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Inner Areas Regeneration and the Circular Economy Model



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Università degli Studi di Napoli Federico II

Via Toledo, 402
80 134 Napoli
tel. + 39 081 2538659
fax + 39 081 2538649
e-mail info.bdc@unina.it
www.bdc.unina.it

Direttore Responsabile: Luigi Fusco Girard
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A paradigmatic shift from heterotopia to hypertopia. New values to reinterpret burial space design and the relationship between cemeteries and cities

Un cambio paradigmatico da eterotopia a ipertopia. Nuovi valori per reinterpretare il progetto degli spazi della sepoltura e la relazione tra cimiteri e città

Angela D'Agostino^a, Giuliano Poli^a, Giovangiuseppe Vannelli^{a*}

AUTHORS & ARTICLE INFO

^a Department of Architecture,
University of Naples Federico II,
Italy

* Corresponding author
email:
giovangiuseppe.vannelli@unina.it

ABSTRACT AND KEYWORDS

A paradigmatic shift from heterotopia to hypertopia

The contribution is part of the research project 'Rethinking *lastscapes* Perspectives' and proposes a paradigmatic shift in interpreting and designing burial grounds. In order to recognise new values in this huge material and immaterial heritage and to make the transition from heterotopia to hypertopia, the contribution reflects on the possibilities of design using the Landscape Services tool and defining a system of indicators useful for recognising a multidimensionality of the cemetery landscape. Only through a broader interpretation of the city of the dead we can rethink its relationship with the city of the living. Three case studies are investigated in order to render the complexity of the theme and some possibilities for the architectural, urban and landscape design.

Keywords: heritage, urban and architectural design, multifunctional landscape, landscape services, interdisciplinarity

Un cambio paradigmatico da eterotopia a ipertopia

Il contributo si iscrive nell'ambito della ricerca "Rethinking *lastscapes* Perspectives" e propone un cambio di paradigma nell'interpretazione e nella progettazione dello spazio cimiteriale. Allo scopo di riconoscere nuovi valori in questo ingente patrimonio materiale e immateriale e per compiere il passaggio da eterotopia a ipertopia, il contributo ragiona sulle possibilità del progetto avvalendosi anche dello strumento dei Landscape Services e definendo un sistema di indicatori utile a riconoscere una multidimensionalità del paesaggio cimiteriale. Solo mediante un'interpretazione più ampia della città dei morti si può ripensare la relazione che essa intesse con la città dei vivi. Tre casi studio sono indagati al fine di restituire la complessità del tema e alcune possibilità per il progetto.

Parole chiave: patrimonio, progettazione architettonica e urbana, paesaggi multifunzionali, landscape services, interdisciplinarietà

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1. Introduction

The growing and varying demand for burial spaces that characterises cities with an ever-increasing population, new burial techniques and the urgency to minimise land consumption because of the paradigms of sustainability and ecology, the different demands of social groups that identify with different cults, the complexity of managing and preserving the varied heritage, the critical relationship between the heterotopic ‘city of the dead’ and the urban fabric of the ‘city of the living’ are all issues that urgently need to be addressed and placed at the centre of the debate on the city and of interdisciplinary research aimed at reintegrating burial sites into the everyday urban dynamics of the contemporary city.

During the last century, a reductionist, merely functionalist and single-sector approach characterised the design of burial spaces. Except for a few interesting and celebrated experiences, the opportunity represented by the design of the cemetery space has been largely missed, though this theme shows how design can become a means of cultural and social innovation, a device for verifying approaches and theories that in heterotopia seem to be able to bring utopia and reality closer together. Therefore, the Rethinking *lastscapes* Perspectives research project (R/P) addresses the need to innovate the interpretation and design of burial spaces in order not to lose the opportunity that these places represent for cities and communities that inhabit them. The complexity of the theme requires an intersection of multiple perspectives and approaches and the identification of institutional stakeholders who can contribute with the concreteness of reality to conceive together, within the wider global transitions, new scenarios for these fragments of the city (D’Agostino, 2022). These places, now saturated with the dead and less and less frequented by the living, mostly hold individual and collective memory and can provide opportunities for the urban contexts in which they are today located on the sole condition that their re-actualised values are acknowledged. In this direction, the research to whom this contribution is referring proposes a new theory for new projects, aiming therefore to rethink in depth the project demands themselves. Hypertopia (Vannelli, 2019) is proposed here as an ontological alternative to heterotopia (Foucault & Miskowiec, 1986) and it is both a theoretical tool and a system of devices and design strategies that are aimed at highlighting the values of which these places can be bearers.

Thus, the interdisciplinary methodological approach assumed within the research project – which also refers to the Evolutionary Evaluation paradigm (Urban et al., 2014) – seeks to integrate different disciplines to generate a shift in the cemetery design. Indeed, part of the research activity primarily concerns the ways in which the disciplines of architectural and urban design, evaluation, history, law and anthropology can cooperate, bringing innovative contributions to the definition of new design strategies for burial grounds.

In this wider framework related to the R/P research project, this contribution is mainly focused on the cooperation between two disciplines: design and evaluation. In this context three main research questions are pointed out.

RQ1. How to identify new values, meanings, and potentialities for the design of cemeteries?

RQ2. Which type of approaches are useful to design and evaluate alternative solutions for cemeteries?

RQ3. Which type of criteria should be used to assess the capacity of cemeteries to provide landscape services? Which design strategies can strengthen the provision of landscape services?

In the light of these premises, the article, after outlining a critical literature review concerning the idea of the cemetery as both material and cultural heritage considered

in its double consistency of architecture and landscape, proposes hypertopia as a new theoretical framework within which the research questions can be defined. In the following paragraphs, the methodological framework is firstly outlined and then, in order to recognize and discuss new values in cemeteries, the contribution presents three case studies taken into account to define the breadth of the field of investigation considered necessary for understanding and updating the theme. The three cases are investigated, also using the theory of Multifunctional Landscapes and Landscape Services (LS), in order to define characteristics and values of a possible contemporary burial space design, to be understood as hypertopia. “La Certosa di Bologna” is an exemplary case of recycling a historical monumental heritage reused as a burial space through a typological reinterpretation. The Belgian case of “Les fours à chaux” in Tournai, on the other hand, represents a further declination of the theme, where an abandoned heritage is redefined and resemantised by carrying out a spatial rather than typological reinterpretation, even recognising new values in the natural action of time. Due to the high quality of the project, ‘De Nieuwe Ooster’ in Amsterdam emblematically exemplifies a burial ground that becomes a public, welcoming and inclusive memorial park.

Thus, this contribution does not intend to compare the three selected case studies, but to outline an evaluation model based on design to be used for the monitoring and evaluation of other built or proposed projects in the light of the three outlined paradigms deemed crucial for the conception of a hypertopic burial space: recycle, coexistence, inclusiveness. More generally, the final aim of this contribution is to outline research perspectives to assess possible ways of rethinking and innovating cemeteries, identifying a possible interdisciplinary methodology that uses Evolutionary Evaluation as a theoretical and practical tool together with those of architectural and urban design with the aim of promoting new methods of investigation and approaches for the design of these places.

2. Literature review and research questions

2.1 Cemeteries as material and cultural heritage: architecture and landscape

The design theme of spaces dedicated to death – the dark resting place (Foucault & Miskowiec, 1986) – is intimately connected to that of inhabiting – which comes from the frequentative of *hābēre*, to have (Agamben, 2018) – where the grave could be understood as human’s last “habit”. For this reason, what the German philosopher Sloterdijk wrote can be taken not only as part of a state of the art concerning inhabiting the city of the living, but also inhabiting the city of the dead: «only after the advent of modern traffic conditions – traffic as an explication of mobility or telemobility – did real architectural, transport and existential alternatives to the post-Neolithic habitus of dwelling come about, alternatives that were finally able to illuminate the eternal half-darkness of sedentarism. Now the skepticism towards everything that adheres to the ground can be positivized; the term ‘uprooting’ takes on a bright sound and can be uttered like a demand» (Sloterdijk, 2016). With these premises, commemorative spaces need to be radically rethought in order not to be left behind in a history that is rapidly evolving in unprecedented and perhaps partly unconscious directions. Thus, if the condition of uprooting becomes paradigmatic of contemporary living, then the ancestral image of the necropolis traceable back to the archetype of the tumulus (Loos, 1992) is radically challenged.

Therefore, changes in the society of the living entail serious effects in the city of the

dead, hence the need to work on this dichotomous and oppositional relationship – between the city of the living and the city of the dead – without necessarily denying it, but certainly in order to negotiate its margins. So, the rootedness of communities to a given territory is increasingly challenged in a society that finds its possible future projections in new forms of nomadism (D’Andrea, 2006; Richards, 2015) and that is becoming ever more profoundly multicultural and therefore multi-religious but also atheist (Omenetto, 2020). This leads to a detachment and a lack of care for those places that preserve the private and collective memory of a society although, within a spatio-temporal extension of the ritual of ‘visiting loved ones’, cemeteries sometimes become the pretext for returning. This is the case when the relationship between the deceased and the commemorative space remains unchanged, i.e. when the cemetery is confirmed as the place of eternal rest. However, new burial techniques sometimes almost overturn this relationship: for instance, this is increasingly the case with the preservation of ashes, a practice that almost completely denies established and inherited rituals.

Together with ecological issues and those relating to the digitisation of material and immaterial heritage, these are the reasons why it is deemed necessary to carry out research that recognises values in these spaces of the contemporary city and acts as a tool for advancing current regulations. In reference to this, the regulatory apparatus inherited in Italy can still be traced back to when Napoleon, with the Edict of Saint Cloud, established in 1804 that the cemetery should be removed from the city. The regulatory apparatus – which at the same time both establishes and embodies the approach to the subject – is clearly obsolete, since in the last two centuries cities have changed dramatically, as have the technical possibilities relating to the practice of burial. Nevertheless, in addition to the inadequate Italian regulatory apparatus, weakening the possibilities of design innovation (Mari, 2022), today a far more dangerous distance than the physical one sanctioned by Napoleon can be detected: a social distance nowadays endangers the existence and preservation of burial sites as their value as a monument (from *mōnēre*, i.e. monument or warning) seems to be disappearing.

The presented research – referred to as Rethinking *lastscapes* Perspectives (R/P) – investigates cemeteries in terms of conspicuous material heritage composed of artefacts of more or less significant artistic value and of more or less considerable size (from large multi-storey buildings or magniloquent monuments to gravestones or even smaller cinerary urns). At the same time, however, it is a broader cultural heritage understood as a heterogeneous system that holds together the ‘major’ stories of so-called illustrious men and at the same time the innumerable ‘minor’ stories, the everyday ones, that make up our current society (Revel, 1998). In addition to this, there is another form of inherited immaterial legacy that is more appropriately linked to architectural and spatial characters and relates to the approach that the forms of the project themselves induce towards death. Therefore, a system of images and imaginaries is inherited, namely the actual understanding of cemetery space and consequently – by a form of metonymy representing the semantic power of architecture itself – of death. For this reason, a re-signification of the inherited artefacts and a re-semantization of the design for cemetery spaces can only start from the identification of new values and meanings, from the recognition of unexpressed potentials in these other cities (Foucault & Miskowiec, 1986) that have a significant and singular character of immanence and ubiquity.

Nowadays, conducting research on cemetery space requires challenging inherited paradigms and dictates by questioning the very sense of the design for the city of the dead. In this direction, on the one hand Loos wrote that the cemetery is a matter of

art (Loos, 1992), on the other hand, the design of graveyards in the second half of the 20th century has increasingly opened up to an intermediate scale that combines architectural and landscape design (Franciosini et al., 2022). The timeless relationship with the ground is certainly one of the reasons for this phenomenon, as well as the position of modern cemeteries generally placed on natural reliefs – where possible – and in urban areas (Galpin, 1915) designed progressively according to a diachronic process of enclosures settling (D’Agostino & Vannelli, 2018). Thus, the architecture of the burial space, especially in northern European contexts, stretches out to become *lastscape* (De Leo, 2006) a design strategy understood as midway between the construction of a city and a system of architectures of variable dimensions and sometimes so small as to question their very belonging to the domain of architecture by becoming ascribable to the one of art (Ragon, 2012).

Robert Auzelle was one of the few architects to have methodically explored the issue of burial space during the 20th century (Auzelle, 1965). He was certainly the one who brought forward this relationship between art, architecture, and landscape in reference to the topic, leading to the identification of the typology of the *cimetière paysagère*: «l’apport d’Auzelle réside aussi dans sa connaissance des réalisations et débats internationaux, à partir desquels il tentera de poser une définition du cimetière français contemporain» (Bertrand, 2010). Opened in 1956, the Cimetière du Parc in Clamart is the first inter-municipal landscape cemetery made by Auzelle. It proves how the city of the living and the city of the dead can be conceived as an interrelated continuum.

In the framework of RIP research, the experience of Auzelle is considered crucial and meaningful due to his research theoretical and practical at the same time. In Auzelle’s work, commingling becomes a device to conceive the future: a mixture of different traditions, of architecture and landscape, of city of the living and city of the dead. More generally, thanks to pioneers such as Auzelle in France and, of course, Sigurd Lewerentz and Gunnar Asplund in Sweden, a cultural and physical heritage that links burial spaces to the green system of the metropolis has taken root during the last century. It is no coincidence that Franciosini states: «tre rappresentazioni della morte [...] sintetizzano le estetiche che legano il tema della morte al paesaggio della vita: il cimitero nella natura, il cimitero come natura, il cimitero come città» (Franciosini et al., 2022). While, back in 1981, Michel Ragon proposed the park cemetery, the forest cemetery, the architectural cemetery and the landscape cemetery as typologies (Ragon, 2012).

Within this framework, the research investigates cemeteries as architecture and landscape – i.e. *lastscapes* – that urgently need to be reintroduced into urban dynamics in spite of the fact that «death has no place in a society which is obsessed with youth and vigour» (Heathcote, 1999).

2.2 Hypertopia: a new paradigm to interpret and reinterpret cemeteries

In light of the above, it is evident that urban cemeteries need new meanings. It is necessary to transit from an image that recognises them only as expression of the past towards a future imagery that links memory with other values of which the physical and formal components of these cities can be an expression.

By assuming the tight link between theory and design as necessary and fruitful, it is believed that to innovate design, it is necessary to reinvent theory. The dominant culture understands burial spaces as perfectly matching Foucault’s definition of heterotopia of deviation (Foucault & Miskowiec, 1986). The three concepts on which this vision is based are otherness, exclusion and – negative – prejudice: heterotopias are other cities excluded from the city because they contain what is

judged to be deviant, i.e. not conforming to a 'norm' representing the society of the healthy, the right, the living, etc.

Yet, in the contemporary world, the fluidity that increasingly marks every aspect of life needs to be interpreted. In recent years, in the domain of architectural and urban design, new paradigms have been sought to subvert some old poetics that no longer seem to meet the current complexity of reality. In this context, heterotopias have often been largely excluded from the processes that transform both the theoretical and practical aspects of design action.

In the framework outlined so far, R/P research proposes a paradigmatic shift in the interpretation of the heterotopias of the dead aimed at innovating their design. By interpreting the new and varied social and cultural contexts, architectural, urban and landscape design for cemeteries is challenged to respond to new demands, defining alternatives to old models and reinterpretations to new and unforeseen contextual relationships.

The proposed shift concerning this heterotopic heritage, the only one that is unavoidable (Rodríguez & Francisco, 2005), is borrowed from cinema studies: it is not by chance that according to Foucault even cinema is a heterotopia. Indeed, through design actions the heterotopia of the dead could become hypertopia: «there is no longer the opening of a “here” toward an “elsewhere,” but rather an “elsewhere” that arrives “here” and dissolves itself in it. I call this new spatial structure hypertopia, in order to underline the fact that rather than taking off toward an “other” place, there are many “other” places that land here, to the point of saturating my world. [...] Hypertopia does not necessarily make an absolute of the “here.” On the contrary, thanks to a sense of articulation and alterity that it brings with it, it can emphasize how this “here” is a space ready to open itself, to transform itself, to renew itself – no matter how full it already is» (Casetti, 2015). Casetti's words make clear the need to recognise and assign new values and consequently new projects in that other world that «presents itself in all its complexity, tensions, and potentialities» (Casetti, 2015).

Casetti defines hypertopia while questioning the possible evolutions, regressions, or disappearance of the heterotopia of cinema. The same concept is here proposed in reference to lastscapes and intended as a term that can be ascribed to the broader design theory of re-cycle (Marini & Corbellini, 2016). A new interpretation of cemetery citadels can only be achieved through a complex design action that interweaves, overlaps and makes several places coexist in the same space, working at the same time on forms and values – hence on signifier and signified – of burial spaces. Only complexity can constitute a reasonable response to the multiplication and contamination of techniques, tools and places that mark both cinema and cemetery space in contemporary times. A project aimed at the transformation of a heterotopia into a hypertopia – and thus the transition from a city of the dead to a multifunctional landscape for the living – requires to be relational and not static, a process-based project (Bocchi, 2014) that continuously develops over time with triggering, verifying and modifying actions. Such a project, conceived according to the time parameter, is significant with respect to its potential social and cultural value. In order to enable such semantic innovations to take root in communities, their introduction should be gradual and progressive, structured by successive experiments that are introduced, verified and established over time, possibly starting from the recognition of ongoing processes. To this end, it was deemed useful to identify in some significant experiences possible trends already detectable in other contexts.

3. Materials and methods

3.1 Methodological framework

In the context of the broader R/P research conducted involving five disciplines, this paper draws attention to what the contribution of evaluation can be in the context of the proposed shift – both in terms of theory and design – from heterotopia to hypertopia.

The preliminary stages of the research consisted first of all in a critical literature review aimed at finding a common vocabulary among the disciplines, relating, for example, the concepts of Lastscape and Hypertopia to that of Multifunctional Landscape. This phase raised several issues concerning: the identification of new meanings, values, and potentialities for the design of cemeteries; the choice of the most suitable design approach and evaluation methodologies for cemeteries; the selection of criteria and indicators useful for assessing the capacity of cemeteries to provide landscape services and, therefore, the corresponding design strategies and urban policy.

In this framework, five key criteria were set through the interpretation of three case studies selected as meaningful in relation to the detectable elements and features, and hence representative of a range of interesting case studies. On the basis of these five key criteria and in line with Landscape Services theory, indicators were then identified to define a generalisable evaluation model based on design experiences and good practices.

The purpose of this investigation is programmatic, i.e. useful for defining what information and elements are effective for monitoring or evaluating the transformation of existing cemeteries or the design of new burial sites. Therefore, answering the research questions, the contribution finalises an evaluation model, based on the study of three significant cases, which is proposed as a device for assessing and monitoring other case studies or design alternatives.

In reason of the assumption of the need to reduce land consumption, the investigated cases can be considered as: a case of typological reinterpretation intended as a project for the reuse of a historical monumental heritage, a case of spatial reinterpretation aimed at rethinking a recent heritage understood as a sign of modern obsolescence and its consequent abandonment, a case of resemantisation of the burial space through a project that is able to make the city of the living and the city of the dead coexist by democratising beauty. This research on existing cemetery aims at understanding their form, function, and impacts within the city. To this end, studies of the project proposals were conducted, site explorations useful for a deeper understanding of the current state of the site were carried out, and interviews with the authors and cemetery visitors and stakeholders were organised. In conclusion, the following paragraphs present the three case studies: La Certosa in Bologna (Italy), Les fours à chaux in Tournai (Belgium), and De Nieuwe Ooster in Amsterdam (Netherlands).

3.2 La Certosa in Bologna: a typological shift

The monumental cemetery of La Certosa in Bologna was founded in 1801 after the Commissione di Sanità del Dipartimento del Reno assigned the former Certosa di San Girolamo di Casara, built from 1334 onwards and suppressed at the end of the 18th century by Napoleon, as a cemetery area (Figure 1). The site was identified because it met the requirements in terms of distance from the inhabited area and position with respect to the hydraulic network and free air circulation. Today, the former convent is located on a slightly hilly terrain facing the city centre of Bologna.

Figure 1. La Certosa in Bologna: a typological shift

Source: Photos by Giovangiuseppe Vannelli.

The distance between the city of the dead and the city centre has been filled in during the last century by new residential neighbourhoods. The context in which the Certosa is now set presents some recurring elements in the cemetery's surroundings: a large infrastructure belt, green systems such as the Giacomo Bulgarelli garden and the Nicholas Green Park, sports fields, sports centres and the Renato Dell'Ara stadium. Therefore, these facilities and infrastructures mark an area where the cemetery, with its multiple extensions, represents an exception to the dense residential fabric.

The case of La Certosa in Bologna can be seen as a typological shift, a re-cycle project *ante litteram* interpreted through a process of resemantisation of the monumental convent. The monumental value of La Certosa was increased from 1801, a time when the nobility and bourgeoisie of Bologna enriched the monastery with family tombs, turning buildings, galleries and cloisters into parts of an unplanned open-air museum. In fact, La Certosa was counted among the most famous sites of the Grand Tour and was visited by distinguished personalities such as Chateaubriand, Dickens, Byron and Stendhal. During the second half of the 20th century, the cemetery was subject to multiple additions that extended and densified the original building complex. The complex spatial structure, made up of additions and layers, contributes to determining a landscape of high historical and aesthetic value: loggias, halls and porticoes recreate a scenario proper to the city of the living. Especially because of its historical value, the monumental cemetery in Bologna has been involved in interesting management and valorisation policies in recent decades. Mauro Felicori has been one of the main proponents in the modernization of the management model of the burial site. When interviewed in 2018 by the authors, Felicori identifies the exponential spread of the cremation as one of the fundamental reasons for the crisis of urban cemeteries having direct negative impacts on the inherited historical heritage: on one hand, the costs of cremation are lower than those of inhumation, and on the other hand, the space occupied by cinerary urns is considerably less than that generally required for gravestones. So, such economic and spatial changes should make those involved in the design of burial spaces and those who manage them question. Felicori has shown great foresight in management

choices to the point of structuring innovative forms of circular economy.

One of the most interesting goals on Felicori's agenda was to define a management model that would provide for the reuse of historic family tombs that no descendant cared for or managed the maintenance of anymore. In this direction, these artifacts were designated to house cinerary urns so that the new beneficiaries would contribute to the maintenance of the historical monuments acquired by the municipal body. In addition, another interesting initiative promoted and carried out by Felicori has been the digital platform 'History and Memory of Bologna' which aims to give voice to Bologna's monuments: a laborious work of cataloguing and networking different types of sources and data that jointly return fragments of history, not only that of the great men but, one might say, of the whole city of Bologna. Also because of this, since 2009 the Museo Civico del Risorgimento has also been taking care of the cultural enhancement of the Monumental Cemetery La Certosa. Moreover, constant efforts are made in order to redeem these repositories of memories and to enhance and share the stories kept among tombstones and gardens: in fact, the one in Bologna is one of the most active cemeteries in terms of artistic offer – such as theatre performances, exhibitions, concerts, etc. – proposed in these places of memory and open to the community with the aim of re-cognizing these sites, too often neglected, and their potentialities. Beyond that, La Certosa hosts some interesting activities that allow users to actively participate in the maintenance of this public asset, such as those promoted by the Amici della Certosa association: since 2014, workshops for the removal of dust have been conducted by volunteers in collaboration with the municipality of Bologna and under the guidance of trained restorers and are carried out for the purpose of ensuring cleaning, routine maintenance and monitoring of monumental tombs in La Certosa.

Thus, the case of La Certosa proves how the identification of new life cycles is what triggers needed processes of care and material and immaterial reunification with both city and community.

3.3 Les fours à chaux in Tournai: the coexistence of multiple legacies

The kiln of Cherq is located along the Escaut south of the centre of Tournai in Belgium (Figure 2). The site represents one of the best-preserved vestiges of local industrial activity: the production of lime. Although the city of Tournai is quite small, the metropolitan area that is part of Grand Tournai is the largest hinterland of Belgium; this region has long been marked by the profitable extraction of natural hydraulic lime, which was exported all over the world.

The complex of Les fours à chaux in Cherq consists of eight furnaces built between 1840 and 1875 and the annexed stables. The system is characterised by massive facades that enclose the combustion chambers connected to each other by vaulted galleries, which are opened to the river by a sequence of ogival arches. After the Second World War, the production activity of the Cherq furnaces ceased and, in the subsequent time of abandonment, nature established a deep relationship with the limestone factory, giving the site a romantic charm. Over time, the tectonic and spatial qualities of the architecture have been enriched by a forest crowning the structure. The spontaneous recolonisation of birch, maple, hawthorn and ash trees transformed the limestone soil into a fertile substrate: a silent regenerative action bringing back living beings, giving the site a symbolic value of rebirth (Baldin & Vannelli, 2018). Within this story of abandonment and spontaneous renaturalisation, the turning point came when the CCB company decided to sell the site in the 1990s. At that point, four friends with a passion for art and industrial heritage decided to buy the site in order to prevent its demolition and preserve its memory with a culture-

based intervention. Thus, Domino Favot, Eric Marchal, Quentin Wilbaux and Mathieu Wilmotte bought the kiln in 1997, even though they had not yet defined a redevelopment project: the aim was to preserve that important trace of industrial heritage so meaningful for Belgian culture by resemantising its elements and giving it a new meaning.

Figure 2. Les fours à chaux in Tournai: the coexistence of multiple legacies



Source: Photos by Giovangiuseppe Vannelli.

With the FaMaWiWi foundation, the four *passseurs de mémoire* initiated a gradually more precise cultural project of re-functionalisation. This is an open project to be understood as a process-based project: not predictive determinism but fuzzy prefiguration. This has proven the ability to introject the event, the unexpected and the autopoietic.

The project to rehabilitate the site started from ‘listening’ to the place and trying to keep the relationship between memory and art strong. The initial idea of the proponents focused on the possibility of having a place open to the community where people could share experiences and leave a trace of their passage on earth with a work of art, a poem, or any object. This project became on the one hand more complex and on the other hand more solid when in 2006 ash scattering was authorised by the Belgian government. This political opportunity was the premise for a process of shared construction of a collective heritage on the spontaneous green roof of the lime kilns.

FaMaWiWi’s purpose is to enhance the kiln as a heritage site for local culture, to make the site known to the public through the organisation of events and artistic performances and, in the end, to integrate an innovative burial space into the wood. The proposed memorial project is complex and holds together different aspects related to the concept of memory. The aim is the valorisation of a memory of the past, namely that of the Belgian industrial heritage; a present-day memory, the memory of the people who first lived in this place and then chose to scatter their ashes and leave their *passse-mémoire* on the roof garden; and a memory of the future, which is held in the foundation itself, which, with its charter has the ambition to

ensure the endurance of the objectives and values that brought it into being.

Thus, the coexistence and contamination of multiple heritages can be understood as the added value in a bottom-up transformative process that aims to preserve both individual and community memories. Nature – the spontaneous green roof – art – the *passe-mémoires* – and artefact – the lime kilns – in the end, represent three useful devices for both a material and immaterial renegotiation of heterotopia.

3.4 De Nieuwe Ooster in Amsterdam: an inclusive memorial park

De Nieuwe Ooster was opened in 1894 after the municipality of Amsterdam acquired a 16-hectare site in the former municipality of Watergraafsmeer in 1888 (Figure 3). Leonard Anthony Springer worked on the first design of the burial site. The competition-winning landscape architect, by conceiving De Nieuwe Ooster as a landscaped park for walking, succeeded in giving the site a clear landscape character that still remains today. At the same time, many buildings – now listed – enriched the cemetery: the service building, the gravediggers' houses and the auditorium. Due to further expansions, today the Nieuwe Ooster has approximately doubled in size in comparison to the original design and is surrounded by an urban fabric strongly characterised by sports facilities that define a vast green system in the south-east of the city of Amsterdam. Furthermore, while the context presents similarities with most cemetery areas (for example, it is crossed by large road and rail infrastructure bundles surrounding the city centre), the perimeter of the cemetery defined by a system of canals is specific to the urban and landscape structure of Amsterdam. In fact, a sequence of elements defines the margin of the cemetery park. The perimeter is articulated in layers that define the gap between the city of the living and that of the dead: the natural features of this margin certainly give great spatial quality to the site. Starting from the road surrounding the cemetery, there is a bicycle path, the canal and then a row of trees. So, even from the perimeter, the cemetery announces the reserved but inclusive and welcoming consistency of the memorial park. The cemetery, declared an arboretum in 2005, is now a public park and a reserve of biodiversity: the memorial park hosts around 500 different tree species (most of which display name boards). Moreover, it is interesting to investigate the various interventions that over the past decades have led to the strengthening of an image of the Nieuwe Ooster, in the collective imagination, as a memorial park and not a cemetery.

The Nieuwe Ooster – which became a national monument in 2003 – was reinterpreted in 2005 by Karres en Brands – a firm specialising in landscape architecture – and then, in 2007, was also equipped with the Uitvaart Museum Tot Zover located in the former cemetery director's house.

The design of Karres en Brands started from a careful study of the construction phases and interventions, finding as a project concept a strong, recognisable but flexible conceptual structure that interpreted the site by focusing on more than just the areas to be transformed. A barcode is the concept that guided the design of the most recent extension of the burial site: the concepts of structure and identity were the key elements. The concept represents a structure – both conceptual and physical – within which to operate in order to offer users a wider choice, a wider possibility of experiencing an identity relationship – in both personal and collective terms – with the cemetery site.

In the drafting of the new masterplan, Karres en Brands envisaged a landscape restoration as a first step to give back vigour and clarity to Springer's design. Whereas the fracture determined by the project dating from 1924 where it connected with Springer's two-phase project was mended by Hilversum's studio through a set

of actions aimed at re-establishing the original pathway system: the restoration of Springer's historical layout, the reinterpretation of the 'green rooms' proposed in the 1904 project, the variation of tree and flower species. While ensuring continuity with the pre-existence, these design actions enabled the creation of different settings and provided a sense of identity and recognisability to the users, which was a major goal for the designers. In the articulated park created by Karres en Brands, three strips of the 'barcode' are considered to be of remarkable interest.

Figure 3. De Nieuwe Ooster in Amsterdam: an inclusive memorial park



Source: Photos by Giovangiuseppe Vannelli.

The first part of the project to be highlighted is the resting place for those who do not have sufficient financial resources to afford a traditional burial or those who are not interested in having a gravestone to remember them. The designers have integrated these burials into the overall design of the memorial park, offering spatial and material quality and the possibility of 'leaving a trace' despite the indigent condition of those generally destined for mass graves: from this design strategy, aimed at not denying dignity to the disadvantaged, emerges an important ethical and social figure of the designers' action aimed at broad inclusiveness.

The second strip of the "barcode" considered to be of interest presents a multifaceted cinerarium built as a thick excavated wall, almost eroded, with narrow stretched courtyards and some spaces for resting, both introverted and extroverted. The architecture, treated as an object, becomes a signifier with a strong artistic value. The design operations performed on the long parallelepiped, through the measured definition of included and enclosed spaces, seem representative of the precarious balance between the private and public spheres of grief through an architecture that always becomes a threshold.

The third strip is featured by water: a long pool hosts cinerary urns arranged above the water, almost like circular metal water lilies. These elements are the most expensive alternative among the burial plots that the Nieuwe Ooster proposes. Nevertheless, these elements can be seen as a shared asset of which all users of the memorial park benefit: a privilege of the private that turns collective in the

construction of a landscape that becomes inclusive for diverse communities.

The variety displayed through these three exemplary interventions is the feature that also inspired the design of the vegetation. The theme of variety becomes the pretext to offer through the project a choice to the users not only according to personal preferences, but also in relation to the different economic conditions of each, almost proposing an updating of the concepts of variation and hierarchy detectable in the projects realised by Springer.

Moreover, the inclusiveness and variety of this memorial park also interests the religious field. In fact, Karres+Brands' project includes a burial ground designed to house the Islamic dead, which, together with the annexed pavilion, fits well into the overall cemetery system even while respecting the necessary direction towards La Mecca.

Through the actions described so far, the Dutch firm has succeeded in conceiving the cemetery as a place not perceived as gloomy and marginalised by the community, but as a space belonging to the city and structured by compositional rules proper to a contemporary public space: a memorial park for the city of Amsterdam.

In conclusion, in addition to the qualities inherent to the project, the success of Karres en Brands' work also depends on two management issues that are worth highlighting. Following the drafting of the master plan, the firm coordinated training activities for the staff in charge of managing the memorial park so that they could acquire the necessary skills to properly manage the park conceived by the landscape architects. Furthermore, enhancing the opening of this place of remembrance to the city and its citizens is the decision in 2007 to inaugurate the *Uitvaart Museum Tot Zover*: a museum that focuses on the subject of funerals, their practices, traditions and developments. Privately run, in synergy with the public institution, the *Tot Zover Museum* is not only a museum but also a café. Thus, within the memorial park, it offers unprecedented services to a public that is interested and involved in the multiple activities carried out: from artistic performances to art and photography exhibitions, from didactic meetings with schoolchildren to collective therapy activities on the theme of death, from the narration of the stories of famous people buried there to astronomical observation. In conclusion, the *Nieuwe Ooster* has become an inclusive place dedicated to the care of society and the city.

3.5 How to recognize new values in cemeteries: the Landscape Services approach

In this perspective, thinking in terms of Multifunctional Landscapes facilitates the understanding of the mechanisms inherent in structure-function-value chains, which can be identified in the transformation processes of complex landscapes (Termorshuizen & Opdam, 2009), such as *lastscapes*. This theoretical and methodological approach within the processes of knowledge, management, and transformation of the landscape includes the evaluation of Landscape Services. These can be identified according to the multiple environmental, economic and social functions of a given context, also taking into account the interests of the various social actors involved in the transformation processes (Lovell & Johnston, 2009). In fact, Landscape Services can be defined as a multi-scalar approach, grounded in Ecological Economics and useful for the "integrated assessment" of landscapes and their distinctive components providing services to different types of recipients.

In the literature, the concept of Landscape Services is closely related to that of Ecosystem Services. Both concepts have multiple and sometimes vague definitions due to their adaptability to different topics and fields of knowledge (Costanza et al.,

1997). In order to define Ecosystem Services and Landscape Services, it is useful, therefore, to refer to three fundamental meanings, which can be identified in the definition provided by de Groot, which concerns the ability of processes and natural components to provide goods and services that satisfy human needs, directly or indirectly (de Groot, 1992; de Groot et al., 2002, 2010); in the definition of the Millennium Ecosystem Assessment, which concerns the benefits that people obtain from ecosystems (*Millennium Ecosystem Assessment (2005) Ecosystems and Human Well-Being: Synthesis*, 2005); in the economic-environmental definition provided by The Economics of Ecosystems and Biodiversity (TEEB) which, instead, considers ecosystem services in terms of direct and indirect contributions of ecosystems to human well-being (*TEEB Synthesis Report - The Economics of Ecosystems and Biodiversity*, 2012). From these definitions, one can understand how landscape functions are related to the functions of ecosystem processes and their capacity to produce services. Currently, Decision Makers are paying increasing attention to the evaluation of landscape services in strategic planning choices, although it is still challenging to attribute an economic value to them due to the difficulty of identifying traditional parameters for the assessment of such goods such as the existence of a market or a production process (Fusco et al., 2014).

Studying *lastscapes* for their ability to provide services to direct and indirect beneficiaries means, therefore, identifying innovative regenerative strategies to guide their transformation processes as potentially multifunctional landscapes. Consequently, exploring the concept of landscape in relation to burial spaces is crucial for the research development and for guiding the identification of design strategies and scenarios. Also, the methodological support provided by the Landscape Services theory is significant in evaluating – according to relevant indicators – a multifunctional and cultural landscape and in its capacity to influence human well-being.

Behind the Landscape Services theory lies the interpretation that Termorshuizen and Opdam propose of landscapes, considered as: «spatial human-ecological systems that deliver a wide range of functions that are or can be valued by humans for economic, socio-cultural and ecological reasons». Thus, Landscape Services refers to the notion of multifunctional landscape because they integrate both natural and cultural aspects, spatial patterns and the inclusion of stakeholders. So, a social and cultural perspective on landscape is clearly determined and affirmed in evaluation practice as well. This more complex vision underlies the methodological proposal put forward to investigate cemeteries.

The aforementioned ones are some of the reasons for referring to Landscape Services rather than Ecosystem Services. Moreover, these services associated with landscapes rather than being related to the properties of each specific ecosystem are intended in relation to interactions and flows between the different parts of the territory and between these parts and human elements: landscape services represent the production of both material and immaterial benefits for human beings. In this sense, the landscape is regarded as the interacting scenario for everyday human activities since it constantly provides services to humans.

Accordingly, the Landscape Services theory proposes the definition of a classification using categories of services to which correspond as many types as possible of functions. The concept of ‘function’ is understood as an interface between ‘processes’ and ‘benefits’: namely, the function becomes a service when people enjoy it, when they profit from it. Furthermore, services are grouped into three sets: ‘provisioning services’, ‘regulating services’ and ‘cultural services’. The first refers to the role of the landscape as a source for natural resources. ‘Regulating

services', on the other hand, refer to the ability to control ecological processes in each ecosystem, ensuring its preservation and preventing related natural disasters. 'Cultural services' refer to those intangible outputs that people benefit from the contact with the ecosystem: this aspect appears relevant as it considers the intangible dimension that underlies the concept of landscape. The relationship between the three categories described above highlights the need to hold together perceptive and ecological processes; therefore, a classification of Landscape Services requires an interweaving of the material, immaterial and perceptive aspects that are proper to the landscape.

In addition, an investigation of Landscape Services can be matched by an analysis of their effects on 'human well-being'. In literature, the latter is described through six parameters: 'health', 'security', 'adequate resources', 'enjoyment', 'personal fulfilment' and 'social fulfilment'.

In describing the landscape, which also represents the scenic backdrop of our everyday life, it is useful and necessary to identify a new class of services added to the previous classifications proposed in the literature: 'regulation of the spatial structure'. In relation to the latter, three services are proposed: 'connection of spaces', 'buffer disturbing uses' e 'provision of spatial complexity of the place' (Vallés-Planells et al., 2014). This is because link between ecosystems and spatial complexity are considered prerequisites for ecological resilience. In addition, the connection between different areas influences the ability of the landscape to provide opportunities for sport and social encounters, hence for well-being. Services related to the regulation of spatial structure are assumed to be a prerequisite for cultural services in what has been called a multifunctional landscape: a veritable cultural space.

In this sense, landscapes can play a central role in defining the identity of a community and in the symbolic representation of 'social open spaces'. The centrality accorded to the landscape because of its value that is at once about identity and relationship emphasises that: «landscapes can also contribute to creating a sense of material continuity through the life course (Graham et al., 2009). For instance, certain places evoke memories of our childhood and relatives who passed away, and they give us a chance to remember past times, thus providing us with a certain sense of well-being» (Antrop, 2001). Thus, cemeteries are regarded as special fields of investigation and experimentation for reconsidering the cultural landscape starting from its identity values and attributing new material and immaterial values to these places.

4. Results

Thus, on the basis of the interpretative description of the three selected case studies, aimed at highlighting relevant elements and characteristics, in coherence with the Landscape Service theory, an evaluation model structured by key criteria, LS classes, LS indicators were defined.

The five key criteria that informed the description hold together this qualitative approach: place and context; architecture and space; history and memory; culture and society; process and management. These criteria enabled the selection of the LS classes best suited to express the service provision potential of the three case studies and thus of contemporary cemeteries.

Thus, following the analysis of the three cases considered exemplary in terms of tangible and intangible heritage issues and at the same time for the design and management of the burial space, qualitative and quantitative interpretations are

enabled by the tools offered by Landscape Services theories. In this sense, the set of LS indicators should be considered as an important component of the proposed methodological approach. Indeed, the criteria and classes selected, with their associated indicators, can be used within guidelines for the design of new burial sites or for projects aimed at transforming existing cemeteries, or even within the framework of research to interpret and evaluate cemeteries understood no longer as heterotopia but as hypertopia. In fact, for example, in design competitions for cemeteries, in addition to quantitative benchmarks or performance to be achieved, qualitative parameters linked to this evaluation model could be added.

Table 1. Landscape Services indicators

Key criteria	LS Classes	LS indicators	Data typology
location and context	Material	Surface area of protected areas and public parks	contiguity; proximity
process and management	Material	Number of recycled spaces	internality; contiguity; proximity; closeness
location and context	Daily activities	Surface area of urban green spaces	contiguity; proximity
culture and society	Daily activities	Population density	contiguity; proximity; closeness
location and context	Regulation of the spatial structure	Number of industrial sites	decommissioned /active
location and context	Regulation of the spatial structure	Number of highways or railways	decommissioned /active; elevated /flush
architecture and space	Regulation of the spatial structure	Length of fences or enclosure walls and percentage of porosity of the enclosure	
location and context	Health	Number and length of footpaths	crossing; ending
architecture and space	Enjoyment	Surface area for flower viewing	internality; contiguity
location and context	Enjoyment	Number of viewsheds	internality; contiguity; proximity
history and memory	Personal fulfilment	Number of memorials and historical sites	internality; contiguity; proximity
history and memory	Personal fulfilment	Number of archives	internality; contiguity; proximity
history and memory	Personal fulfilment	Number of memorials and famous burials	internality;
culture and society	Personal fulfilment	Number of sport facilities	internality; contiguity; proximity
culture and society	Personal fulfilment	Number of recreation facilities	internality; contiguity; proximity
process and management	Personal fulfilment	Number of photos posted on social	internality;

process and management	Social fulfilment	networks Number of places to experience cultural heritage	internality; contiguity; proximity
architecture and space	Social fulfilment	Number of access points	
process and management	Social fulfilment	Number of other activities (per year)	internality; contiguity; proximity
location and context	Social fulfilment	Number of public transport stops (bus, train, metro)	internality; contiguity; proximity
location and context	Social fulfilment	Travel time from central station	
location and context	Social fulfilment	Number of food court	internality; contiguity; proximity
location and context	Social fulfilment	Number of shops	internality; contiguity; proximity
location and context	Social fulfilment	Number of markets	internality; contiguity; proximity
location and context	Social fulfilment	Number of workshops	internality; contiguity; proximity
process and management	Social fulfilment	Number of associations performing outdoor activities	internality; contiguity
location and context	Social fulfilment	Number of hotels	proximity
culture and society	Social fulfilment	Average price of hotels	
culture and society	Social fulfilment	Average quality of hotels	

Source: Authors' elaboration.

6. Discussion

The paradigmatic shift from heterotopia to hypertopia detected in multiple though partial guises in the cases of Bologna, Tournai and Amsterdam can be summarised through three paradigms that are presented as crucial for a hypertopic conception of burial spaces: recycle, coexistence, inclusiveness. The latter, on the one hand, are arising from the case studies interpretation and, on the other hand, are underlying the evaluation model. The three terms are proposed here as prerequisites for designing cemeteries by going beyond the Foucaultian vision and opening up to multiple relationships with the city and its inhabitants. Thus, resemanticisation and overwriting are the two operations proposed as necessary to determine new narratives for these spaces of the city.

The search for a definition of a contemporary form of hypertopia for burial imposes a questioning about the already inherited heritage that needs to be reinterpreted through new visions and, at the same time, about the new projects of settlement whose site, typology and composition need to be evaluated. The study of the three cases through the lens provided by the theory of Landscape Services was carried out because of the urgency of responding to both of these needs by supporting them with the identification of useful indicators to investigate the most relevant questions about the relationship that these heterotopias weave – or can weave – with the cities that

surround them. Indeed, the relationship between the city of the living and the city of the dead is certainly the central issue to be addressed in order to move from a heterotopic to a hypertopic vision of burial space. In addition, especially with regard to the methodology proposed for investigating case studies, it is significant to underline that the data typologies envisaged are almost always referred to the area outside the burial site itself (discretised in the typologies of “internality”, “contiguity”, “proximity”). This typifies the research’s intention to put the cemetery at the centre, that is, to interpret the city of the living from the city of the dead. In fact, the indicators – identified in the areas of provision services, regulation services and, for the most part, cultural and social services – are all relational: on the one hand they tend to highlight the value that these citadels can represent for the surrounding city in terms of both tangible and intangible assets, and on the other – observing the inverse relationship – they investigate the surrounding city in order to understand how many and which services or urban dynamics can represent an opportunity, or even limits, for the *lastscapes*. In this sense, the indicators identified refer to the space inside the cemetery and/or the space immediately adjacent to it and make it possible to recognise the actual multidimensionality of cemetery landscapes.

7. Conclusions

The interdisciplinary methodological approach – here focused in its components of design and evaluation – is the first ongoing outcome. The idea of process – this ongoingness – is meaningful when studying the transition – which is a process – from heterotopia to hypertopia. The proposed ethical and political attitude requires a continuous and prolonged effort, which entails the ability to change step by step the way of thinking, designing, evaluating and monitoring burial ground projects. In the light of the above, taking as the main focus the observation of the evolution concerning the cemetery programme, Evolutionary Evaluation – being rooted in the fields of evolutionary theory, natural selection, evolutionary epistemology, developmental systems theory, ecology and systems theory – becomes central.

Within this framework, spatial interpretation, urban reading and project evaluation are all considered fundamental means to recognise the significance of the criteria and indicators that express this shift. In conclusion, the team proposes a new design approach to burial grounds rooted in the analysis of the relationship between city of living and city of dead, intending the burial ground as a cultural heritage and a public space. This could incorporate elements from other disciplines, such as urbanism, landscape architecture, ecology, and social sciences, into the design process. Also, this dialogue between disciplines can help to promote the paradigmatic shift in the design and evaluation of burial spaces from heterotopias to hypertopias.

Thus, within the framework of the ongoing research Rethinking *Lastscapes* Perspectives, the contribution on the one hand affirms the urgency represented by the heterotopic heritage – which sometimes finds exemplary conditions to be taken as references – and on the other hand proposes new values for a possible hypertopic space that can open up new material and immaterial relationships with citizens and the city. Thus, only by means of a broader interpretation of the city of the dead – with reference to the paradigms of recycle, inclusiveness and coexistence – the relationship it weaves with the city of the living can be rethought.

Author Contributions

Collaboration Group Member: G.P., G.V.; Conceptualization: A.D., G.V.; Methodology A.D., G.P., G.V.; Validation: A.D.; Investigation: G.V.; Data Curation: G.V. G.P.; Writing - Original draft preparation: G.V.; Writing - Review & Editing: A.D., G.P., G.V.; Visualization: G.P., G.V.; Supervision: A.D.; Project Administration: A.D.; Funding Acquisition: A.D.

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Conflicts of Interest

The authors declare no conflict of interest.

Originality

The authors declare that this manuscript is original, has not been published before and is not currently being considered for publication elsewhere, in the present of any other language. The manuscript has been read and approved by all named authors and there are no other persons who satisfied the criteria for authorship but are not listed. The authors also declare to have obtained the permission to reproduce in this manuscript any text, illustrations, charts, tables, photographs, or other material from previously published sources (journals, books, websites, etc).

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