

Since the beginning of the third millennium, the rapid changes that contemporary societies are facing are radically transforming the perception and the structures of our cities. New topics seem to dictate the political agenda, suggesting alternative options to manage the emerging urban mutations.

An increasingly "data driven society" is forcing the migration into an almost immaterial world, prompting Information and Communication Technology together with the Smart City.

The crisis of the traditional real estate industry, propelled by the global finance system, is contributing to re-evaluate the theme of Public Space as a "space of encounter, sharing, experience and inclusivity", mapping the everyday life to discover unexpected Urbanities, through the application of innovative strategies and tools.

As an immediate consequence, new "forms" of cities are strongly brought to our attention: the "city of sharing", the "city of temporariness", the "city of Life between buildings", giving an unexpected impulse to incremental Urbanism of evolving cities.

In such a way, the very idea of the city is radically under discussion. We are then required to answer these numerous questions in order to define the scientific coordinates for the City of the 21st century.

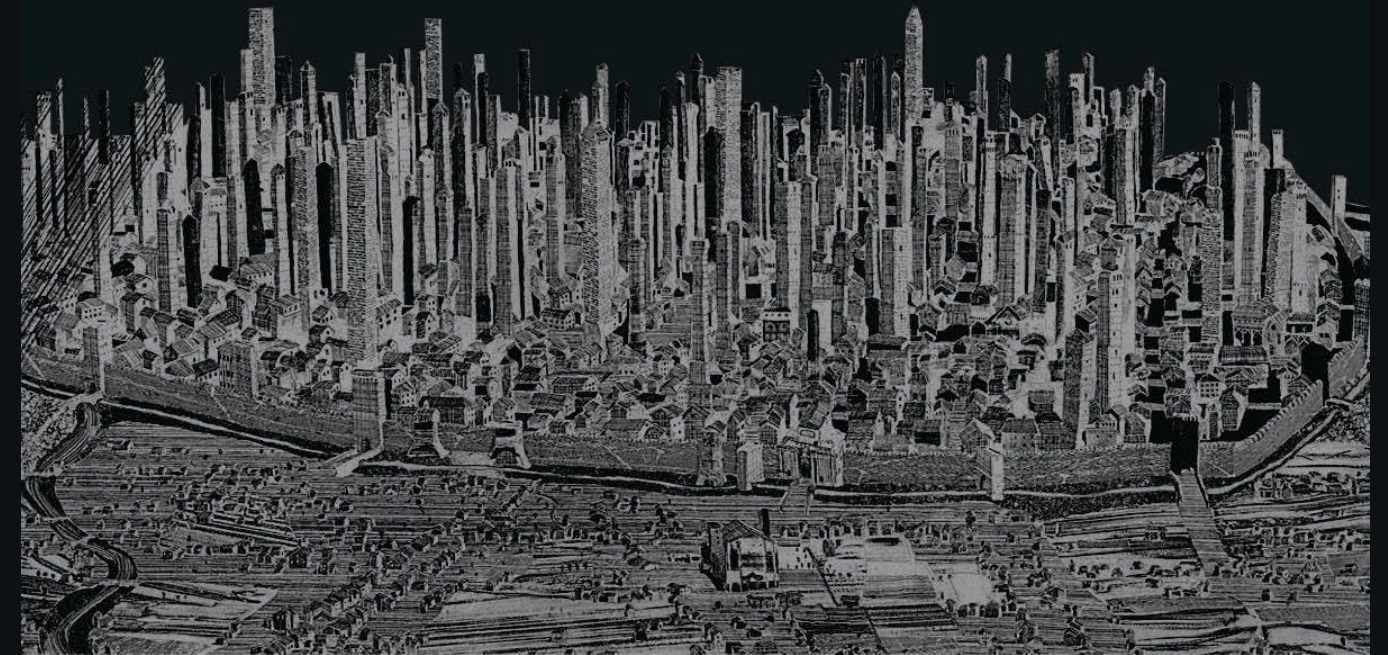
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Marco Maretto, Nicola Marzot, Annarita Ferrante



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MORPHOLOGY AND URBAN DESIGN
new strategies for a changing society

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MORPHOLOGY AND URBAN DESIGN

new strategies for a changing society

PROCEEDINGS

edited by

Marco Maretto, Nicola Marzot, Annarita Ferrante

with the collaboration of

Silvia Tagliazucchi, Francesco Scattino, Greta Pitanti

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The city of the dead: an in-vitro city. Rethinking Liège starting from cemeteries

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Abstract. *The contribution is rooted in the interdisciplinary research "Rethinking lastscapes Perspectives" carried out at the University of Naples 'Federico II'. Through different gazes, the current complexity of burial places is investigated searching for new forms and roles in the urban fabric. Out of the historical city centre, cemeteries are standing as cities surrounded by the contemporary urban fabric: the "city of the dead" is here proposed as an "in-vitro city". Multicultural societies are facing rapid changes while the progress in burial techniques and instances related to ecology and sustainability are arising. These are some of the reasons why the perception of the "city of the dead" is changing and their modern urban structures have to be rethought. Then, it is necessary to investigate the latter in relation to the "city of the living" considered in its urban fabric and its more recent urban elements. The recognition of new values in cemeteries is absolutely urgent for the preservation of these heritage but also for the urban quality of the surrounding neighbourhoods, generally marginalized and peripheral. Through the city of Liège, it will be shown why it could be possible to rethink the "city of the living" starting from cemeteries.*

Introduction

Nowadays cities are waiting to be redefined, waiting to find balances based on new relationships between humans and their environment. Therefore, the latter is considered as a landscape that is both lived in and shaped by communities. It is a landscape with which the inhabitants find intimate and deep connections. This landscape induces new practices by moving from the status of an object to be consumed to that of a subject to be considered and respected (Gemenne, F., Rankovic, A. and Atelier de cartographie de Sciences Po, 2019). It is fragile and ever-changing; it is acquiring attention and needs to be cared for (Besse, 2018). The landscape is regaining significance and on it a collective culture is being rebuilt today: it is now assumed as an inclusive landscape that becomes a societal project.

This change of dialectic implies a change of paradigm in the way of understanding, conceiving and managing the organisation of territories (Clergeau, 2020). The rise of modernist orthodoxy in urban planning since the 1950s has turned a blind eye to all other currents of thought, reducing the question of the spatial organisation of the city to a few rational principles of functional optimisation and infrastructure enhancement. The practice of zoning has sought to minimise all conflicts related to proximity between 'antagonistic' activities, but at the same time it has segregated parts of the territory by cancelling the links that guarantee the interrelationship of the materials that make up the city; in other words, the very condition of their existence.

On this basis, the contribution focuses on cemeteries by referring to the interdisciplinary research "Rethinking lastscapes Perspectives (R.I.P.)" carried out at the University of Naples "Federico II". The research aims at understanding and questioning the role of the "city of the dead" within the contemporary city (Vannelli, D'Agostino and Occhiuto, 2021). Those citadels represent a rejected heritage (Masullo, 2004) even though in the last century they have been encompassed by the contemporary city due to the dramatic urban sprawl dynamic. These phenomena, which have characterised more or less all the medium-sized and large cities of European countries (De Leo, 2006), are on the one hand the spatial consequences of the heterotopia concept theorised by Michel Foucault (Foucault, 1967) and, on the other hand, the premises to be assumed in order to reinvent the relationship with death from a social, cultural and, above all, urban point of view.

Taking into account several different values that can be outlined in them - besides the exclusively memorial one - cemeteries are considered emblematic places endowed with a strong potential in a perspective of spatial reorganisation of urban systems and redevelopment of the landscape. Thus, within this contribution, cemeteries are interpreted as cities and ecosystems: "in-vitro cities", morphological urban structures inhabited by both human and non-human beings and well representing the more complex "city of the living".

In order to understand the meaning of the cemetery intended as "an in-vitro city" and to verify on a real case study the potential roles of these heterotopias within the contemporary city, the contribution proposes a particular context of experimentation. As this contribution is part of the R.I.P. research but benefits from the collaboration of the Laboratoire Ville Territoire Paysage (LabVTP) at the University of Liège, the Liège metropolitan area - currently interested by the drafting of the Schéma de Développement Communal - is taken as a case study.

Methodology

The bibliographical research and the study of past and present approaches and solutions in Western Europe (Ragon, 1981) enable a broader perspective to be adopted by providing a theoretical basis for the evolution of practices, funerary symbolism and the cultural significance

of cemeteries, as well as for their design (Franciosini, 2022). In this way, it is possible to set up a wider reference framework of the experiences carried out. In this sense, the research R.I.P. consists of three main steps: firstly, a broad socio-cultural and technical investigation in order to define a new possible common ground (Felicori, 2005); secondly, an exploration of several cemeteries across Europe considered relevant to the topic (Franciosini, 2011); thirdly, an in-depth analysis of the main case study in which to develop strategies and guidelines (Coutts, Basmajian, Merriam and Salkin, 2013).

The topic of burial spaces is questioned in relation to the current profound social and cultural changes (Omenetto, 2020). The liquid society (Bauman, 2000) of the new millennium is more and more nomadic (Makimoto and Manner, 1997) and multicultural (Strappa, 2005), both these factors lead to a significant modification regarding rituals (Han, 2021). Such changes related to the intangible legacy of cults, practices and rites are manifestly having strong repercussions on the built heritage (Bialestowski, 2012). Indeed, it appears that in contemporary society there is no longer space and time for death (Heathcote, 1999) and, as a result, care practices for both memory and places erected to represent it become increasingly rare, until they disappear. The phenomenology of this shift is embodied, on the one hand, in the state of abandonment and degradation that characterises entire cities of the dead and, on the other, in an understanding of the cemetery as a repository that materialises in architectural and landscape projects - often lacking in quality - built for the mere purpose of storing more deceased people. Beyond these socio-cultural conditions, and its architectural implications, the new technical possibilities in terms of burial practices also have remarkable impacts on the built heritage and its management: i.e. practices and proposals such as resomation, eternal reefs, boschi vivi, capsula mundi, etc. (Vannelli). Thus, only a multidisciplinary approach to research on the topic can enable the development of design scenarios and guidelines in which burial techniques and spatial conception of the memorial sites evolve together, in this sense the work carried out within the DeathLab at Columbia University is exemplary (Rothstein and Staudt, 2021). Therefore, with respect to these social, cultural and technical conditions, the design of burial spaces cannot but evolve by exploring new horizons and modifying the theoretical boundaries in which it has been confined for so long.

In this direction, R.I.P. research, in addition to focusing specifically on the case study of the cemetery system of the Poggioreale hill in Naples, investigates international cases in which to seek out hints of innovation that challenge the notion of the monofunctional cemetery intended as a "heterotopia of deviation", namely an enclosed and excluded "other city" (Foucault, 1967). Based on these two morphological conditions - closure and exclusion - in the research framework, cemeteries are understood as 'in-vitro cities'. Taking into account that in-vitro means "outside or isolated from the living organism and in a test tube or other artificial environment" (Agnes and Guralnik, 2008), this expression refers to two characteristics. On the one hand, it refers to the specific condition of isolation of a 'microcosm' that is self-sufficient even though it is a representative part of the organism - in this case, the city of the living - from which it has been ejected (i.e., *mit à l'écart*, in French). On the other hand, the innate vocation for experimentation is meant to be brought forward, facilitated by the presence of a reduced number of elements, albeit representative of the urban system in its complexity. Furthermore, the progressive denial of both of the above-mentioned characteristics - being outside or isolated and the existence of a 'test tube' - is assumed as what puts these places in a fruitful condition for the project. In this sense, it seems useful to focus on two fundamental aspects: firstly, the in-vitro city of the cemetery has its own complete and autonomous morphological structure that can be studied in itself; secondly, the in-vitro city, despite being placed *à l'écart*,

always has at least a physical connection with the “living organism” of origin. The road that leads to the burial site, which originally guaranteed its expulsion, today generally becomes the spatial premise for a re-evaluation of the cultural and sacral link that, even if weakened, holds together the living organism (the city) and the test-tube (the heterotopia).

With these premises, investigation through historical maps is of utmost importance in order to trace those direct links that played a significant role in determining the positioning of these heterotopias and hence to understand the evolution of these relationships. In addition to roads, urban walls, extra-moenia monasteries or other possible direct links that can be traced, indirect links - or regulatory systems - must also be sought because they also have conditioned position, form or relations with other elements (i.e., the geographic structure of the territory, urban fabric and possible phases of expansion, rituals related to the practised cult, etc.). Therefore, the descriptive analysis of the morphological structure of the city, its natural regulatory elements, its constitutive reasons and logics, and its mechanisms and dynamics of transformations allow an understanding of cemeteries evolution within the history of the city formation.

Beyond this, the combined use of descriptive and interpretative diachronic methods of reading morphological structures and characters through history, the highlighting of sensorial and perceptive values through individual and collective field work, and the understanding of narratives and connotations through documentary research, investigation and dialogue, open up the possibility of filling the existing gap between past heritage and present needs. These multidimensional approaches allow us to gain a deep understanding of the territory and the landscape in their dynamics of transformation, in order to subsequently test them in terms of future opportunities. Moreover, with the aim of understanding the recognisable and recognised intangible values in the area under investigation, wherever possible, also the tool of the survey is integrated into the methodology. Thus, observation, description and perception through the senses reveal cemeteries' anthrop-spatial characteristics and qualities.

The methodology developed in this research also relates to uses. Beyond the function as a place for burial and commemoration, there are various uses detectable in and around the cemetery enclosure. From this reading derives a complex system of uses that hybridises sacred and non-sacred functions, activities related to funeral rites and others. This must be investigated in order to be able to select parts more available to be transformed - for instance, underused areas, both inside and outside the cemetery - or to identify possible “sparks” that can become pretexts for the project, triggers for transformation.

Therefore, with the aim of observing and describing the territory prioritising the availability for transformation, the study is conducted by first of all distinguishing within the cemetery the areas for each type of burial, since different spatial conditions and possibilities of use correspond to them. In addition to the uses described so far, there are two fundamental characteristics to be described and mapped that relate indirectly to the category of uses: the type of vegetation and the degrees of abandonment. Both parameters are interesting when investigated both in and around the cemetery as they frequently constitute the most available areas for the modification and reinterpretation of the cities of the dead. Plant heritage and abandoned architectural heritage are often the ones of which wider communities are able to recognise a latent and unexpressed value that requires design intervention as a trigger for a more open vision of these heterotopias.

In conclusion, a review of the main strategic plans and urban projects highlights the quite pervasive lack of consideration for these fragments of the urban *craquelé* (D'Agostino and Vannelli, 2018) within territorial strategies and therefore also of studies on their potential for urban re-composition. In this sense, the last two steps of the methodology are the most project-

oriented. On the one hand, the cemetery is analysed in the context of visions and strategic planning that are being drafted or adopted. On the other, the construction of new imaginaries is encouraged through site visits aimed at the construction of new auto-geographies. Inducing communities to observe places through different lenses and making them adopt a project-oriented attitude can determine a cultural evolution that may lead to the hypothesis of new shared scenarios.

The general methodology outlined so far is to be understood as a frame of reference that, in relation to each case, delves more deeply into or skips certain phases due to specific interests or unavailability. On this basis, a critical analysis is carried out by testing the city of Liège in order to highlight the potentials that cemeteries hold both as a place that takes distance from the city and as part of it. The purpose of this project is to open them up to new imaginations, to new ways of seeing these places, which until now have been considered as closed places.

The case study of Liège is approached prioritising morphological investigation (Gerber, Iseli, Kurath and Primas, 2021) as it is considered to be an emblematic case demonstrating the urban condition of the cemetery as outpost. This notion is proposed in relation to the multiple phases of the urban evolution of European historical cities in which the initial externality of these sites is denied by the urban sprawl phenomenon that has characterised urban areas over the last two centuries. The dichotomy city of the living and city of the dead is investigated in this logic and in order to understand the possible roles of these heterotopias in the contemporary world, starting from the detectable gap between the will of exclusion and the permanence of morphologically structuring connections. Thus, the Belgian case study clearly demonstrates the shift from “the cemetery as an outpost” to “the cemetery as a background” (un arrière, in French).

Measurement and analysis

A combination of four factors have conditioned the establishment or resettlement of cemeteries in the urban area of Liège, have determined their role in shaping the urban form and have characterised the type of relationship they have within it, namely the promulgation of the first republican decree on cemeteries and the subsequent laws, the increase in urban sprawl correlated with the topographical specificities of the Meuse valley, the consideration of cemeteries as places to be distanced from the city centre and to be enclosed and finally, the specificities of the Belgian administrative division.

In accordance with the law-decree of 23 Prairial Year XII promulgated in 1804 by Napoleon Bonaparte, burials can no longer be organised around religious sites, within these sites or within hospitals (Iszatt, 2018). From then on, burials had to be performed exclusively in specifically dedicated spaces located at a minimum distance (35 metres) from the city walls. Cemeteries, organised in individual graves and respecting precisely fixed dimensions and distances, will be enclosed by walls at least two metres high and preferably placed on the highest ground facing north; from now on, “one goes up to the cemetery”. As a result, cemeteries were among the first acts of peri-urbanisation blocking off some lands at the beginning of the first urban extensions outside the city. The application of these measures radically altered the relationship between the city and the cemetery, which became a space set apart from urban life: a relegated space. Existing cemeteries that do not comply with the law will be closed and kept in good condition for five years before being leased by the municipality for the only purpose of seeding or planting. These were the first planned public actions for the (organic) regeneration of cemeteries. Then, in 1932, cremation was accepted in Belgium, and burial practices changed. These new ways of dealing with mortal remains diversified the landscape of

cemeteries and widened the range of their facilities.

The extraordinary urban growth experienced in the 19th and early 20th centuries confronted the municipalities of the Liège industrial basin with a scarcity of land suitable for construction. With its narrow and tortuous configuration, the valley results in a restricted flatland, also occupied by multiple branches of the river and its main tributary. The valley absorbs their fluctuations until they are brought together and channelled through major interventions from the 1850s onwards. The city had no choice but to move upwards. Cemeteries, in search of large, flat land with possibilities for expansion, were often the first to be displaced. They were pushed directly up onto the uplands, or with a first stage on the intermediate levels, creating an increasingly large gap with the historical settlements. This separation was accentuated by crossing the slopes. These cemeteries, the first to be established, are ideally located on the slopes overlooking the town, with their monumental entrance facing the path rising from the valley via the talwegs. These less steep paths will also quickly become the main directions of the urban expansion, also regulated by the constraining topographical conditions. Consequently, cemeteries are at the same time distant from the historic living centres, but linked to them by initially fragile umbilical cords which gradually became major elements of the urban structure. Cemeteries are gradually being surrounded by the increasing urbanisation. Although strategically located in the geographical centre of new neighbourhoods, they are actually placed in a situation of physical rupture with them.

The territorial layout and the diversity of Liège's cemeteries is also the result of the administrative regrouping under a single body of ten municipalities that were managed autonomously until the Belgian law on the merging of municipalities in 1977. In this framework, each local authority sought to meet its specific needs in its own territory. Thus, the former municipal area of Liège - accounting for more than half of the population grouped together over the course of time (136.000 inhabitants out of a total of 230.000, whereas the average of the others is close to 10.000 inhabitants, with 22.000 for the largest) - acquired two large cemeteries. The first one is on the edge of the plateau on the right bank and covers 40 hectares (Robermont cemetery) while the second one covers 20 hectares on the edge of the plateau on the left bank (Sainte-Walburge cemetery).

The oldest, Robermont Cemetery, was founded by municipal decision in 1797 (two years after the 1795 annexation to France and in anticipation of the imperial decree), taking advantage of the large walls surrounding a former abbey to prevent the proliferation of disease. Originally divided by hedges into three parts reserved for the three religions: Catholic, Protestant and Jewish, the cemetery was extended and developed many times. Despite the removal of the dividing hedges in 1874 and the abandonment of the geographical distinction of burials, the cemetery is still characterised by these differentiated areas, notably because of the specific orientation of all the tombs still present. The "Père-Lachaise" of Liège (Mezen, 2000), which is presented as an immense park, retains the traces of the different settlements and layouts influenced by the particular designs of their time and will perpetually house the most famous citizens.

The Sainte-Walburge cemetery was created in 1874, in particular to compensate for the lack of space due to the former cemeteries at the bottom of the valley were closed. It echoes its predecessor on the other side of the valley and gives a final resting place to other more contemporary personalities from Liège. It is designed as a large urban park, originally on a radial layout and in a second phase following wide, smooth curves supported by a large central avenue. This basic hybrid structure was completed as the extensions were made by adjoining satellite parts.

These two major cemeteries, made by addition, have become more complex over time, to the point where they have lost their legibility.

The cemeteries of the peripheral villages, which are much smaller in size, respond quite strictly to quantitative needs and aim above all to rationalise the land to the point of eliminating all forms of vegetation. Only the entrance building and a few funerary monuments of the most distinguished families emerge and break the general monotony in some places. Rows of poplars, cypresses or black locust trees – all species with a minimum width – replace the high walls, when they are not reduced to simple metal trellises which at least have the advantage of guaranteeing the visual permeability of these community places.

The peripheral municipalities on the right bank all experienced the same mode of expansion as Liège, rooting themselves in their historic core on the banks of the river and then moving upwards through the lateral valleys. The convex orographic feature of this promontory, which is located at the confluence of the Meuse and Ourthe rivers, leads to the natural convergence of these entities at the top of this foothill of the Herve massif, with their cemeteries as outposts, which are therefore concentrated in a geographically limited area.

Within a logic of overturning their landlocked state, these cemeteries on the right bank, including the largest one in Robermont, have been thought of as a network and are now an opportunity to restore coherence to the conurbation generated by this uncontrolled process. A series of other places characterised by the presence of the relief or resulting from the diffuse mode of development become as many complementary opportunities to strengthen this structuring chain of spaces (the former military fort of the Chartreuse, abandoned buildings, steep wooded hillsides, valley sides, byways, residual, enclosed or under-exploited land, ...). The neighbourhoods of the heights, which all belong to the same plateau, are then reassembled in their new communal entity, while maintaining a strong link with the communities that hosted their ancestors there. The activities associated with the cemeteries (within or outside the walls) also find new dynamics in this scenario, working in synergy with the other functions that animate this part of the city.

The same phenomenon can be observed on the left bank in certain sectors such as the Cointe promontory where the municipalities of Ougrée-Sclessin, Saint-Nicolas and Liège join, or in other towns or large municipalities that make up the Liège conurbation or where Liège meets them.

More generally, the pathways within the cemeteries are organised to serve the whole allocated land area, often by setting out a hierarchy of different paths. Some also have several entrances. These complex networks of paths, positioned in strategic geographical locations, thus offer the possibility of reconnecting the parts of the neighbourhoods that have bypassed them. However, it is necessary to open them up and thus reinstall them at the very heart of urban life, a concept that has been historically anchored in various cultures or accepted more recently by others. Intervening with certain specific architectural projects and reimagining a design for public space by integrating both the specific expectations and needs of the cemetery and giving it a more unitary organisation is certainly a promising path.

Conclusion

Although, several re-naturalisations, differentiated management and landscape redesign operations have been already carried out in Liège's cemeteries, what remains is to bring these experiments – which have until now been carried out "in-vitro" – to the scale of the city. A first step could be giving to cemeteries a different status, i.e., of a public park equipped with many new and highly evocative places, and a place for social exchange with a strong memorial

and sacred charge. An integrated place where the worlds of the living and the dead meet and balance with nature. The cemetery thus becomes a real agent of urban and landscape re-composition for the long term.

Therefore, looking at the city of the dead as an in-vitro city allows one to recognise it as part of the city and as a field of experimentation that subsequently needs to be reintroduced into "the organism" to which it belongs, the city of the living. In the case of Liège, it becomes emblematic, moreover, how, if the phenomenon of urban sprawl is put in relation to the shift from "the cemetery as an outpost" to "the cemetery as a background", the relations between the city of the living and the city of the dead find an opportunity for profound rethinking. "The cemetery as a background" represents a key infrastructure for the contemporary city seeking directions for expansion. In this sense, the drafting of the Schéma de Développement Communal, operating at different scales, might go further toward the objective of regaining the relationship between valley and heights. In doing so, it is also important to enhance the project-oriented attitude of communities that, recognizing new values in cemeteries, can transform the current cultural evolution into the capacity of defining new future and shared scenarios.

Thus, it is considered that in order to design a sustainable urban form in Liège, within the framework of the Schéma de Développement Communal or other future planning and design means, the role of cemeteries cannot be neglected, even more so when put in relation to the many nearby spaces available to be transformed as underused areas and infrastructures. This system of multiple obsolescence should be both the premise and the pretext for a sustainable project and it is possible starting from cemeteries.

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Illustrations and tables

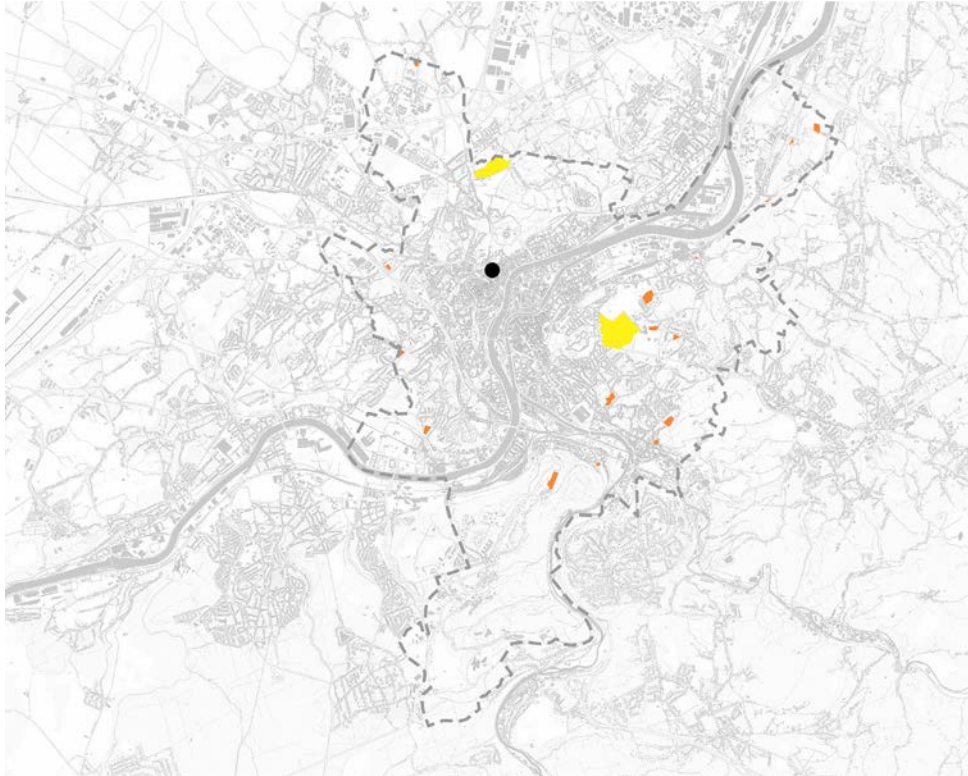


Figure 1. Liège: the city centre (black dot), Robermont Cemetery (in yellow, on the right bank), Sainte-Walburge Cemetery (in yellow, on the left bank), the cemeteries of the peripheral villages (in orange). Courtesy of Giuseppe Palmieri and Gennaro Vitolo.



Figure 2. The cimetière paysager within Robermont Cemetery.

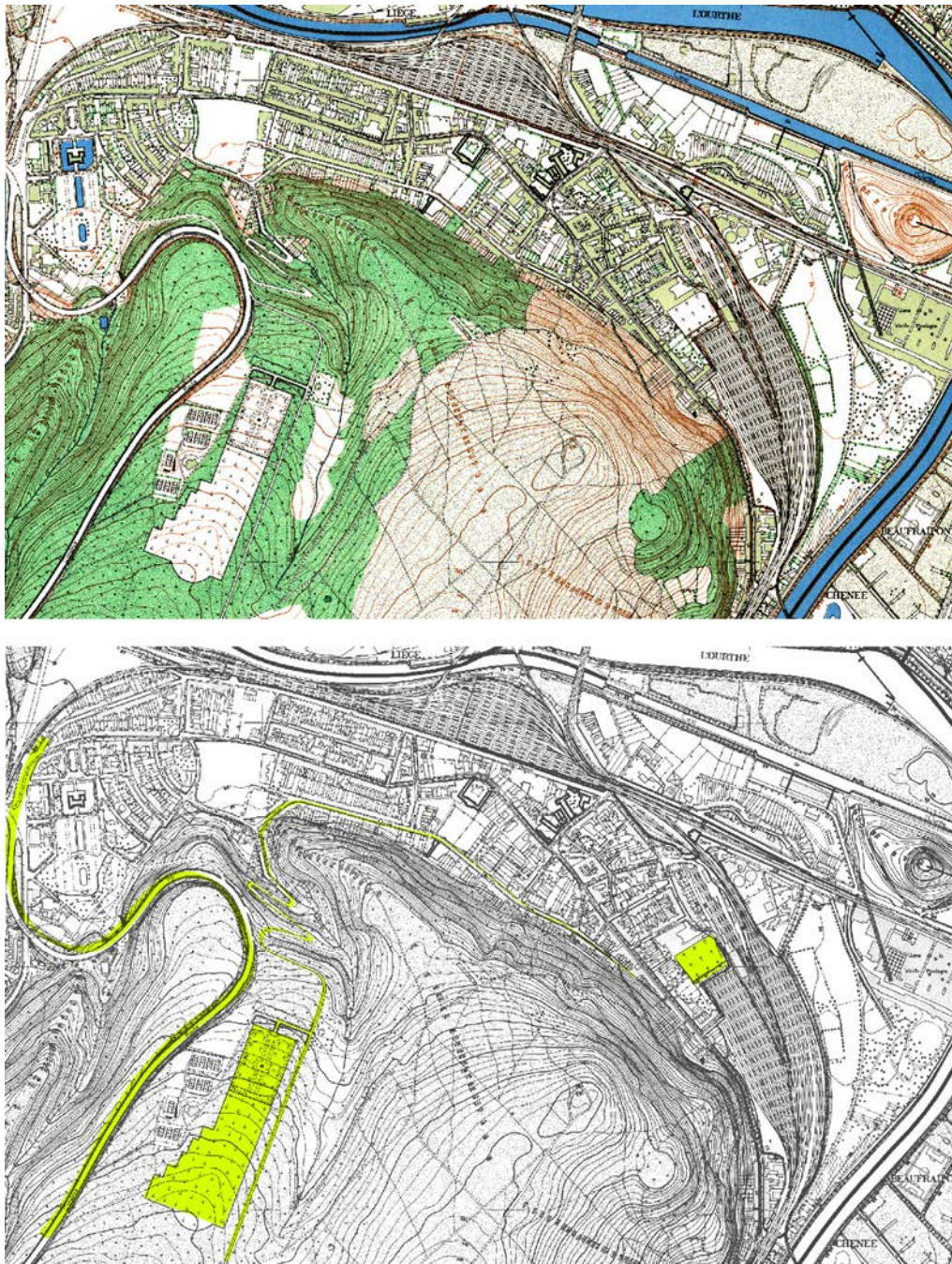


Figure 3. Angleur. On the “Plans du Ministère des Travaux publics” (Liège - 1953) are highlighted the historic cemetery close to the church (on the right), the narrow historical street that used to give access to the new cemetery (in the middle) and the most recent street (on the left) giving access to the cemetery. Nowadays, the cemetery’s main entrance is perceived as it is set “on the back” due to the relation with the original path

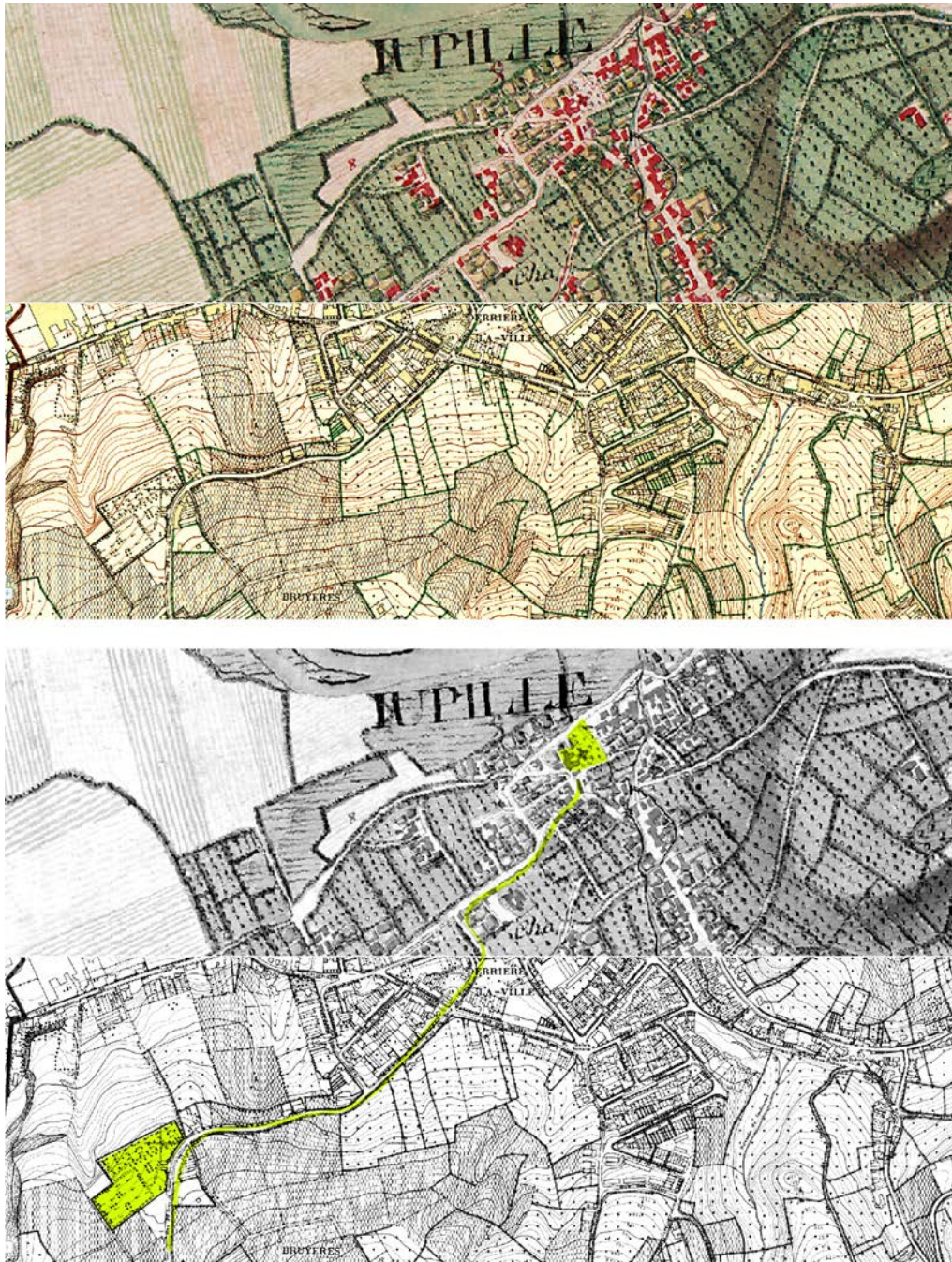


Figure 4. Jupille. Through the juxtaposition of the “Cartes de Ferraris”, Liège - 1777 (on the top) and the “Plans du Ministère des Travaux publics”, Liège - 1953 (on the bottom) it is possible to highlight the historical cemetery close to the church (on the top) and the street leading to the new cemetery (on the bottom).

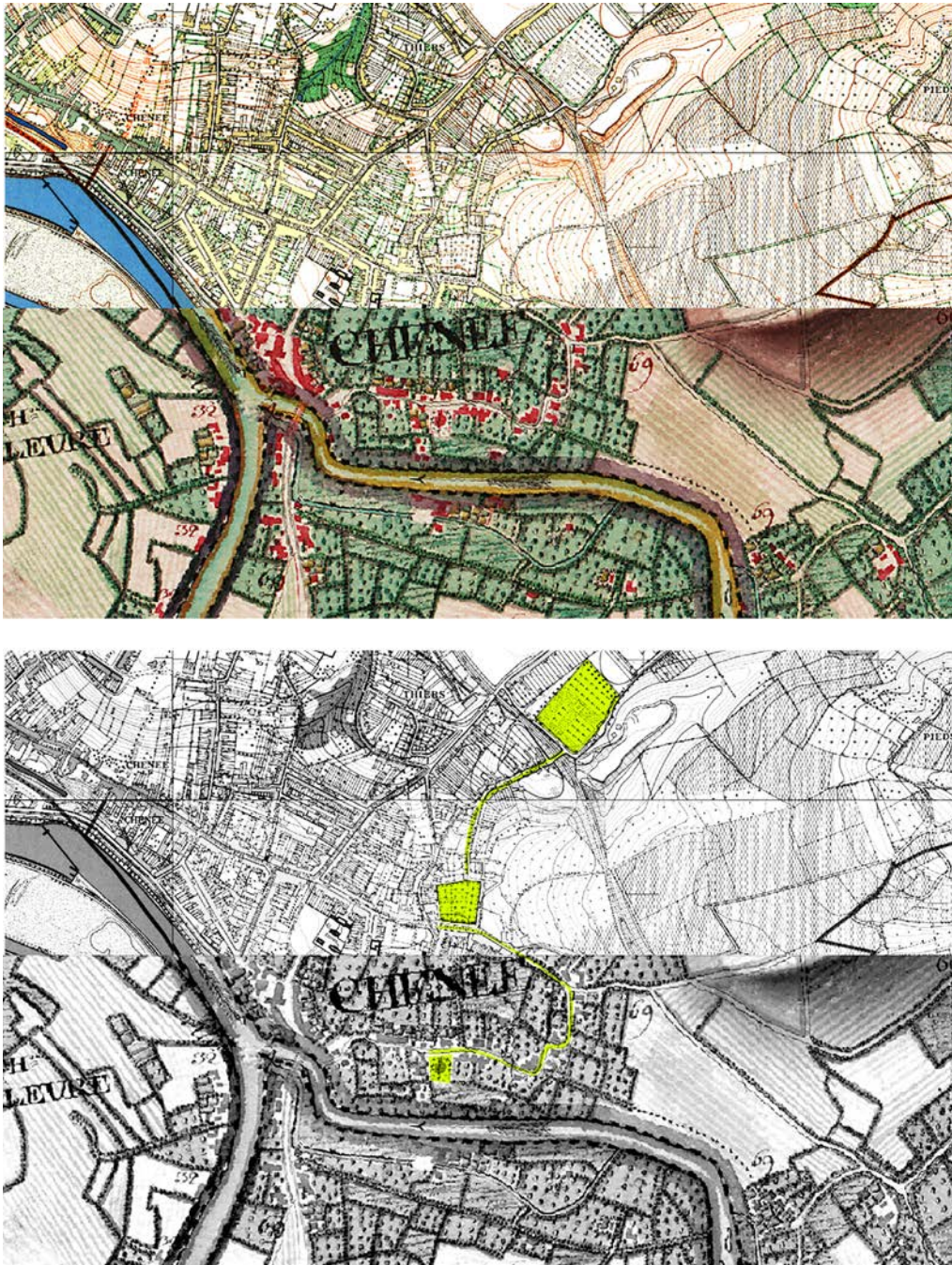


Figure 5. Chenée. Through the juxtaposition of the “Plans du Ministère des Travaux publics”, Liège - 1953 (on the top) and the “Cartes de Ferraris”, Liège - 1777 (on the bottom) it is possible to highlight a three-steps migration of the cemetery: from the most ancient cemetery of Chenée (the smallest one) to the most recent one currently used (the biggest one).

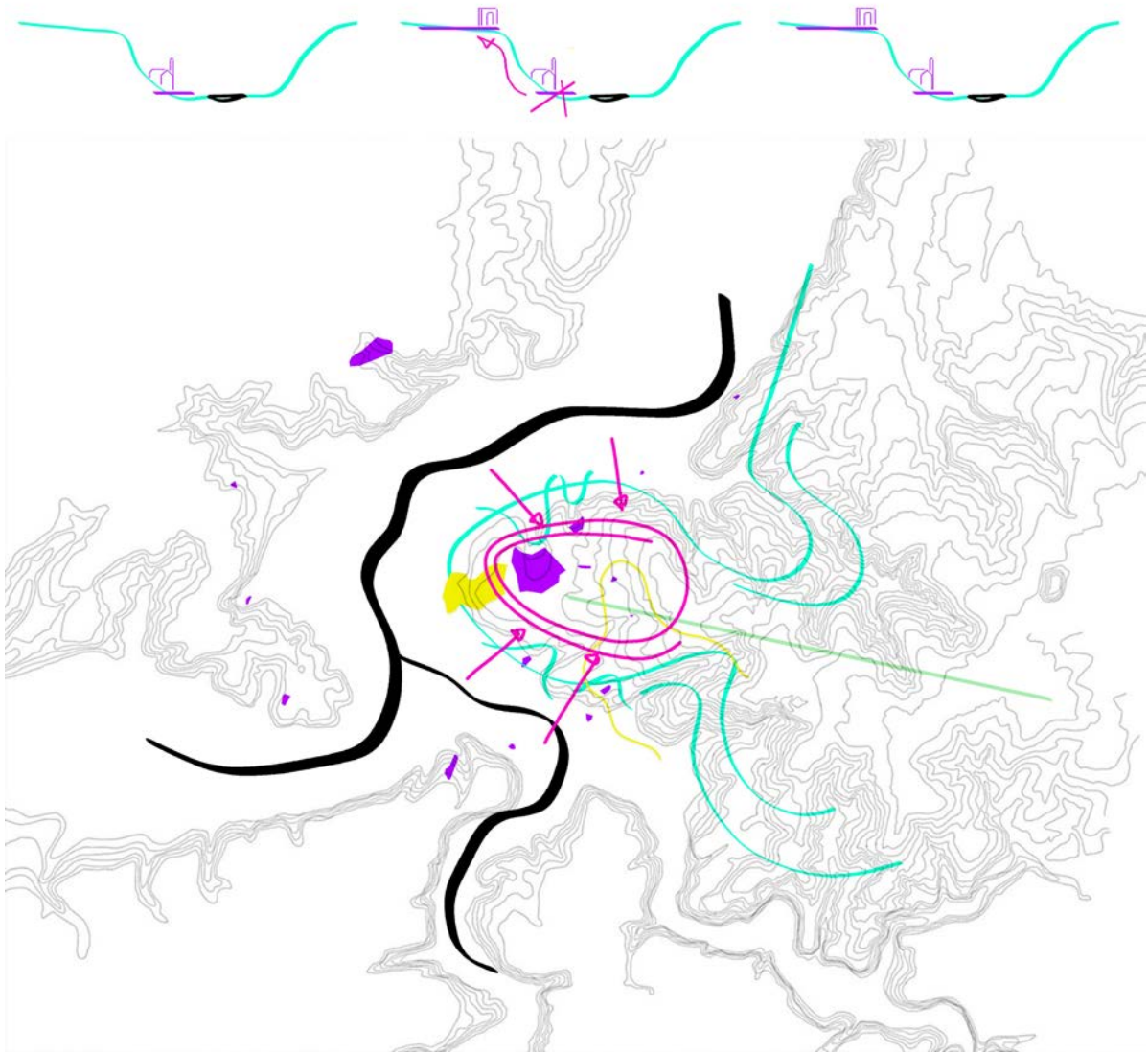


Figure 6. Three schematic sections show the cemetery migration from the valley to the plateau (on the top). The right bank: rethinking Liège starting from cemeteries. The cemeteries (in purple) and the main abandon architectures and infrastructures (in yellow, la Chartreuse and an abandoned railway track) can be the structuring elements to rethink the urban growth on the plateau (on the bottom).