

Bringing the City to the People. Urban and Territorial Regeneration Challenges in the Outskirts of Guimarães

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ABSTRACT

This paper aims to contribute with a new commitment to the concept of urban regeneration, which assumes diffuse/transgenic territories as new forms of city life, using the continuous (sub)urbanization we find in the outskirts of Guimarães as case study.

Along the national roads N101, N105, N206 and N207 a set of clusters have emerged, slowly, linearly and apparently disconnected, establishing a set of extensions of the urban core. We believe that these are not mere links between different cities; they prolong urban life outside the recognizable limit of the urban form, although their appearance does not present itself according to the mental image we associate to a city.

Therefore, we propose that the concept of urban regeneration should be applied to these territories, but it should be considered with a particular approach, different from traditional solutions: little improvements in the basic structure of these axes can help to bring the city to the people instead of bringing the people to the city.

Keywords: Guimarães; Territory; Urban; Suburban; Transgenic

1. Form

Western civilization has a tradition of more than two thousand years thinking the city as form; in *De Architectura Libri Decem*, Vitruvius (33-14 BC) already applied to the city the same principles advocated for architecture: Venustas, Firmitas and Utilitas.

Since the fifteenth century, the classical treaties on architecture applied these principles of beauty, constructive stability and usefulness in search for an ideal city, expressed as an ideal form; it is the result of a plan, which establishes the limits and the structure of the urban spaces.

The importance of form, defined by limit and structure is evident in the plan for the ideal city of *Sforzinda*, designed by Antonio Averlino, known as Filarete, in his *Trattato d'Architettura* (1461-4); this is one of the first proposals of Renaissance urban design, and can be read as an attempt to geometrize the traditional form of the medieval town: his drawing overlaps two squares to create a regular star with its eight vertices (which defines the wall), enclosed in a circle (the moat), crossed by eight concentric streets that start from a central square and pierce the wall in its eight doors, protected by eight towers. This idea of geometric and centralized design can be related to an anthropomorphic concept of composition presented by Vitruvius (illustrated by the famous 1490 drawing from Leonardo Da Vinci, "The Vitruvian Man"), which can also be found in most of the architecture treaties written in the sixteenth and seventeenth centuries, such as *I quattro primi libri di Architettura*, by Pietro Cataneo (1554) or *L'Idea dell'a Architettura Universal* by Vincenzo Scamozzi, often related to the planning of Palmanova, an Italian town founded in 1593 (Morris, 1979, pp.186-194).

Throughout the centuries, with the pacification of the European territories (which made the walls useless) and the industrial revolution, the uncontrolled growth of some cities shifted the focus of attention from the center to the periphery.

This shift implies that the form of the urban spaces has to be considered in a different way: it is the structure (radial, linear or defined by a grid) that defines an abstract idea of form, since it defines the rule to an expansion that can be continued outside the limits of the original plan. In the mid-nineteenth century, two paradigmatic interventions emerge in Europe, simultaneously: while in Paris Haussmann defines a new structure for the existing city, in Barcelona the Grid of Cerdá allows an almost unlimited growth of the city (Benevolo, 2001, pp.589-608).

But in most European cities, the urban form outgrew the existing plans; beyond the traditional dichotomy city/country (in which the definition of each concept can be done in opposition to the other) a third reality emerges threatening the definition of urbanity as form: the suburbs.

Reacting to this new circumstance, the disciplinary discourse of the twentieth century continued to propose alternative solutions in form, structure and functional management, applicable to cities and their expansion areas: the Linear City (Soria y Mata, 1882), the Garden City (Ebenezer Howard, 1898), la Ville Radieuse (Corbusier, 1933), Broadacre City (Frank Lloyd Wright, 1931-5), etc.

But despite all these new ideas, suburban areas continued to grow uncontrollably in most European cities; and even if, in some cases, we could identify the presence of a more or less recognizable structure, suburbs tend to lose density as they grow away from the urban center. The lack of a clear boundary leads to a gradual dilution of the urban form in the (ancient) rural areas.

These complex interconnections between country, city and suburb imply that the city can no longer be mainly defined in terms of form.

The Linear City was proposed by the Spanish road engineer Soria y Mata and never fully realized; the only experience based directly on his ideas was constructed in the outskirts

of Madrid, by the “Compania Madrilenia de Urbanization” – but only a small part of the 55 km plan projected by Soria y Mata was accomplished. It represented the opposite of the traditional concentric idea of urban space: “a single street, of (...) the length that may be necessary” (Frampton, 1985, pp.27-8), designed to link two preexistent cities. It was organized along the tracks of the railroad, with a central axe that incorporated the mechanic transportation (and all the infrastructures) and provided access to both housing and industry (Giedion, 1941, p.809).

Although the principles of the linear city suggest the natural development of the urban sprawl, it was not considered as an effective solution; neither in the Soria y Mata approach nor in the version of the Russian disurbanists (for example, see Ivan Leonidov’s plan for Magnitogorsk, in 1930), which anticipated most of the schemes that Corbusier (and the ASCORAL group) presented in “Les Trois Établissements Humains” (1945), proposing the same territorial layout with a different type of housing. Corbusier also proposed a linear form in his Plan for the City of Algiers (never implemented), where “an expressway running at a height of 100 m (...) will be supported on a concrete structure (...) which will contain housing for 180.000 people” (Boesiger, 1972, p.174).

In the 60s, the idea of the Metabolist city expressed by Kenzo Tange in his plan for the Tokyo Bay (1960) presented a new approach to the concept of the linear city.

The metabolists believed that design and technology should express human vitality and the architect or urban planner should foster the metabolic development of society (Kurokawa, 1977, p.691).

In the Tokyo Bay plan, Tange justifies his linear approach with an analogy between the growth process of an organic body and the urban sprawl of a city.

In the initial development phase a city, like an egg, must have a central core; but later, in a natural process, the core developed into a spine and breaks the egg shell. The spine

becomes an essential element to the city, as it does to vertebrate animals: it is an important element in the nervous system, responsible for transmitting nerve signals loaded with information that make the connection between the brain (the political center) and the rest of the body (Ferreira, 2016, p.37-38).

This metabolic approach interests us, because it provides a model for understanding the reality of the territory of the outskirts of Guimarães; but in the valley of the river Ave we can't speak of a unique spine emerging from the egg: we have the road N101 to the northwest (from Guimarães to Braga) and to the southeast (to Amarante), the N105 to the southwest (Santo Tirso), the N206 to the west (Famalicão) and to the east (Fafe), and the N207 to the north (Póvoa de Lanhoso).

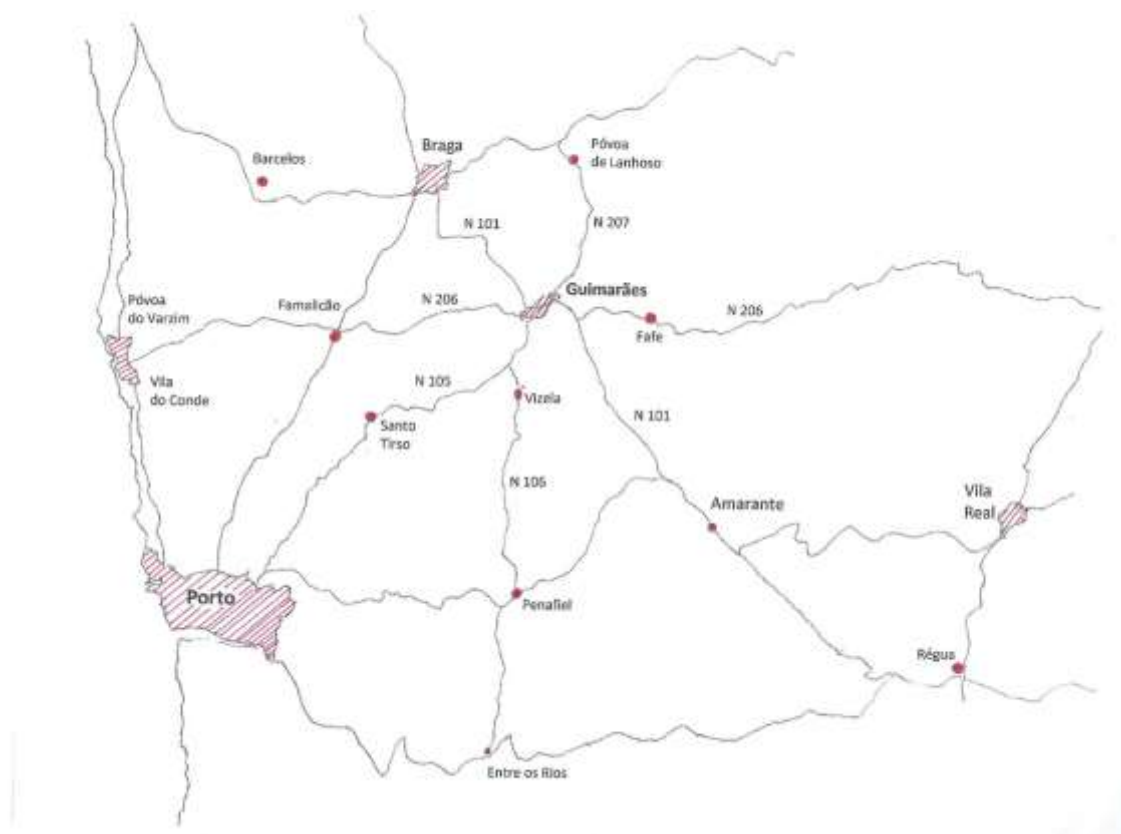


Fig. 1. Schematic map of the northwest of Portugal, showing the ancient connections between Guimarães and the surrounding cities.
Drawing by Eduardo Fernandes, based on Távora (1982).

In each one of these axes a set of clusters have emerged, slowly, linearly and (apparently) disconnected, establishing a set of extensions of the urban core. These are not mere links between different cities, they prolong urban life outside the recognizable limit of the urban form. Like the tentacles of an octopus, they are part of the same body, but assume a different shape.

2. Growth

In Guimarães, the form of the city is easily recognizable since the fourteenth century: the design of the medieval wall that unified both the initial urban nucleus (“Vila Alta” and “Vila Baixa” – Upper and Lower Town) established a clear differentiation between the defined shape of the enclosed within and the outskirts, organized in a much less defined way. Even after the partial demolition of this wall, the ancient layout is still very clear and designs the form of the old town.

Inside and outside the walls, the territory was organized by the main roads.

The Upper Town’s urbanization was organized along the Castle Street (“rua do Castelo”) and Infesta Street (“rua de Infesta”), connecting the city to the north, by roads leading to Póvoa de Lanhoso and Chaves. This nucleus was linked by St. Mary Street (“rua de Santa Maria”) to the monastery of Nossa Senhora da Oliveira, in the center of the Lower Town, joining with the crossroads that connect Braga (in the northwest) to Amarante (in the southeast) with the road to Vila do Conde (to the west) and the track to the south, in direction to Santo Tirso and Porto (Fernandes and Jorge, 2011, p.17-19).



Fig. 2. Schemes of the medieval nucleus of Guimarães before and after the construction of the second wall. Drawings by Eduardo Fernandes, based on Afonso and Ferrão (2002) and Távora (1982).

Outside the recognizable limits of the wall, urban growth began in the Middle Ages (Afonso and Ferrão, 2002), along these paths that started inside the city and continued, through the doors of the wall, heading for the nearest towns.

Over the centuries, the urban form began to outgrow the limits of the ancient wall.



Fig. 3. Scheme of the 1982 Plan of Guimarães, by Fernando Távora. Drawing by Eduardo Fernandes, based on Távora (1982).

In the end of the twentieth century, the General Plan of Urbanization designed by Fernando Távora (1979-82) sets new limits to the consolidated city with a clear border:

the half-ring of the new Freeway sets the boundaries in the southwest, west and north; to the south and east the city growth is naturally limited by the topography (the Penha mountain is a natural barrier that complements the design of the highway).

The new limits are clearly noticeable for those traveling on this new route: on one side there is the city, on the other is a rural landscape; the exception happens only on the nodes of the highway, new doors through which the old roads can cross the new wall and continue its route.

In the region of the River Ave valley, outside the new city limits, new questions arise, very different from the ones that concern the old city. Although the use of this ancient rural territory is also secular, it has undergone transformation processes in the last forty years that profoundly changed its image, dynamics and identity.

This rapid development has created a reality, in which the rural identity is lost but not yet replaced; a reality where a hidden identity is still under construction, but is still too young to present a clear image or to be defined by a precise word.

3. Name

‘Images’ and ‘words’ are forms of communication that allow a common definition of a particular object, providing the possibility of sharing ideas from different individuals on the same reality.

It is a way to catalog and organize the complex world around us, making it simpler to the perception of the human being.

However, as words are related to a pre-designed image of reality, sometimes the object does not comply with the lexicon of the predefined language.

The outskirts of Guimarães are an example of a new reality that does not fit the existent vocabulary:

(...) neither city nor countryside, neither urban nor rural... (...) the first question is to find an encoding, a word (...) to identify any assignable identity that can be shared. The most common approach is to see here a 'non-thing.' (...) an identity built in the negative, without qualities, repeatedly referencing the list of malfunctions, deviations and losses. (Domingues, 2008, p.27)

In the past, these roads (N101, N105, N206 and N207) were limited to connect cities, but nowadays they are the anchors of the transgenic process that has created this diffuse territory, where the city genes are slowly invading the countryside, in a constant cycle of mutation.

Facing this new form of habitat, new questions arise. For urbanists and decision makers, to act in this territory is a difficult task, because the same old solutions can't be used in a completely new problem.

When acting on these roads, even if we are aware of their peculiar characteristics, the temptation is to still consider it them under the concept of countryside (a non-urban reality). So, the inability to understand these territories leads to the temptation of doing nothing, abandoning these realities to their own impulses of change.

To outdo the passive posture towards these new landscapes, Álvaro Domingues (2008) proposes the designation 'transgenic', implying its formation through mutation processes between the qualities of the city and the countryside.

If we assume that both city and countryside are defined by several properties which we can designate as 'genes' (components of a characteristic 'gene string'), when we introduce a city 'gene' (collective housing, for example) into a landscape with 'rural' genetic background, we have a process of transgenesis (Teixeira, 2014). Because the number of combinations is almost infinite, the plurality of morphological results creates a set of images so diverse that the whole seems chaotic, with no apparent rules, no limits... However, 'transgenic' is a quality, not a noun.

To name it, we must try to understand this transgenic territory.

We know what it is not: not a road, not a street, not a city, not countryside, not urban, not rural, not industry, and much less can it be called ‘nature’.

However, it is not ‘nothing’.

The term ‘nothing’ presupposes an absence, and the ‘thing’ exists: it appears to be a little of everything, mutated into something new. On these national roads, an identity is being built over time by its population; the character of a ‘passing through’ space was gradually cloaked by the present use, emphasized by the desire for attention of some of the inhabitants.

The term ‘diffuse’ (Portas, 2009) is appropriate to define this new reality, but still doesn’t imply a new direction to practical action on this territory. It assumes the process of transgenesis, but does not offer a principle of identity or an organization rule. However, the word ‘diffuse’ suggests the main difficulty in defining this territory, where the genes of the city and the rural are mixed: it has no recognizable urban form.

And, yet, it is urban.

4. Urbanity

It may seem odd to call ‘urban’ these (apparently) suburban (or rural) territories of the valley of the river Ave, organized along the national roads, with linear expansions that articulate the urban centers of this region.

If we assume that cities are defined by the built physical reality (streets, squares, buildings, etc.) and therefore should be understood, analyzed and classified by their form, the continuous (sub)urbanization we find along the N101, the N105, the N207 or the N206 is far from the mental image we associate to this concept.

But we believe that cities are also defined by people, and that is mainly in the way people interact that a territory can be more or less urban (Jacobs, 1961; Cullen, 1961; Rossi, 1966; Gehl, 2011).

After all, what defines urbanity, for common people, is not the shape of the urban tissue, or the administrative division of the territory. Traditionally, we call city (our city) to the set of places that meet the practical needs of our everyday life (supply, consumption, employment, security, mobility, housing, sports, education, leisure, culture, etc.) and, simultaneously, allow us a social identification, an identity (Fernandes, 2003).

Today, this identification is done in a network of more or less fragile links that indicate different relationships: kinship, exchanges, authority, representation...

In the case of Guimarães, about fifty thousand people live in the ten most central parishes (those that will be consensually considered urban), while more than one hundred thousand live in the remaining territories of the county (INE, 2011).

These one hundred thousand inhabitants are scattered in a seemingly chaotic manner.

However, studying the evolution of the territory, it is possible to realize that the apparent randomness is structured: first, by the main connections between cities (the aforementioned N101, N105, N207 and N206, old roads that today have the character of an urban street), then by the pathways that connect those roads to smaller urban clusters and finally by a networked of smaller paths, forming a web that is constantly sprawling through the urbanization of old farmhouses properties (Brandão, 2014).

But this structure is not only composed by housing. This region is not the dormitory of the cities that surround it; on the contrary, it articulates a persistent connection to agriculture (inside this network there are considerable areas where we can still find a rural character), with industrial activities of various scales (widely spread along the territory) and a very representative incidence of commercial and service facilities.

Each of the sectors (of undefined limits) of this territory is fairly autonomous from the nearby cities. For many of these hundred thousand inhabitants, the interactions of the day-to-day are made within these diffuse areas. So, can we consider this territory their urban reality?

Yes, we believe it is a city, but still a very young one; we propose to call it 'emergent city'.

5. Network

The exponential increase in the speed of the evolution of the world that surrounds us tends to influence an acceleration of change in our lives: we move to another city or country to study, to find a job, to change jobs (or because our job was dislocated); we change our house because we married, had children, divorced, got married again; or because we have more money, or less (we can no longer afford the loan); or because it seems like a good deal; or just because we suddenly felt we need to change something in our life...

Our connection to the territory is ephemeral; we do not stabilize the relationship with the places where we live long enough to grow roots, to establish ties, to feel an identification. At the same time, from our home we can connect virtually to anywhere in the world, which also contributes to weaken the real relationship to where we are (Fernandes, 2015, p.53). So, the spaces where we spend our everyday life can no longer be restricted to a distinguishable area. It is a network system, constantly changing, which articulates different points, more or less close, more or less virtual.

From the city that represents our identity reference, we preserve the name, which still magnetizes the memories even if we no longer feel the need to go there... (Calvino, 1990, p.127).

The territories of the Ave valley work in a network: but it is not just a physical network of roads and paths, it is also a complex network of human activities that respond to the requirements of a very rich urban system, when analyzed in conjunction with the cities that it articulates and complements (Teixeira, 2014). Analyzed separately, this system is incomplete, but so are the cities in its vicinity.

But they should not be considered separately, because they form a whole, like the head and the tentacles of an octopus.

6. Proposals

This new transgenic reality that we call emergent city is often considered negatively and interpreted as a chaotic territory which, apparently, does not follow any rules. However, what distinguishes it from the traditional urban forms is, precisely, the particular set of rules it possesses (Portas, 1986).

Although it has been a case study for urbanists, architects and politicians in the last forty years, the actual planning of these territories was not effective.

Although these new landscapes cannot be recognized as rural in the traditional sense, its characteristics do not allow them to be understood as cities, also. So, the implementation of the traditional regulations and strategies to this new reality is not adequate to its peculiar character.

We need to improve the study of this emergent city, to better understand its mechanisms and necessities and to be able to define new and appropriated tools to intervene.

A city is “as an architectonic work, (...) a construction in space, but it’s a construction of large scale, something only perceptible through long periods of time” (Lynch, 2011, p.9). So, as with every city type, the basic ingredient in the construction of transgenic cities is time.

These are emergent cities – cities yet to come –, whose identity is being shaped by diverse mutations through time, by multiple social dynamics and new appropriation processes. Its form is not yet defined nor its final definition entirely certain; therefore, incertitude is the main tool we have to work with. So, global regeneration plans for these territories should be structured by two key words: versatility and immateriality.

Versatility because the evolution of transgenic territories is controlled by rules we don't fully understand at the moment; thus, each global proposal should assume multiple possible results, instead of imposing itself to the natural mutation course.

Immateriality because, in such a large territorial scale, the best approach are solutions that don't imply a predefined image as a desired result.

The proposals presented on this paper, in the following subchapters (Sidewalks, Transportation, Public equipment, Culture) are not global solutions, but small and precise interventions that could improve the life in these emergent cities, providing better conditions to its inhabitants.

They are based on the analysis of the necessities of these spaces, considering the essential elements of urban life:

Libraries have been written about why humans ever built cities in the first place, but most historians agree that for the last eight thousand years, cities have been shaped by seven purposes: industry, governance, commerce, safety, culture, companionship, religion (Garreau, 1991, p. 6).

6.1 - Sidewalks

In these territories, the question of security does not reside in the usual aspects that we tend to consider in urban life. This is a territory where crime in the public space is not a concern neither to the municipality nor to the population. In the outskirts of Guimarães, we can still find private houses where the front door is always open, and is only locked at night.

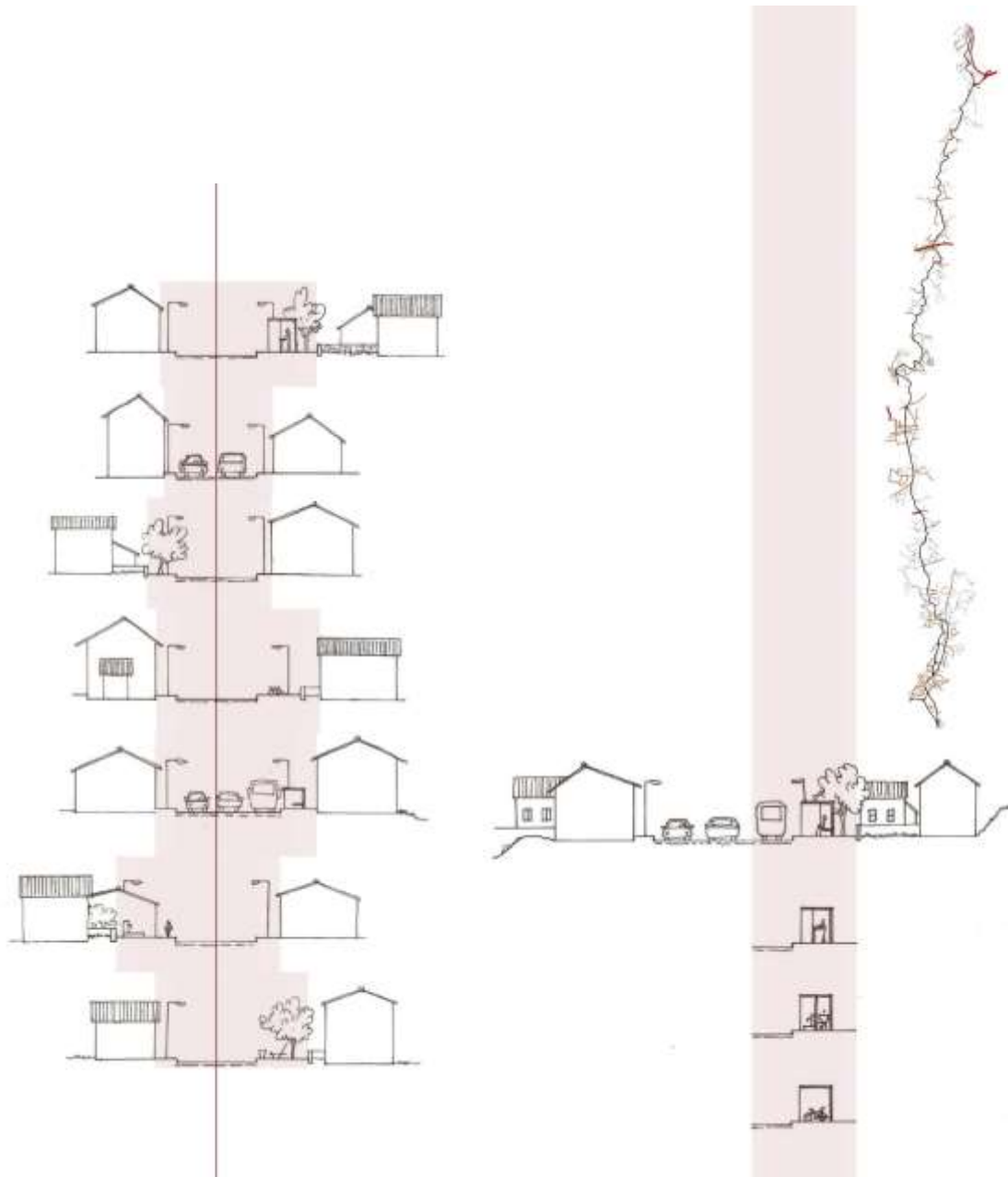


Fig. 4. Sidewalks, transportation and public equipment.
Drawings by Carolina Teixeira.

When we walk the road, we sense no traces of violence, robbery or vandalism, but there is a great danger: the traffic of motor vehicles.

Since the national roads were initially only considered as links between cities, they are designed for cars and not to serve the pedestrians. Although the speed limits in most parts of the roads are low (50 Km/h), the width of the lanes invites the drivers to move faster.

On the other hand, there are no sidewalks in vast areas of the road, and the ones that exist are very narrow (no more than sixty centimeters).

However, although these axes present the form of a road, today it functions like a city street; every day, when we drive along the N101, the N105, the N206 or the N207, we find men, women and children walking along the side of the road.

It is vital, for the security of these streets, to build sidewalks; they should be large enough to permit two pedestrians to cross, or walk side by side. By doing this, we will also narrow the traffic lanes, reducing the potential speed of the cars and increasing the security of the pedestrians.

6.2 - Transportation

It's important to find a way to improve mobility in these territories. Today, we have a public transportation system based on a fleet of large buses, in a low frequency timetable; as the full capacity of the buses is never used, tickets are expensive.

Therefore, to improve mobility, we should consider the use of smaller buses, in larger number, to improve the service. With smaller buses, its full capacity would certainly be achieved more often and tickets would be cheaper. Since it would be less expensive to travel, and the buses more frequent, people would use this public transportation more often, instead of the private car. Then, traveling in the transgenic city would be easier and nicer for everybody: cars, buses and pedestrians.

6.3 - Public equipment

The mixture of agriculture, industrial activity, commercial and service facilities, along a territory largely occupied with low density housing allows a proximity between the

inhabitants and a large amount of potential employment that diminishes the necessity of private car traffic.

With adequate sidewalks, the national roads could be agreeable to pedestrian use; if the traffic lanes included a bicycle path, this mode of transportation would also be an interesting alternative.

With low economic investment, some very simple artifacts could be introduced along the streets: garbage cans, trees, bicycle parking, water fountains and benches.

Covered bus stops should also be provided, designed as a multifunctional unit which aggregates all the aforementioned equipment; it could even include small commercial areas and public bathrooms. These commercial facilities could be offered to local farmers, allowing agricultural products to be sold directly from the producer.

All this public equipment, properly organized along the sidewalk, would change the character of the road, which would become a real urban street, more adequate and enjoyable to pedestrians.

6.4 - Culture

When we think of these spaces as an emergent city, we should consider the lack of cultural events and initiatives a problem, due to the lack of cultural structures.

To improve the cultural interactivity, simple and light structures could be introduced in empty spaces – those so called ‘leftover spaces’ – or in unused fields.

If we remember the Archigram Studies for the Instant City (1969), it becomes clear that cultural events can happen in low cost ephemeral structures: outside cinemas, exhibitions, workshops, fairs, etc. Recently, the proliferation of music festivals that happen in the summer, all over Portugal, demonstrates how this type of instant city can easily be assembled and dismantled.

The creation of an adequate public transportation system, complemented with adequate sidewalks and public equipment would bring more people to the streets, providing public for the cultural events.

7. Manifesto

All the proposals presented in the last chapter are quite realistic and could be realized with little cost. But, in the end of this paper, we felt we should present an utopian proposal. The term “Utopia” is used here considering the seven “discriminatory features” presented by Françoise Choay in her famous definition (Choay, 2007, p.44); so, the images presented in the figures 5 and 6 do not represent a concrete territory, but a space-time abstraction based on the territories we are studying.

This idea of a suspended monorail, connecting the cities of the River Ave valley, although impossible to realize due to the economic reality of the country and the region, is useful as a manifesto, to present a strong image of transport efficiency, a fast public transportation system sustained by pillars, with little interfering in the morphology of the landscape.

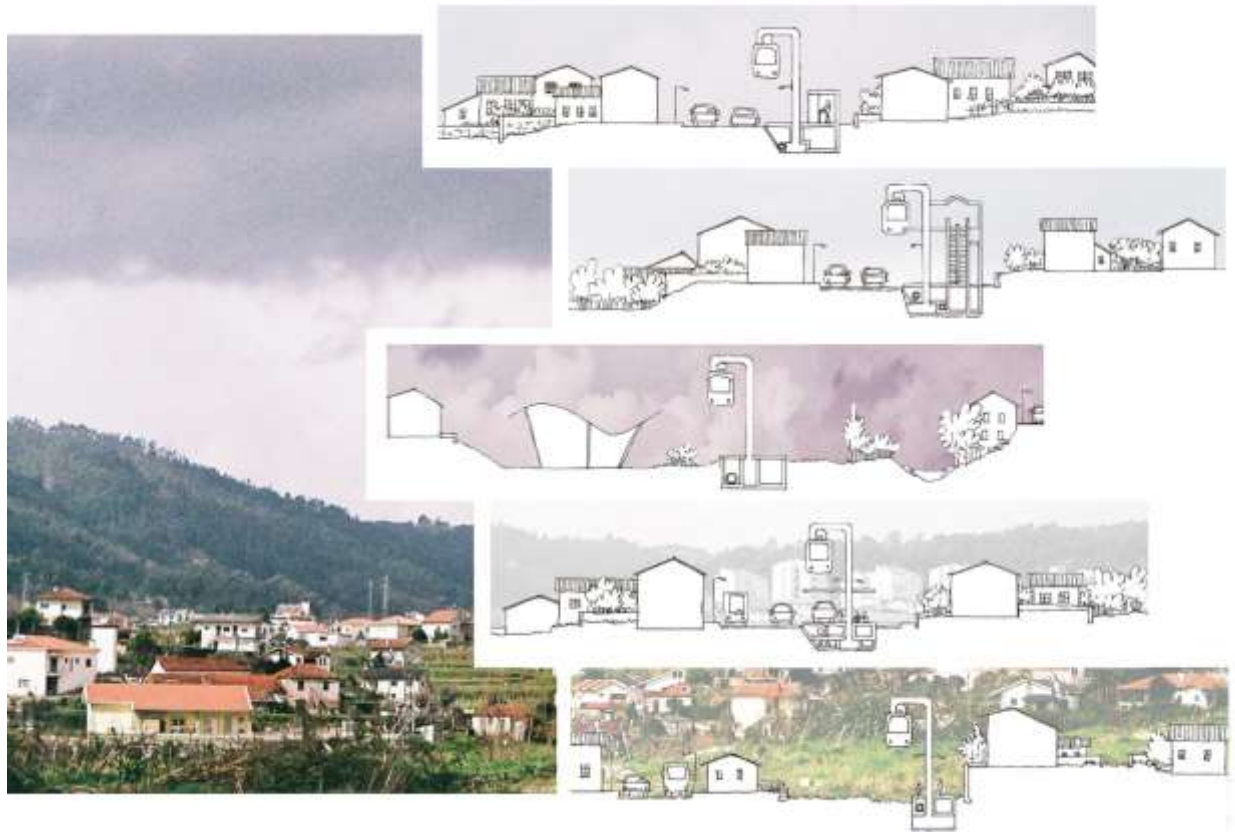


Fig. 5. Manifesto: the suspended monorail.
Photo, drawings and collage by Carolina Teixeira.

Nowadays, we can see this system implemented in China and Japan, serving, simultaneously the concentrated city and the rural areas, providing an efficient and low cost solution of mobility.

If we considered the possibility of using the monorail as a complement in the mobility system of national roads, its structure would have great potential to aggregate the other solutions we propose for these territories. The path of the pillars could organize an alternative sidewalk, crossing the fields and joining the road from time to time.

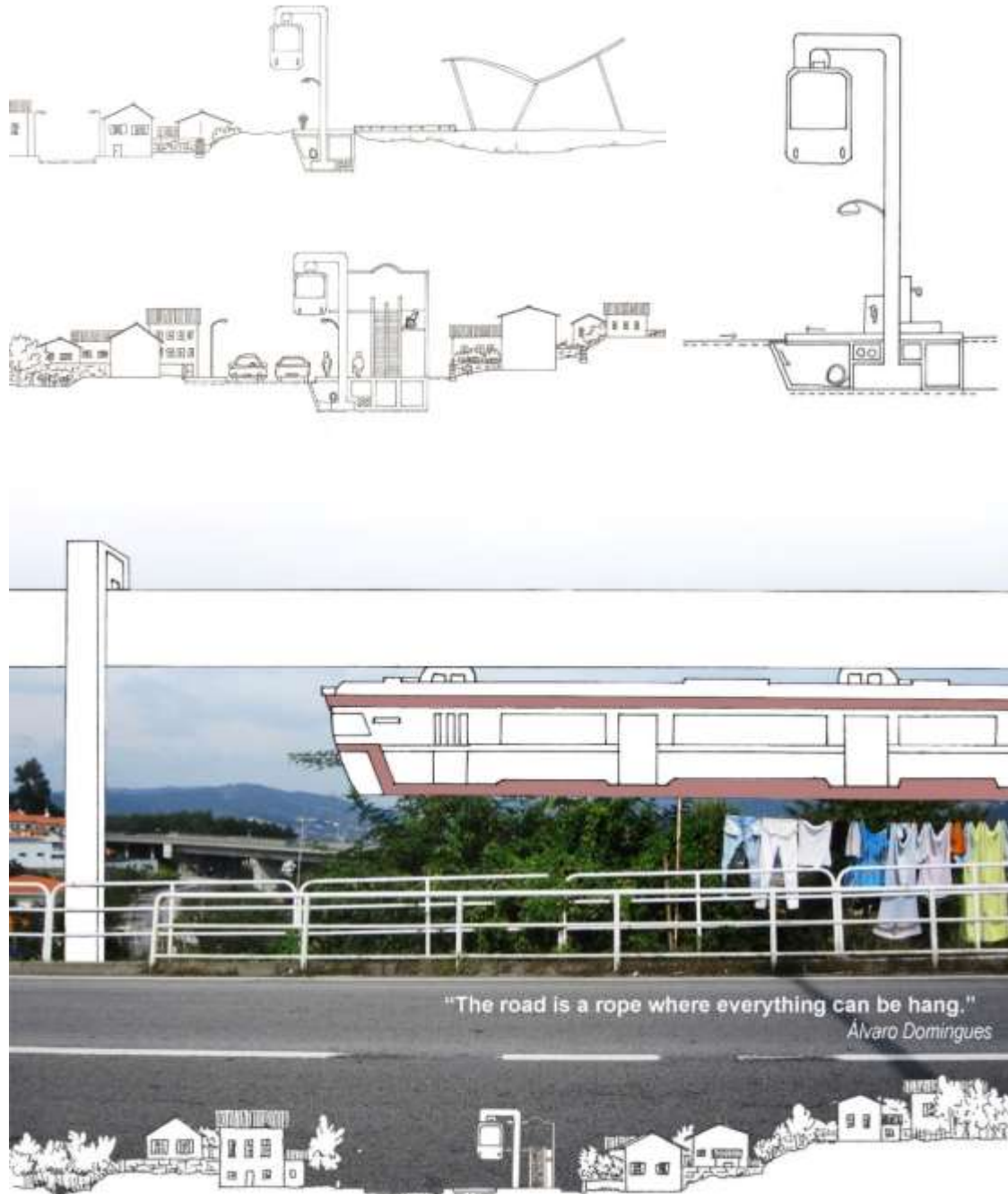


Fig. 6. Manifesto: the suspended monorail.
Photo, drawings and collage by Carolina Teixeira.

This path could be designed as a continuous infrastructure of electricity, gas, water underground, providing these territories with the essential tools to improve security and comfort.

Being utopian, this proposal is intended as a manifest: not only to reinforce the idea of the necessity of the transformation of these territories but also, mainly, to propose an image of unity to this emergent city. Because this image of unity, which today lies unseen underneath the complex organization of this territory, is necessary to its future, so it can be understood and managed as an urban space.

8. Conclusion

When we speak of urban regeneration, generally we talk about traditional cities, where the concept of urbanity can be easily applied. However, city and country, urban and rural, are no longer clear dichotomies, although these concepts still prevail in urbanism speeches and territorial policies.

Thus, regeneration plans should not limit its concerns to the cities in its traditional sense. The goal of this paper is to consider and reinforce the urbanity of the emergent cities which are being born along the national roads that expand the urban core of Guimarães: little improvements in the basic structure of these axes can help to bring the city to the people, instead of bringing the people to the city.

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