchange between producers and urban inhabitants. Its society was built around a much more fragile and dynamic set of relationships. This is why the traces that are left of it tell us that the barrios, or neighbourhoods, were almost semi-autonomous; they developed according to their own logic, and constantly created and dissolved alliances. They did not have to go through the sphere of higher government to make decisions; in other words, they formed part of a corporate government.

- To clarify: when you talk about a corporate government, what do you mean?
- I mean that both at the base and at the top of Teotihuacan society there were cooperative structures. At the base, cooperative groups of people lived in close proximity to one another, in the same housing complexes. They were not necessarily families, and shared certain aspects of everyday life but not others. In the domestic sphere, each family had its own home or apartment. However, generally speaking, these groups tended to engage in a common economic activity. A good example of this is a housing complex that I excavated, where three families of stucco workers lived. These people specialised in the preparation and application of lime. We found lime patches right outside their compound, as well as areas of activity where lime and working tools were dug out inside it. They were, essentially, masons.

Each family, however, had its own ritual courtyard and its own patron deity, different from the other families, showing clearly that they did not all belong to the same kinship group. For example, in the Maya area, in the city of Cobá, we excavated plots that belonged to two extended families; each kinship group had a single ancestral shrine for all the families that lived on the same plot. This did not happen in Teotihuacan, where neighbours were not related by blood but rather shared a common productive activity,

like the lime masons. This is what I call a 'corporate group'. Immediately to the north of the lime masons' housing unit dwelled a group of obsidian carvers. We have seen traces of it, most notably obsidian debris, but it hasn't been excavated yet.

The presence of these diverse groups meant that a given neighbourhood (that is to say, an aggregation of housing compounds) was almost semi-autonomous, hosting corporate groups dedicated to the different productive activities that it needed in order to function, usually clustered around a centre from which this activity could be coordinated. Interestingly, at the top of the hierarchy there are no royal tombs, no clearly defined rulers' palaces and no representations of rulers, as we find in the Mayan civilisation. The most plausible explanation is that the city was organised into districts, and that the co-rulers from each district formed a ruling council. That's why we don't see them in any of the main monumental buildings: they operated within their districts and only came together to make decisions by consensus.

- Looking at the spatial evidence of this cooperative government, we understand that in Teotihuacan certain structures served the whole city, but there was also a network of atomised services that were more specific to each district, neighbourhood or barrio. Within the macro-organisation of the city, for instance, there is the Avenue of the Dead, the main ceremonial axis that links together the whole complex, yet you argue that some of the most well-known monuments, such as the Pyramid of the Sun and the Pyramid of the Moon, might have been temples that catered to specific districts.
- Yes, this is indeed my conjecture: that the city was organised into four districts. Since I began to work on this hypothesis in the late 1990s, I have found consistent evidence of iconographic representations that were the emblems of the districts. In the northwestern district, there are the voladores, the flying animals: eagles are placed as an offering inside the Pyramid of the Moon, there is an Eagles' Plaza, and the sacred butterfly is found in Oztoyahualco 15B and in the Quetzalpapalotl Palace within this district. The northeastern district is characterised by felines: on the facade of the Pyramid of the Sun, feline sculptures take pride of place. The Rain God had his feline emblems, and seems to reign over this district, as he does the Xalla palace compound. In the southeast, there are serpents: the Pyramid of the Feathered Serpent is there, and depictions of serpents can be found everywhere. In the southwest, we find canids: coyotes, wolves, etc. These emblems are pervasive in Teotihuacan, and I believe that they are direct representations of the four social and spatial units into which the city was divided.

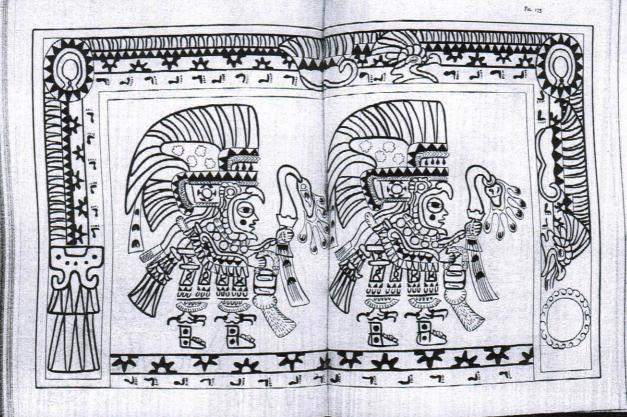
- Within the four districts, everyday life, as you mentioned earlier, was organised by compound dwellings. Most of these compounds shared the characteristic of collective activity that you already highlighted, but there were also exceptions. For instance, in the compound of Teopancazco you found evidence of collective kitchens. How do you interpret this very specific housing arrangement?
- At the centre of the neighbourhood we see what could described as an alternation of kitchens and storage spaces. This collective kitchen of sorts, however, has nothing to do with a domestic idea of oikos; it is, rather, the manifestation of a productive activity that would have happened in public space. This is very different from what we see in multi-family compounds, where we would never find such a concentration of cooking spaces. In multi-family complexes, each family had its own flat, its own kitchen and its own storeroom. Teopancazco is something very different. Although at first sight it might look like other compounds, it was not. In fact, its kitchens catered to groups of workers who mostly immigrated to Teotihuacan from other regions. They would have been attracted to come and work in the neighbourhood by a caravan system that ran through a particular corridor of ally sites, and ultimately enabled them to settle in the neighbourhood as attached workers.
- AT Were they temporary inhabitants of the city?
- They were inhabitants and migrants. Wherever they came from, they ended their life there, in Teotihuacan. Using isotopic studies of the burials of the Teopancazco neighbourhood centre, we were able to see who the migrants were and, conversely, who were the locals. We found the presence of what we call reverse migrants Teotihuacanos who left for a long time to live in other regions, but then came back and died, and are now buried there. So here you see that the caravan system followed two movements, both to and from the city.
- AT What else was happening there, then, at the level of neighbourhood structure?
- In an area of Teopancazco we call 'the tailor's shop', where clothes for the intermediate elite were produced, the two master tailors were foreigners from the corridor towards Veracruz. The people in charge of the productive activity that gave the neighbourhood its identity were foreign masters who settled there, in Teotihuacan. They worked there cutting, sewing and assembling and hardly ever went out into the courtyard. In fact, excavated bodies tell us that some individuals got scurvy from a lack of sunlight.

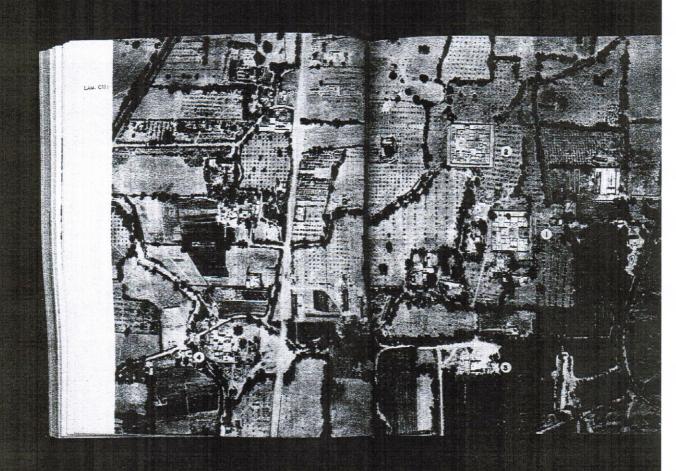
The centre of the neighbourhood was what we would call today a maquila, or sweatshop. Labourers worked long hours, and their hands were marked by enthesopathies or activity markers that can be seen in their skeletons. They couldn't even go out to eat; they had a place to reheat food and collective kitchens made food for them so that they could keep producing, much like contemporary maquiladores. They were under surveillance, as is clear from the presence of a military sector. To serve such acomplex productive condition, the ritual area of Teopancazco had a big square or courtyard with an altar, as was typical of a neighbourhood centre. In comparison with the ritual courtyards of the multi-family compounds, this was a much larger urban infrastructure that addressed a bigger and more diverse group of people.

- AT Indeed, you have written very extensively about the multifamily compounds. They represent a form of domestic
 dwelling that is very unusual compared to those that we find
 in the western tradition. As you already explained, they were
 not organised by family kinship, but by productive activity.
 Could you expand on how their productive logic worked, in
 relation to the wider district system?
- I believe this productive logic operated at the scale of the neighbourhood, rather than the individual multifamily compounds. For example, the stucco workers in Oztoyahualco 15B didn't make a living from eating stucco; they had to exchange with other groups nearby. That is to say, they had to offer their activity to the neighbourhood at large, just like the obsidian carvers would and just like the potters would, too. As a result, products could be brought from rural villages to the tianguis, or weekly market, where they would be exchanged with the goods made in the neighbourhood. Handicrafts, obsidian, tools and construction materials would be bartered for food, plants and animals.

The barrio, with its tianguis and its caravan system, therefore operated as a semi-autonomous economic system. It didn't depend on anybody else. It could perhaps boast if it was successful, but it didn't have to ask other neighbourhoods for anything. It even had its own identity, its own costume, its own rituals, its own spaces, its own people and even its own cargadores (carriers) who would accompany the caravans as they moved.

Teotihuacan, there are no representations of rulers of governing because those rulers, or co-rulers, or nifying deities. Spread of Laurette Sejourne's ara y Pintura en Teotihuacan with a drawing ing two Quetzal-Men from the Tetitia fresco, which lby Edwardo Contreras. From Laurette Sejourné, ara y Pintura en Teotihuacan, 1966. Image courtesy of M Collection.





Above: Aerial photograph showing the sites of: 1, Zacuala; 2, Yayahuala and 3, Tetitla, before the explorations of Laurette Sejourné in 1955, 1958 and 1963 respectively. From Laurette Séjourné, Arquitectura y Pintura en Teotihuacan, 1966. Image courtesy of the HITAM Collection.

And if the barrio or neighbourhood's identity was so strong, what is it that defined the identity of Teotihuacan as a whole, at a spatial level?

- Spatially, just the colourful city of Teotihuacan itself. How else would you get migrants excited about moving there? Workers were being fed; there were, effectively, daily food rations. From the isotopes we studied in the burials of the Teopancazco neighbourhood centre, we know that they ate tamales, tortillas and atole (that is, different types of corn food). They had corn and corn-fed animals such as dogs and turkeys. Migrants came to the city, as it must certainly have offered the promise of better living conditions. The narrative of a diverse, marvellous Teotihuacan would likely have spread far and wide, with the enticement of plenty of food and work. So the caravans brought in migrants attracted by the glamour of city life (an enduring myth throughout millennia), but once they arrived, they ended up shackled to a sweatshop system. They were not allowed to move around and they died there, as their burials evidence.
- One of the first to develop the thesis that the dwelling complexes at Teotihuacan were not elite palaces, but rather social housing, was the anthropologist René Millon. Using techniques such as photogrammetry, aerial photography and topographic and architectural projection, Millon carried out a 'mapping project' that inaugurated a new social interpretation of the multifamily compounds. I would like to ask you, on the one hand, what this transformation in the general interpretation of the multifamily compounds implies and, on the other, about your own techniques of interpretation. You work with techniques of forensic anthropology, analysing human remains, for instance; how do these techniques intersect with spatial analysis?
- The archaeologist Laurette Séjourné was guilty of calling these compounds 'palaces'. She excavated the compounds we call Tetitla, Zacuala and Yayahuala between 1955 and 1964, and called them palaces because of their scale, mural paintings and use of stone masonry; wrongly, because in the archaeology of premodern cities we define a palace as a seat of government. You can't call them all palaces - there are more than 2,000 such complexes in Teotihuacan. So, Séjourné excavated those spaces and marvelled at the mural painting and the burials, but didn't try to understand what actually happened inside them. And when René Millon studied the city, he focused on urban space itself. That's why his 1973 book, Urbanization at Teotihuacan, Mexico: The Teotihuacan Map, remains a masterpiece. It is an extraordinary study because it brings the multi-ethnic structure of the neighbourhoods to life. He speaks about them, and he locates them. He understood the foreign character of the neighbourhoods, although he did not work with the human remains buried there.

This seems, to me, to be a fundamental observation. When traditional archaeologists (but the same is true for architectural historians) read the past, they tend to focus on the spatial manifestations of the structures of power. But by changing the lens, it is possible to begin to decode the past differently. What if, instead of the sumptuous exercise of power, these places were sites where domestic practices, the rituals of life and reproductive labour took place? What do we see then? Sejourné, Millon and your work appear to be three different stages of understanding Teotihuacan in increasingly subtle ways. How would you describe your contribution to this genealogy of the interpretation of spatial structures?

Let me tell you an anecdote. In 1992, I spoke at a symposium on Teotihuacan at Dumbarton Oaks. Due to my background in Mesopotamian studies, I was very interested in understanding whether there was a system of redistribution at Teotihuacan, at least at the neighbourhood level. And there I proposed that the city would have had some kind of shared governance structure. During the question and answer session, René Millon, already a great figure at the time, who knew me because he had visited my excavation at Oztoyahualco 15B and had the two volumes of my Anatomy of a Housing Complex, said to me: 'Linda, how can there be a shared government in Teotihuacan? It doesn't hold up, there must have been a strong, single government.' To which Henry Nicholson, the great ethnohistorian, stepped in to defend my argument by reminding Millon: 'But René, don't you remember that Cholula had two rulers? It had a shared government indeed!'

There were, in fact, many examples of shared governments in central Mexico, as Zoltán Paulinyi also stated. It was a tradition that began in Teotihuacan and then continued in Tlaxcala. So, what is the difference between René Millon's work and mine? He did a fabulous job of defining the enormous city, mapping it with photogrammetry, conceiving the idea of the 'foreign barrios', talking about the specialisation of craftsmen. Those were the first steps that were required to overcome the idea that the dwelling compounds were palaces or monuments, and nothing more. But it was not enough. I see the neighbourhood as the dynamic component of Teotihuacan: semi-autonomous, forging alliances with other sites outside of the city, extending its tentacles beyond its perimeter to bring in migrants and use them as maquiladores. All this within a first-generation state that was, ostensibly, quite weak. So, of course, when it doesn't rain in a city where the patron deity is the Rain God ... well, there's no way an urban society can survive without enough water and enough food.

That was the beginning of the end, wasn't it? We wanted to ask you what made this unique society collapse in the sixth century.

AT

- Yes, drought played a part. To that, we must add a belated effort by the ruling elite to control the barrios; to end their semi-autonomy. The people who lived in the neighbourhoods could not stand it. They were already very free; they did what they wanted. It was too late for the state to try to put an end to that system. Studies of the uprising that put an end to the Teotihuacan experiment highlighted the fact that rioters only destroyed the spaces of the ruling elite. Most structures along the Avenue of the Death were burnt, their sculptures smashed to pieces. There is no evidence of any invasion. It was a revolt against the elite.
- PC Your work incorporates many disciplines, including palynology, palaeobotany, palaeozoology, osteology, geology, chemistry, physics and geophysics. You mix past and present in a very fertile way the past is extracted not only from excavations of physical material, but also from the future that we associate with the most advanced technologies. You have pioneered radiocarbon studies, the use of particle accelerators and the concentration of radioactive gases in studying the past, and your articles are often co-authored with scientists. What becomes visible at the intersection of the past and new technologies?
- It is the dialogue in my interdisciplinary interpretation seminars (which I held every two weeks, with a range of different experts) that sets them apart from other projects. From my very first experiences in training, I have been in dialogue with biologists, soil experts, geologists, etc. When I started teaching at the National Autonomous University of Mexico (UNAM), I was able to work with chemists and then people who work with ancient DNA and isotopes. In my research on the geographical origins of the buried, which has led to the understanding of Teotihuacan as a multi-ethnic city, I asked myself: who is who in there? The only option to answer this is to use 21st-century science and study evidence such as isotopes, DNA and burial practices.

- That's wonderful, because it's like the instinctional or acade correlate of your methodological principle; you don't look objects, but rather at the relationships between objects, whare relationships between disciplines. It's something like a corporate structure that unveils the keys to your own subje
- LM Of course, I don't do my work alone. It is always inter disciplinary. My young students are trained to work on these deeply interdisciplinary projects. I am just the director of the orchestra, the translator, who puts all th evidence together.