



CHAPTER 9

URBAN PLANNING
AGAINST
BOTTON UP LIKES

*THE CITY OF
CITIZENS*

CHAPTER 9. THE CITY OF CITIZENS.

Representing the city is not a merely descriptive exercise. On the contrary, its mode of execution has always been symptomatic of a certain approach towards the urban phenomenon, that is, of a particular discourse on the city. In this sense, the first Babylonian representations, the urban plans of the Imperial Rome, the Baroque perspectives or the axonometric representations of Modern times, appear not only as guiding tools, but above all as firm representatives of specific urban readings.

The urban positioning that each of these documents contains, to a great extent depends on the socio-cultural and technological situation of each era. The emergence of the informational technologies of the 21st century has allowed to analyse and manipulate the urban flows with much more precision, allowing the transition of an urban system based on the idea of accumulation towards an urban system based on the idea of circulation. Therefore, time has become a fundamental parameter and the current urban representations can hardly exist without it.

In fact, previous models of urban representation were generally static models. Today on the contrary, the representation of the city implies first of all the representation of urban flows in its movement.

We moved from urban documents towards urban records. And urban records not only require dynamic documents in order to be analysed. They also require the hyper-specificity that real-time-data can provide with the sensor technologies of the 21st century.

We would therefore be facing the necessity to find new ways of representation. We need new models that would require some other types of qualities, such as enabling certain interaction with citizens, developing the third dimension of the traditional plan, or moving from the notion of representation towards the notion of simulation. It is therefore a problem that is closely related to the new urban readings of our century, not only in relation to its content, but also in relation to the format of communicating them.

In this context, a new question arises: How should we represent the urban phenomena of the 21st century?

Urban representation

The pair “form / content” has traditionally been understood as a dichotomy, as a pair of opposites. However, and despite belonging in fact to different natures, their separation into watertight compartments does not correspond to the reality. On the contrary, both maintain certain relations of complementarity with each other, since there can be several “forms” for the same content and vice versa. This phenomenon is very evident when we analyse different ways in which societies have represented cities throughout history. In this sense, the different applications of conical and axonometric perspectives are especially emblematic. One of the most obvious examples of the first case has to do with the use of the perspective in the representations of the gardens of Versailles during the reign of Louis IV. Although the perspective had already been used in some of the Egyptian paintings and even in the Middle Ages, the process of technical perfection that occurs during the Renaissance permits its correct application in the Baroque context. If the French monarchy of the seventeenth century stood out for absolutism exercised by a single individual, in this case the “Sun King”, it seems logical that the representations of its domains use the perspective, especially the central one, as the principal mechanism of representation.

Indeed, perspective is a resource that allows one or more objects to be represented on the flat surface. But above all it does so with the relation of the position of a certain subject. This “personalistic” nature of the perspective makes it especially suitable for functioning within the culture framed by the absolutist power of one single individual. The monumentality and the symmetry of these types of documents are the most significant representatives of the era where the idea of “composition” was the leading one.

However, the case of the axonometric perspective reveals some completely different attributes. It is difficult to understand its boom without the continental positivism of the nineteenth-century, and above all, without the scientific spirit of the French “Belle Époque”. Already in his “Receuil” at the beginning of the nineteenth century, Jean Nicolas Louis Durand surprises his students with the approach of the scientific nature towards the architecture, and gives little or nothing to the metaphor and the subjectivism. The French architect works within a rigorous representation through the ground plan of several buildings drawn with the same scale. Although this does not yet include any axonometric perspective itself, he stands out because of the important abstraction, precision and universality of his drawings. Yet the first who will systematically use the axonometric perspective as a representation mechanism will be Choisy in his fundamental work “History of Architecture”. Due to its great abstraction and apparent neutrality, attributes that are perfectly coherent with the prevailing positivism, the axonometric perspective was incorporated as one of the principal mechanisms of representation of the modern architecture, and by extension, of the modern urbanism. One of the most emblematic examples of this type of representation is the project of the Ville Radieuse of Le Corbusier, that went up on the tabula rasa formed by the ruins that the war had left in several European cities.

The project's successive representations in the axonometric or almost axonometric perspectives emphasise the concepts of mass repetition, universality, neutrality and scientific objectivity of the twentieth century.

This leaves aside the leading role of the idea of "composition", typical of the Renaissance and the Baroque, in order to emphasise the notion of "position" and the importance of such modern typologies as "campus".

The importance of the notion of "time" in the 21st century

The emergence of information technologies and especially the rise of the ability to manage data in real time has opened a new field of work in urban design. The determination to analyse, manipulate and propose urban flows is closer and closer to be crystallised in a series of designs whose fundamental value lies in the ability to manage values of hyper-specificity. Indeed, the possibility of constant informational updates permits it to circulate in flows rather than to be accumulated in ratios.

This means that each update overlaps the previous one, and in this sense time becomes a variable of a great importance. The great novelty of the urban phenomenon of the 21st century is that we no longer design urban objects, but instead we design urban flows of the most varied type. They take advantage of the potential of a large network of sensors that is distributed in the city and that is constantly sending updated data regarding its state, not only as a value, but at the same time as a register or a map of that data: they have no value itself, but they do have it in its temporal phase and in comparison, with the others.

In this context, the citizen doesn't behave as a mere receiving agent. On the contrary, it established a bidirectional communication with the system. This communication exchanges information with the user through all kinds of high-portability technologies such as mobiles or wearables. These devices can send information not only highly specific but also usually unknown by the user, as in the case of pulsations.

Obviously, this type of telematic systems can be transferred to other urban elements like traffic lights, cars, public transport, lighting, pavements or facades. The capacity to measure and to alter in real time the behaviour of all these elements enables an immediate and operative interaction with them.

At the same time, the ability to superimpose a layer of the virtual reality to the physical reality of the city adds another dimension to the conventional urban complexity. The application of processes of Augmented Reality to the urban fabric leads to the emergence of a multidimensional urban reality, a scenario in which the physical area and the virtual area cease to be parallel realities and constitute one single level of information.

In this context, the informational era gives way to what is known within some social and cultural circles as the age of experience. This implies not merely the possibility of constantly reading updated information, but the possibility of interaction with it. This means that the communicative experience is much more immersive. It appears as a true multisensory experience that at the same time registers opinions, desires, preferences and ideologies. Urban “gaming” experiences that take advantage of technology’s ability to “cross” the physical and the virtual reality are becoming more common, even though they have not yet crystallised into firmly established social habits.

From representation to simulation: the multidimensional plan

In a context where urban reality is ephemeral, fluctuating, hybrid and complex, it seems difficult to get an adequate representation of it through the traditional tools of representation in two or three dimensions. What most of the urban representations that have appeared until today have in common is its static nature. Indeed, they understand the city as a fixed scenario in which urban design must concentrate its efforts on urban objects. On the contrary, the urban design of the 21st century works mainly through the analysis, manipulation and design of the urban flows. These flows, unlike objects, require the use of representational tools that are much more dynamic than those that have been applied until today, whose rigidity has turned out to be obsolete.

To represent the city today means to capture its hyper-specific, ephemeral, variable, instant and interactive nature. Instead of accumulating information during big lapses of time in order to compress it into a synthesised document, it is necessary to take advantage of the potential of informational technologies, and above all, profit to its ability to process data in real time.

We would therefore require new documents of a multidimensional nature,

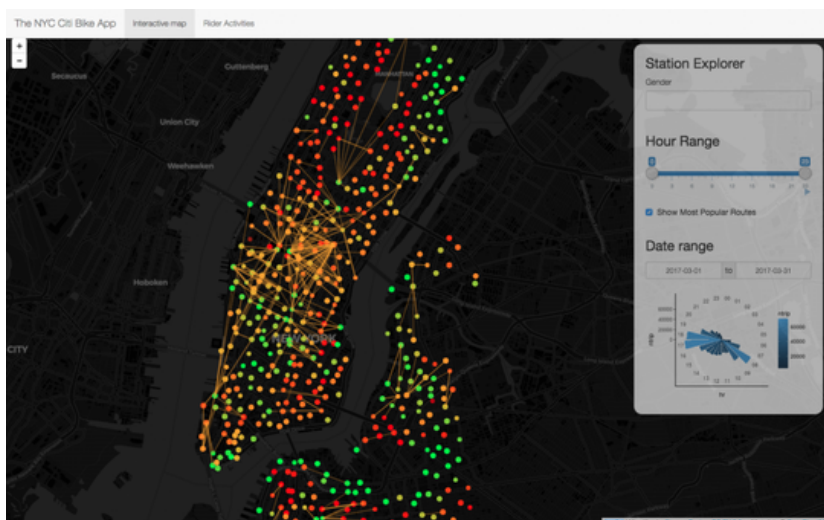
that is, documents that would not only consider the physical variables of the space, but that would also include time as a fundamental parameter. We should be able to represent the fact of becoming, enabling the visualisation of all the continuous updating processes that conform our urban flows.

We would therefore be closer to the representation in motion typical of an audio-visual content rather than to the immobility of a photograph. However, this document would not be a mere contemplative representation, but instead it would require active participation from citizens. Their interaction would be fundamental not only in terms of data sendings, but also in terms of information filtering: in the context of having a huge volume of information that could be crystallised in very specific layers, it is up to the user to choose which type of layers he wants to activate.

In this sense, the boundaries between “representation” and “simulation” are starting to be more and more blurred, as the ability to process the large amounts of information enables the possibility of some forecasting. Such representations would no longer be minimised to documents intended to visualise the past, but would also make certain simulations about the present and would imagine the nearest future.

The urban visualisations that are closest to this type of documents are probably the urban mobile applications. They enable the up-to-date, specific and ephemeral view on a particular issue of the city, be it traffic, accommodation, public transport, etc. In addition, its visualisation is not merely reduced to the simple informational reading, but it also sends information about the status of its user, if as it would be about a loop that updates the system with its participation.

In this context it seems clear that most of the urban habits established by the informational society implies a dynamism that constitutes a real challenge for the contemporary urbanism representation. It suggests an urban reality based on flows and nodes, a multiform and variable reality that is not constructed since a centralised position, but on the basis of a simultaneous and real-time participation of a vast variety of agents. Therefore, the representational tools of the 21st century cannot keep on being developed within static means, but instead should be able to interlock with the new urban dynamics of the 21st century.



CHAPTER 10

CONTROL ROOM
AGAINST
SELF-SUFFICIENCY

*HELLO, HAL,
CAN YOU SEE ME?
- AFFIRMATIVE,
DAVE. I GET YOU*

CHAPTER 10. HELLO, HAL, CAN YOU SEE ME?- AFFIRMATIVE, DAVE. I GET YOU

Historically, one of the most significant issues that has conditioned urban design is the degree of control exercised over citizens. This issue has a strong political implication and requires a clear position towards issues that are fundamental in order to define what it means to live in a city. Concepts such as privacy, public space, surveillance, control, freedom, autonomy or diversity are just examples of extremely political notions that produce relevant urban consequences.

In the sphere of urban design, traditionally decisions have been made in order to promote a certain type of control, exercising it in one or another way and depending on the social, technological and political context.

However, the present socio-technological situation has led the emergence of a new paradigm that is based on the contrast between traditional “top-down” control and the renewed capacity for self-management of a “bottom-up” type.

While the first one is exercised from large control centres as the case of the control room that Rio de Janeiro built for its Olympic games, the second one does so from multiple dispersed platforms, as Uber for example. This empowers citizens by giving them the tools that, to a certain extent, enable their emancipation from much more centralised urban dynamics.

Paradoxically, some of the companies that provide technology for the first group also do so for the second one, since in both cases the fundamental element is the same: real time data. Applied in one direction or in the other one, it can crystallise in centralised and repressive dynamics, or in dispersed and enabling dynamics. This tension defines one of the biggest challenges for the urban management in the 21st century, raising a new question on the table: How can we control information and at the same time empower the citizen?

Urban Control.

Urban design has traditionally been one of the most effective ways of controlling the masses. The structured distribution, size and position of squares, the width and the pattern of the streets or the height of the buildings offer “readings of power” that expose the political, liberal or repressive positions in the urban planning, from the control towards the autonomy.

One of the cases where this phenomenon is more evident has to do with the colonisation of America by Portugal and the Crown of Castile. Indigenous people like the Panará formed their settlements through the shape of a circle as a main foundational geometry. Their circular villages located residence sites on the periphery of the circle, leaving in the centre a large concentric space destined for the political and ritual activities. The circle thus stood not only as an “operative planning,” but also as a structuring symbol of their comprehension of the world. One of the first actions that European settlers did was to transform this circle into a grid, following the cross-wise pattern based on the *cardus* and *decumanus* of the imperial Rome. This action was a first step for the destruction of the indigenous imagination, that deprived of its material structure, lost one of its main references. This is a very clear example of a controlling urbanism where the geometric layout of the urban elements is constituted as a power tool. On another scale and in a much more urban context, Baron Haussmann’s operations in the Paris of the nineteenth-century are one of the most emblematic examples of an urban control strategy.

This kind of operations were quite common throughout the nineteenth century in Europe upon the arrival of major urban reforms. Indeed, they were intended to respond to new needs based on the population growth caused by the Industrial Revolution, the demand for more favourable conditions for the treatment of epidemics such as plague or cholera and the adaptation of the city centres to the new means of transport, etc.

Paris pioneered this type of operations of renovation, which were proposed mainly for controlling purposes. Revolts of 1830 and particularly those of 1848 had caused numerous difficulties to French authorities, especially because of the barricades of the workers who took advantage of the narrowness of the medieval streets. Napoleon III wanted very wide streets in order to facilitate the work of the order forces enabling their rapid displacement throughout the city and impeding the construction of obstacles. Haussmann created big avenues making wide geometric cuts in the medieval urban fabric and also constructed railway stations that united those streets enabling the provincial troops to be quickly deployed in Paris.

Haussmann's example inspired other European cities such as Brussels, Vienna or London, but his case had also similarities with some of the characteristics of the Soviet urbanism that the Russian government applied several decades later in its satellite states. In this sense, Stalin's urban operation of reconstruction in Warsaw has several characteristics in common with that of Haussmann: the streets were designed in such a way that they could absorb the transit of several tanks in parallel or even enable the landing of a combat aircraft.

The notion of Urban Big Brother.

The emergence and the generalisation of new information technologies has had many consequences in the sphere of urban control. The use of geometry to optimise the control over the citizens has lost its significance with the urban proliferation of sensors and cameras: they established a telematic control that doesn't depend on the physical conditions that can be found in the city.

If in the 1970s Foucault distinguished between the public punishment, that is celebratory and expository, like the one to which the prisoners of the Middle Ages were subjected, and the private punishment, secret and closed, the one like that of the Panopticon of Bentham, today we would face what we might call an Omnipresent Panopticon. The difference between the two precedents is very clear: in the punitive system of the Middle Ages the prisoner was placed in the centre of the space and was surrounded by citizens, whereas in the punitive system of the Modern time it is the prison guard who is positioned in the centre of the panoptic surrounded by potential culprits.

In the age of experience, the computerised and informational systems are no longer used in a discrete way. Instead, they are used in a continuous way both in time and in space: the control is exercised from each of these devices, in other words, the control is exercised in a dispersed way and it is totally absorbed by our own experience.

Thus, the form of cities no longer has a decisive role in its control, instead they are basically controlled through a network of sensors that constantly send information regarding their state. Therefore, the “telematic control centres”, meaning, the equipment through which the urban processes are surveilled, appear more frequently in several cities. In this way, the city becomes an entity that is “piloted” from an operational centre that allows to analyse and manipulate with high levels of specificity the state of each of its flows.

This is a completely hierarchical system articulated through the technology based on real-time data that in this case is aimed to centralise the urban control all over. However, information technology can offer exactly the opposite. Far from being constituted only as repressive tools, real-time data services can also capacitate and empower citizens, like applications such as Uber, Wallapop, or Airbnb, which represent the emancipatory power that technology can have on day-to-day basis. In a much more dispersed, optimised and equal way, these services decentralise power structures and increase the accessibility to services that would otherwise be more expensive, less efficient, and with less freedom of use.

The case of the taxi business is very representative: today it is an anachronistic, centralised and inefficient system. Uber or Cabify clearly performs better thanks to their much more accurate, safe and cheap services. However, these types of systems also require a new type of regulation, especially when its application occurs massively and in the urban scale. In this sense, the most illustrative example is that of Airbnb: its generalised and massive application generates situations of gentrification, which is the product of artificial overbooking in the urban housing stock. However, we face a 2.0 gentrification 2.0, which is more sophisticated than the previous one because of one crucial aspect: it is not about replacing one population with the wealthier one, but what happens is that the stable population is being replaced by the drifting one. Neighbours are replaced by Tourists, and residential rental homes by tourist apartments, something that turns urban centres into mere commercial areas rather than common zones of daily living.

Some cities like Barcelona or Madrid are beginning to observe this phenomenon with a lot of concern. In several cases, and within political premises, it has already been necessary to propose some measures not only to relieve their effects, but also and above all to regulate those activities. Set in the “laissez-faire” and deprived of any type of control, this kind of the emergency processes can turn its emancipatory role into the secondary aspect, while contributing to the increase of social inequality typical for the neo-liberal globalisation.

Bottom up & Top down

It is difficult to deny that the power of emergency processes is immense: decentralised webs, collaborative networks or smart phones possess such precision, operability and efficiency that together with great democratic potential are revealed as essential tools in order to face the urban dynamics of the 21st century. In the context of these dynamic and hyper-specific protocols, the traditional centralised processes prove more and more questionable: their application requires large doses of bureaucracy, they are less sensitive towards singularities and they can hardly act with the flexibility that cultural and technological context of nowadays seems to require.

However, and especially in the case of urban dynamics, it would be a mistake to renounce to centralised intelligence. First of all, from a strictly conceptual point of view, emerging unguided processes need more time to produce satisfactory results. In this sense it is necessary to mention Darwinian processes: they are developed through a binary system that determines whether there is a survival or not: intelligence is reduced to one single bit and therefore it needs long periods of time to constitute and stabilise generalised changes.

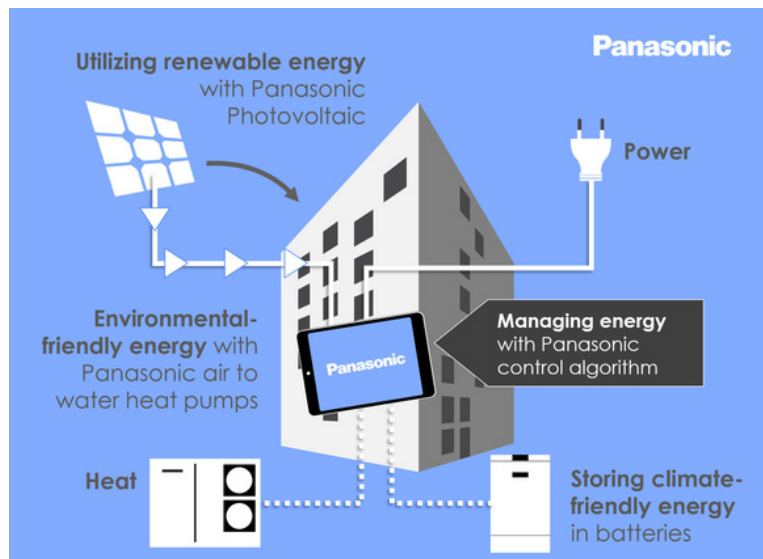
A similar case but with one important detail is that of Wikipedia: although it is built with the help of impartial contribution of the millions of users, its development is far from being the culmination of the rigorously emerging process. On the contrary, behind that there is a huge work of centralised management that deliberately filters the content to speed up the process of the information optimisation.

In the second place, letting the emerging processes to be developed by the free will, can lead to the situations that are not always desirable. In this sense, some certain urban dynamics, such as those already mentioned regarding Airbnb, are very illustrative: without any type of control, the high profit of a particular group of agents can lead to the decrease of the welfare.

One of the important challenges for the urban planning in the 21st century will imply the achievement of the significant collaboration between the both procedures. The ability to manage data in real time is a capability that has benefited both the centralised and the dispersed systems. The contrast set between the surveillance of the control centres on the one hand, and the emancipatory opportunities offered by the urban dispersed platforms on the other hand, has generated a hybrid situation where the information technologies are constituted as the common denominator.

The main technological companies produce in both directions: with the right hand they apply the technology in the form of fines, insurance and taxes of all kinds, and with the left hand they ensure the energy self-sufficiency, the mobility or the self-management. It will be the task of urban design to make both experiences compatible in the future.

Obviously, the political connotations that such decisions have and the responsibility of the civil society to profile their wishes and demands, cannot be ignored. Therefore, the possibility of bringing together both systems through the regulation of the dispersed urban processes seems to be one of the most promising lines of research in contemporary urban design.



A photograph of a protest or rally. In the foreground, a person with long blonde hair is seen from behind, wearing a white quilted jacket. In the background, a large sign reads "WE ARE BETTER THAN THIS!" with several stars drawn on it. The scene is outdoors with bare trees and a street sign visible.

EPILOGUE

**AFTER
RESILIENCE,
REVOLUTION?**

EPILOGUE. AFTER RESILIENCE, REVOLUTIONS?

It has become increasingly evident the participation of young people in public demonstrations, political positions, and social participation in defense of a series of arguments that, in one way or another, are all closely related to Resilience, and especially in relation to the Climatic Change and global policies for its containment. However, it does not seem to be in itself a unifying concept of these sectors, it does not even appear as a recurring word in their speeches.

On the contrary, the advocacy of the resilience concepts is more clearly linked to the more scientific, political and industrial sector, used by the media with more economic capacity, more linked to production, and ultimately with more things to lose in the medium and long term.

This is nothing new. As we have already reviewed in the history of innovations and in the course of paradigm shifts, these cycles accelerate once the frequency of accidents, anomalies and dysfunctions makes the possibility of a model change more tangible.

The final stretch of these cycles coincide in an interesting overlap: while the collapse curve of the previous model accelerates, it is directly proportional to the appearance of the new referents, of a new paradigm.

This is what happened, as we will see, in the gas industry and its link to the public lighting in the USA in the early XX century with the appearance of electric bulb invented by Edison, and that is what also happened in the refrigeration industry, at the stage where it superimposes the fantastic Tudor's industrial history in the exploitation of natural ice within the constant trial and error searches in the production of a refrigerator, that is to give two well-known examples and references of the obsolescence processes, collapse and paradigm shift.

The last years of each model in crisis coincide with a surprising stage of continuous technological advances and improvements, right till its collapse.

Analyzing the example of public lighting it becomes evident. The gas lamp was an invention of the Scottish engineer William Murdoch who in 1792 observed that the gases released from the burning of wood, peat and coal had three very attractive characteristics: they were highly flammable, transportable and could be ignited and extinguished with ease. In 1805 the Londoners were the first to enjoy public lighting, the first illuminated street was Pall Mall Street, and London was followed by Preston (England) and Baltimore (United States), where the lighting arrived in 1816. Very soon after, the main streets of New York were illuminated with more than two thousand of gas lamps, one of those pieces can still be seen in Greenwich Village. This new technology not only meant a before and an after in the use of public space as we can recognize it now - moving from the Middle age to the Modern age: the streets began to have night activity - but it meant the first action in terms of urban infrastructures network, even long before the drinking water network.

At the beginning of the XX century, the gas industry had an extensive network of pipes, hundreds of kilometers of copper pipes installed, with all the additional control, supervision, and security devices, which were threatened in a matter of a very short time.

By 1880 Thomas Edison already had his first 16-watt light bulb patented, lasting 1500 hours, which together with the development of AC power a few years later made the industrial electric lighting project highly viable and competitive: The gas street lighting provided less light than a modern 2.5 watt light bulb. The model was threatened, but while it is irretrievably collapsing at the cost of a higher-order paradigm shift, it remains highly resilient. In 1885, only 5 years after the Edison light bulb, the incandescent gas mantle was invented, which revolutionized the gas industry of that time, and which we can continue to use until today in any camping gas lamp that we find in Decathlon. The last 10 years of the firewood gas industry in urban lighting sector are the most innovative in this industry, until it finally collapses.

A similar case can be found in the history of refrigeration production. Leon Neyfakh, from the Boston Globe, perfectly describes this story of ascending cycles and obsolescence curves until reaching a paradigm shift in the case of refrigeration. “In 1806 a man from Boston walks into a bar and offers to sell the owner a chunk of ice. 250 years ago it would certainly have sounded like science fiction—especially if it was summer, when no one in the bar had seen frozen water in months. In fact, that is the beginning of the story how refrigeration industry started.

The ice was sent by a 20-something guy called Frederic Tudor, born in 1783 and known by the mid-19th century as the “Ice King of the World.” What he had done was figure out a way to harvest ice from local ponds, and keep it frozen long enough to ship halfway around the world. The work of ice-harvesting involved cutting massive chunks out of frozen bodies of water, packing them in sawdust for storage and transport, and selling them near and far.” Tudor’s great idea ended up altering the course of history, making it possible not only to serve cool beverages in midsummer, but also to dramatically extend the lifetime and availability of food.

Today, refrigeration is essential to our food economy, which is based on the movement of perishable products over thousands of kilometers. Natural ice harvested from ponds and lakes was the first innovation that made it possible. Dartmouth College geography professor Susanne Freidberg in her book "Fresh: A Peishable History," credits Tudor with setting the stage for the refrigeration revolution; as she sees it, the very concept of "fresh" was turned upside down by the world that Tudor made possible.

History is in itself a paradoxical example: as people progressed to make industrial ice and not depend on frozen lakes cut by hand, they came to the manufacture of "cold" directly and not through blocks of ice, with what we entered the era of the mechanical and modern refrigeration based on the expansion of a fluid through its evaporation.

Although the first attempts implied evaporation of a liquid, in 1805 Oliver Evans designed the first refrigeration machine using steam instead of liquid, just a year before the start of the incredible Tudor's story in a Boston bar.

But it was not until 1842 that the American John Gorrie designed a machine to cool rooms for patients with yellow fever. The device was based on the principle of compressing a gas that cools it through radiation coils and then expanding it to lower the temperature. In 1856 the Australian James Harrison, basing on Gorrie's refrigerators, introduced the vapor compression refrigeration in the brewing industries, which is still used today. From then on, the refrigeration machinery began to take off at a dizzying rate, and in the second decade of the XIX century these researches and innovations threatened the industry that Tudor had contributed to found, which, however, accelerated the pace of improvements and innovations in its methodology, processes and logistics, from the insulating shell of its ships, to the house-to-house distribution networks, or in a really advanced sense the specific demand creation: according to Gavin Weightman, who in 2003 wrote a book about ice trade in New England, Tudor was applauded for half a century after his death by the academics at Harvard Business School, who "admired him for creating a demand where it didn't exist before."

After all in both cases it is a cycle of resilience. The paradigm is highly resilient just near its point of collapse until the next paradigm shift occurs. That is the turning point, and it is that moment of overlapping between two paradigms of different signs, of two different resiliences, a negative and a positive one, of a collapse or a rupture, an obsolescence or an irruption, that we are interested in focusing this work at.

Possibly in these years we will attend all, several or some of these urban paradigms that we have analyzed to a time of simultaneous expectations: continuous improvements and endless innovations in a cycle of negative resilience within a model that will inexorably collapse, in simultaneous coexistence with new referents and cycles that are inaugurated, new paradigms that initiate a new cycle of positive resilience, a new era of demands and claims, and a new context in which to develop their potential.

It is exactly at this point where we must begin to distinguish what we want to conserve, and what we must necessarily abandon. The scenario of a model crisis, of a paradigm shift will mostly take place within a physical space called the city, understood in its maximum dimension, in its different scales and degrees, as we have mentioned.

The stories of collapses in the past have much to do with natural selection, a Darwinian way of being discarded, but the novelty is that we are immersed in an era with technological and intelligence potential as never seen before to establish scenarios and simulations in the short, medium and long term.

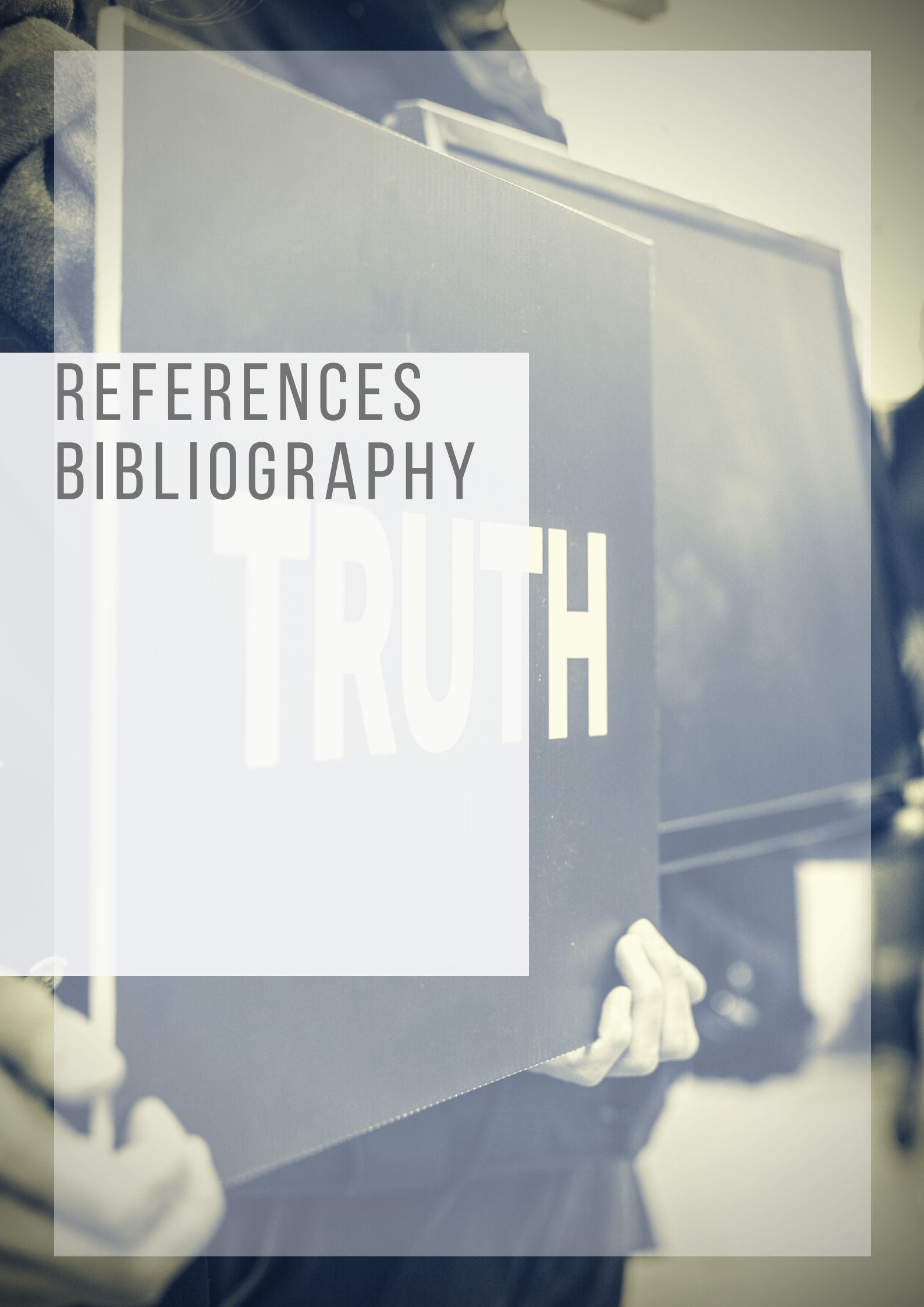
What is the algorithm for these paradigm shifts?

Shall we expect them to happen in slow motion, while their end becomes evident, even if we don't arrive to see it? Or as a society shall we act decisively to establish what must be resilient and what must not?

Or does, after resilience, the revolution come?

**ACT
NOW**



A photograph of a person holding a large, dark sign with the word "TRUTH" written on it in large, white, sans-serif capital letters. The person is wearing a dark jacket and is holding the sign with both hands. The background is slightly blurred, showing what appears to be an indoor setting with other people and structures. The overall tone of the image is somewhat somber and focused on the message of the sign.

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SCIENCE
NOT
SILENCE