

Assemblages for Cultural Heritage: A Methodological Approach of Heritage-Driven Enhancement

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Abstract. Cities are constantly evolving organisms where social, economic, and political changes challenge the design of new sustainable urban futures. In heritage-rich contexts, this often takes to the co-existence of transformation activities and cultural heritage, where culture plays an essential role in regulating human relations and shaping new infrastructures and organizational rules of our societies and urban ecosystems. In this perspective, a new approach balancing preservation and sustainable cultural value-based development is required. The paper analyses the UNESCO Historic Urban Landscape Recommendation approach as a holistic, integrative, and value-based approach. Nevertheless, the Recommendation needs to be implemented through a trans-disciplinary lens, aiming at the integration of knowledge to develop evaluation and policy models based on community-recognised heritage values. The research analyses the possibility of integrating an 'assembled' vision of urban ecosystems, co-constituted by 'human and non-human aspects', and the adoption of the Cultural Values Model as a tool to integrate diverse visions of cultural values of cultural landscapes, address rapid policy decisions, and ensure a sustainable future through heritage-driven actions.

Keyword: Historic Urban Landscape; · Quintuple Helix Model · Assemblage Theory · Cultural Values Model

1 Introduction

The today pressing global challenges have sparked the evolution of strategies aimed at fostering the concept of more sustainable, smarter, and greener urban centres. The city has been defined as a complex system, that can be compared to an entire living organism [1], whose initiatives have arisen amidst the backdrop of pervasive global socio-economic and environmental challenges that cities are facing. The urgency concerning implementing these strategies is demonstrated by the agenda adopted by the United Nations concerning the Sustainable Development Goals. As the notion of heritage continues to evolve, encompassing both tangible and intangible dimensions, it becomes crucial to re-evaluate its active role in shaping sustainable urban futures. This necessity is notably emphasized by Goal 11, "Sustainable Cities and Communities", which underlines the

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O. Gervasi et al. (Eds.): ICCSA 2024 Workshops, LNCS 14820, pp. 356–372, 2024.
https://doi.org/10.1007/978-3-031-65285-1_23

need to 'strengthen efforts to protect and safeguard the world's cultural and natural heritage'. Despite this passive and limited perspective, there is an opportunity to leverage heritage as a catalyst for sustainable urban development [2]. Building a concrete synergy between urban regeneration and cultural heritage has become a main topic in many European cities. Culture plays an essential role in regulating human relations, shaping institutions and organizational rules of our societies and urban ecosystem [3] and culture should be set as one of the main drivers of urban and economic up-growth [4].

When we talk about heritage-led urban regeneration, we are mostly directed to interventions in the conservation or reuse of abandoned or disused built heritage. Over time, European cities have developed several transformation interventions, which have meant a real boost to the local economy. It emerges in various studies how, unfortunately, ineffective these processes are in the long term if they do not adopt a participatory program integrated with environmental issues [5].

Special emphasis has to be placed on the possible effects that heritage values activate on regeneration projects and on the urban fabric in the generation of new functions, where functional, or adaptive reuse goes towards the transformation of a site in an integrated environmental vision, whereby, according to Fusco Girard [6] the site must be transformed into an ecosystem that can contribute to the vitality of the local context, involving in its essence and conformation, other subjects but also and above all groups of stakeholders participating in the activity of its management, possibly generating other ecosystems. In this sense, guiding sustainable urban transformation programs means having a greater and more comprehensive understanding of heritage roles and values in the urban environment.

Starting from this framework, the paper presented here attempts to define a link between the Historic Urban Landscape perspective, which has been adopted to facilitate the integration of heritage management and urban development, the Assemblage theory, made up of relations between natural elements and human artefacts, and the Quintuple Helix model theory, trying to outline an innovative approach that keeps the characteristics of the models and approaches presented within.

The article starts with an extensive introduction that opens up the theoretical framework of reference. In particular, in the first part, the HUL, the assemblage theory and the Quintuple Helix model are investigated, interconnected by an integrated and environmental heritage perspective. In the second part, the research focuses on the methodologies adopted, referring to innovative models concerning the holistic and integral characteristics of the cultural and urban landscape, regarding heritage-rich contexts. The adopted methodological approach introduces a conceptual framework that is open and sensitive to the dynamic characteristics of processes in societal ecosystems. As a case study, Hadrian's Wall, in the UK, will be analysed as an example of a cultural and natural ecosystem, reflecting the environmental, heritage and value characteristics analysed in the previous parts of the article. In the conclusions, it will be possible to establish some reference points for the developments that this research will potentially have later during its application and implementation in similar operative cases.

1.1 Historic Urban Landscape: A *Landscape* Point of View

Cultural heritage, in its broader sense, comes to cities into their socio-territorial complexity as a *cultural landscape*, which is considered by communities as a living heritage consisting of practices and experiences on the territory. The use of the word *landscape* possesses a holistic vision that is indispensable for the prospects of sustainable development for cities, integrating heritage conservation within the broader context of urban governance and value assessment. Landscape represents, in fact, not only a physical entity but also a socio-cultural construct and a mental and subjective representation of the environment that changes in time and space [7]. Over time, the word landscape has become part of discourses that have transcended the urban dimension and ended up interpenetrating several disciplines, such as ecology and archaeology. Already in 1992, UNESCO recognised the cultural landscape as a heritage category, and the Faro Convention, better known as the European Landscape Convention [8], brought out the value of landscape as an interaction between natural and/or human factors, making the way for an integrated approach between governments and communities and extending its definition to the exceptional, the everyday and the deteriorated. The Convention for the Safeguarding of the Intangible Cultural Heritage, in 2003, adds that intangible heritage acts as a driver of cultural diversity and sustainable development, defining it not only as the set of tangible aspects of a place, but also of the practices and experiences accompanied by personal perceptions resulting from the relationship between communities and the environment. The Vienna Memorandum [9], adopted in 2005, emphasises the role and value of landscape as a fundamental resource for society, which is not simply limited to the visual aspect of the territory, but also encompasses its complexity and importance for local communities and the environment. In 2011, the UNESCO Recommendation on Historic Urban Landscape (HUL) was adopted to facilitate the integration of heritage management and urban development. This Recommendation promotes a landscape-based approach, in which the identification of values and vulnerabilities are essential factors in the elaboration of urban development policies [10]. The HUL concept goes beyond the idea of focusing exclusively on the historic city and instead considers the urban whole, including the territory in this new understanding as an urban ecosystem, interwoven with the surrounding urban, rural and ecological areas.

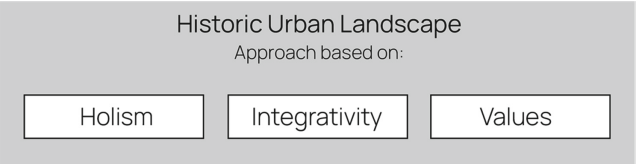

Fig. 1. The HUL Recommendation main points

Its first characteristic is holism [11], as physical-spatial, mental and functional aspects related to processes are taken into account. The second is integrativity, understood as interdisciplinarity, as it accommodates different perspectives between disciplines, including scientific and humanistic approaches as well as cultural and natural heritage

perspectives [12]. The third characteristic of this approach is that it is value-based, emphasising involvement and collaboration with communities associated with the landscape to understand the different values and meanings of heritage that could support a cross-cultural dialogue between different stakeholders regarding decisions on why a particular asset is of conservation interest [13]. Through this reading, the landscape goes from being only a physical resource to an entity intrinsically linked to the culture and identity of local communities, requiring a global and participatory vision in its conservation and management. The specificity of the UNESCO Recommendation on Historic Urban Landscapes is that it combines complementary principles, concepts, approaches, and areas that had already been separately addressed and adopted in previous European and international recommendations, providing a practical proposal for the implementation of a value-based landscape approach to cultural heritage management. The greatest challenge lies in bringing all these features together, *assembling* its components and addressing cultural heritage values in explicit and unambiguous terms for sustainable urban development and policies.

1.2 Assemblages as Dynamic Processes for Urban Transformations

The field of critical urbanism, which essentially elucidates contemporary urbanization patterns and endeavours to combat inequality within cities [14] serves as a useful starting point, as it frames many approaches that share the objective of creating inclusive cities that prioritize citizenship and well-being for all residents, thus serving as a crucial theoretical framework for fostering social sustainability. Expanding upon this, assemblage urbanism, deriving from the 'urban assemblage' concept from French philosophers Gilles Deleuze and Félix Guattari in Anti-Edipus and its focus on desiring machines [15], is a critical perspective that spans empirical, methodological, and ontological dimensions and aims to integrate diverse elements, including human and non-human interactions, networks, and the creation of socio-material and socio-spatial organization within the urban environment. The English term *assemblage* is a translation of the original French *agencement*. An *assemblage/agencement* is composed of multiple, heterogeneous parts linked together to form a whole [16]. However, the translation runs the risk of losing certain peculiar meanings of *agencement*, particularly its implication of the organization that fosters agency. From objects, buildings, technology and infrastructures to nature and social networking data, everything has its active agency and is dynamically interwoven as a component of social life [17].What is particularly relevant about the concept of agency is that it helps in understanding and unpacking the complex dynamic urban transformation of heritage places and the interaction between heritage and social sustainability [18]. Following Lieto's approach [19], in this paper authors seek to understand how urban transformations behave as a process open to multiple practices that enact architectural and urban design as a socio-material assemblage that is realised through multi-scalar processes, which go from grouping places and temporalities, actors and objects, functions and values, aggregated around common tasks. As a dynamic process, heritage-driven regeneration thus takes on a systemic dimension that is open to uncertainty, instability and spontaneity, examining the socio-material and socio-spatial organisation within urban environments. This approach emphasises the urban heritage system, taking into account local contexts and the broader processes of global urbanisation.

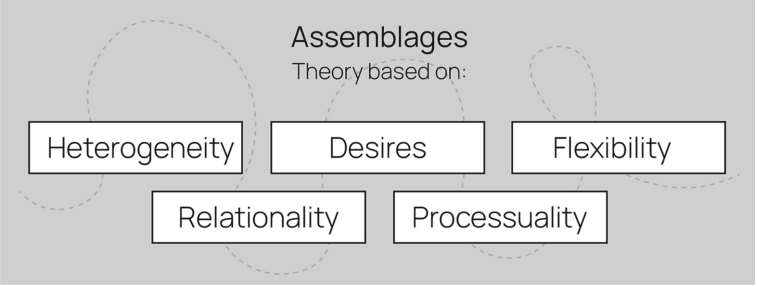

Fig. 2. The Assemblages main points

According to DeLanda [20] and as reported by Müller [16] assemblages are by their very nature 'fragmentary and fragmented' and have at least five specific characteristics that accomunise accompanies them: relationality, productivity, heterogeneity, deterritorialisation and desirability. The assemblage represents a whole that forms, through the connection of different units, a new whole, within which these connections represent relationships between people, objects, etc. These organisations reflect spatial and behavioural orders, new expressions of reality and new actors. The heterogeneity of such ensembles lies in the fact that, without assumptions, what is related escapes the nature-culture dimension [21] and unites humans, animals, things and ideas. Assemblages, as relations, hold together elements that, through their desire to mate, establish spatialities, which constantly change, transforming and breaking up the territories they stabilise.

1.3 The Quintuple Helix Innovation Model

An example of a societal ecosystem is the 'innovation ecosystem', which examines the complexity of innovation and innovation systems within the framework of societal and natural environments [22]. Non-linear models of innovation play a key role in their understanding. The concepts of biological and social ecosystems demonstrate the interdisciplinary breadth of ecology, illustrating the intellectual challenge of integrating ideas between the social and natural sciences while highlighting the benefits of interdisciplinary inquiry for transdisciplinary application.

The Quintuple Helix model (Fig. 2) developed by Carayannis and Campbell in 2010 [23], builds upon the Triple Helix and Quadruple Helix models to support eco-innovation processes and actions. While the Triple Helix emphasizes the interaction between academia, industry, and government in knowledge production and utilization, the Quadruple Helix includes the media-based and culture-based public as an additional helix. This integrated approach enhances the understanding and implementation of eco-innovation. The Quintuple Helix serves as an analytical framework for sustainable development and social ecology, facilitating the integration of societal ecosystems with social and natural environments [24]. Within an "innovation ecosystem", knowledge and learning are viewed as resources and processes, stimulating fresh ideas and opportunities, and nurturing creativity by inspiring "creative knowledge environments [25].

The Quintuple Helix model represents an interdisciplinary and transdisciplinary approach, necessitating a comprehensive analytical understanding spanning the entire disciplinary spectrum. This includes engagement with the natural sciences as well as with the social sciences and humanities to address societal, democratic, and economic aspects (Fig. 4).

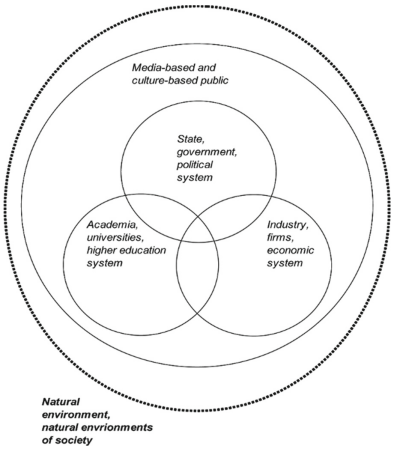

Fig. 3. The Quintuple Helix Innovation model by E. Carayannis and D. Campbell, 2010

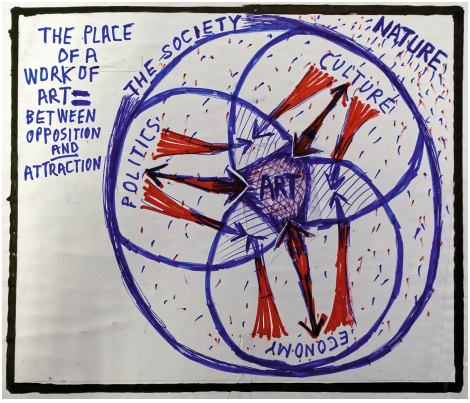

Fig. 4. Thomas Hirschhorn's schema titled "The place of a work of art", 2022

Moreover, the Quintuple Helix serves as a transdisciplinary framework for decision-making concerning knowledge, innovation, and the environment. Proposed as a framework for transdisciplinary and interdisciplinary analysis, the Quintuple Helix encompasses sustainable development and social ecology. By introducing the "fifth helix" of the natural environment to knowledge creation, production, application, diffusion, and use, it transforms knowledge and innovation systems into ones sensitive to social ecology. This conceptual framework enables the examination of how knowledge and innovation,

contextualized by society, intersect with environmental contexts, thereby facilitating sustainable development and social ecology analyses. Additionally, the model delineates the implications of sustainable development for eco-innovation and eco-entrepreneurship, offering insights into their roles in both the present and future contexts [23]. As already outlined by Carayannis and Campbell through the Quintuple Helix model (Fig. 1) 'sustainable development and social ecology represent areas and fields for interdisciplinary analysis and transdisciplinary problem-solving'. The interactions between human society, which is characterised by culture, and the material world, which is composed of the biophysical or nature, generate mutual knowledge. As shown in Figs. 2 and 3, the similarities between the scheme proposed by the visual artist T. Hischhorn (2022) and the Quintuple Helix model are extremely fascinating. A social ecosystemic vision emerges from both, where innovation, which in the field of art translates as 'the work of art', is positioned at the intersection of the political, cultural and economic sub-systems, which nourish each other by creating relational links (cross-referring and cross-relating ideas linking the social sciences to the natural sciences). Furthermore, flows emerge from Hirschhorn's scheme to represent the relationships that intervene and manifest themselves at the edges of subsystems. Their indication with a directionality suggests their relational and attractive power, that is, the influence - or agentivity - that each dimension has on the others. The artist, in this case, informs us of a dynamic ecosystem, within which forces manifest themselves by developing an environment that resembles Deleuze's assemblage, within which relationships of desire and attraction are created, new organisations and accorplations are produced, as well as distances and conflicts. Within these assemblages, confines become labile and constantly mutable.

2 Materials and Methods

2.1 Heritage Values Assessment Approaches

Over the last 150 years, heritage has been perceived and valued in many different ways. Cultural heritage is recognized for its value as a resource for human development and, as emerged from the World Commission on Culture and Development in 1996, as part of sustainable development key drivers. From heritage, important benefits can be gained, as well as important socio-economic functions in contemporary society, like the idea that heritage brings itself a public value expressed through the realm of the democratic realm [26]. As outlined in the Burra Charter (Australia ICOMOS, 1999), heritage defines cultural significance for its 'aesthetic, historic, scientific, or social value for the past, present, or future generations'. This definition of heritage values takes in different important considerations about heritage values that should be considered when talking about urban sustainable development in heritage-rich contexts. On one hand, designers, conservators and decision-makers should deal with the historical values associated with a site, and sometimes some scientific or archaeological values are embedded in it. The set of anthropocentric instrumental and intrinsic values represents a further tool and argument for heritage preservation. By recognizing both an instrumental and an intrinsic value to certain assets or resources, we can better justify heritage conservation and care than with only an economic or instrumental approach [6]. The use of heritage for modern erosive processes is shaping the contours of new geography which fights the mere use

of territories for tourism goals [27]. On the other hand, the function and use of heritage should be strongly connected to its contemporary social value, which is shaped by the social context and processes [13, 28].

Like all entities involving social activities, also heritage should not be considered as a static set of fixed meanings and objects, as suggested by traditional notions of intrinsic value and authenticity, but rather a fluid phenomenon that changes over time and varies from generation to generation [29]. Heritage value should be recognized for its value of legacy and bequest over time, but also as a long-term evolutionary process, like urban ecosystems because its value has been produced/created/recognized by people over a very long history [6]. In each moment, a given heritage site, building, or object has several different values ascribed to it, so heritage is multivalent and logically suggests a pluralistic approach to value assessment. 'Value is formed in the nexus between ideas and things' [13].

Despite the attempts to include material and immaterial urban heritage dimensions, Fouseki et al. have underlined how, in practice, the Historic Urban Landscape Recommendation has largely been placed on 'materially' and 'visually' oriented actions, where adopted strategies mostly concern urban conservation to prevent and mitigate impacts on cultural and natural heritage [30]. The cultural landscape is therefore recognized as an interactive phenomenon, more specifically a spatial and political phenomenon rich in meanings. At the center of contemporary, interdisciplinary, and critical research on heritage lies the idea that it is a social construct, the result of specific social processes at a certain place and time [13]. The meaning of heritage cannot therefore be associated with something fixed, but rather as something extremely intertwined with every aspect of individuals' lives, says museologist Susan Pearce, as something that social groups explicitly or implicitly recognize as part of their self-definition. Whether it is works of art, buildings, or ethnographic artefacts, cultural and material culture products have different meanings and uses for different individuals and communities. The attribution of value is what gives meaning to objects and places, creating the concept of heritage.

From a methodological point of view, the assessment of heritage values is very hard, and these difficulties stem from diverse factors, such as the nature of heritage values (cultural, economic, political, aesthetic and others - some of which overlap with others), the ever-changing nature of values themselves, which are strongly shaped by contextual factors (such as social forces, economic opportunities and cultural trends), the conflict between some values, and the wide variety of methodologies and tools for assessing them [13, 28]. Too often, experts determine heritage significance based on a limited number of established criteria or apply the assessment through unidisciplinary means. As an alternative to this approach, this paper advocates a transdisciplinary approach to analysing and evaluating heritage values.

2.2 Heritage-Based Innovation Models

Among other aspects, it is important to underline that socio-cultural sustainability approaches consist of a hybrid set of hard-to-measure "soft indicators" and ambiguous terms and concepts such as governance, community, and culture [31]. Both tangible, such as physical patterns, and intangible, such as symbolic meanings and values are attributed to the places where we live, which are marked by distinctive characteristics

[32] as well as aspects related to expression and language, such as art, music, dance, etc. In this sense, according to Taylor (Fig. 5), sites and objects assume the position of place within the *cultural landscape* that surrounds them, and the meanings we attribute to them give rise to local identity and a sense of belonging for communities.

Returning to the holistic, integrative, and value-based approach of the HUL, future challenges in the field of heritage conservation derive from contexts, namely from the values and meanings that communities attribute to them. The HUL approach still represents a valid point of connection between the concept of the cultural landscape and the analysis of the system of values layered within it.

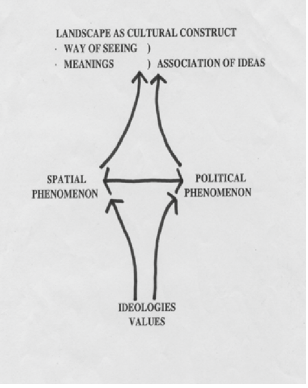

Fig. 5. K. Taylor's diagram for the concept of landscape as an interactive phenomenon.

The Recommendation specifically highlights the temporal dimension of the management of historic cities and their heritage, recognizing in the landscape approach an inspiring urban practice for the creation of democratic policies, which integrate the issue of heritage values within long-term urban planning. The approach presupposes an integrated – we could say *assembled* – environmental vision, which, referring to urban management approaches, opens up to a wider range of stakeholders, residents, investors, and experts. Consequently, heritage also expands its agency to a broader environment. In everyday language, the word 'environment' – as underlined in the previous paragraphs for the term 'landscape'- is normally associated with the natural environment, but its meaning is also commonly linked in the literature to the whole of societal subsystems. In a spatial-political multi-level architecture, societies could be located at different levels of aggregation - ranging from local to national and trans-national – and also being contextualized by the 'natural environment' [23]. Based on the interaction between living and non-living organisms, we define an 'ecosystem' as a sum of these relations. The concept of the ecosystem, originally rooted in the natural sciences, can be reimagined and adapted by the social sciences to form a 'social or societal ecosystem'. A societal ecosystem encompasses essential elements such as actors, institutions, structures, and processes, along with their intricate interaction patterns, mirroring those found in natural ecosystems. Moreover, it extends to encompass the contextualization provided by the social environments of other societal subsystems and is further contextualized by the

natural environment of the entire society. Societal ecosystems also have the potential to interact with both their social and natural environments.

Taking their cue from these representations in paragraph 1.3, the authors have developed a Quintuple Helix scheme that aims to generate a synthesis of these two approaches. The diagram represents the three subsystems which are education and academia, the political and governmental system, and the economic system. Following the model already outlined by Carayannis and Campbell, where at the intersection of the three sub-systems lies eco-innovation, the authors have included art as a generative innovation approach. The three systems are interconnected and, learning from the assemblage approach, outline continuous interrelationships between their elements. The civil system embraces the three sub-systems. In turn, the civil system is embedded in a natural and anthropic ecosystem, defined as the environment, which we could define as 'landscape', continuing the holistic approach outlined in the previous paragraphs. With the aim of restoring a framework of relationships, a new reinterpretation of the model of the Quintuple Helix is thus outlined, informed by the elements and relationships that constitute the assemblages (Fig. 6).

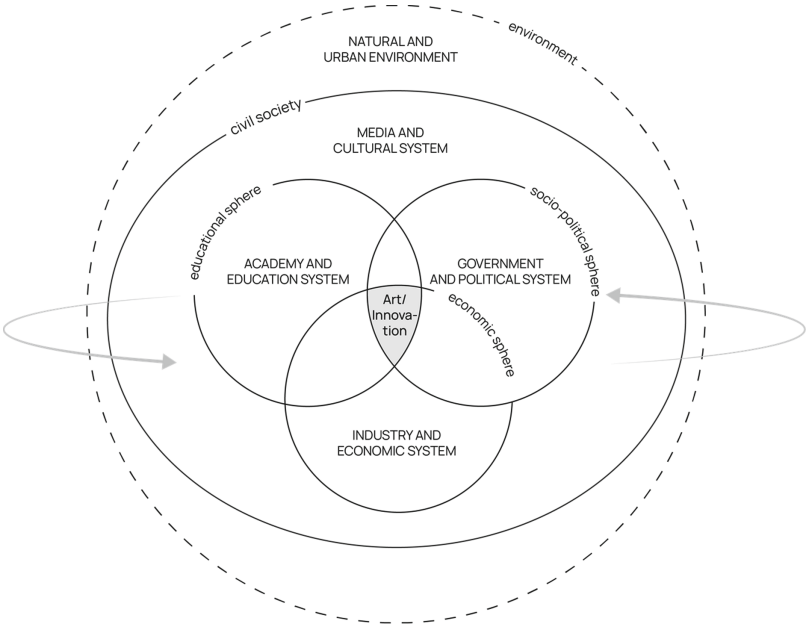

Fig. 6. Authors' elaboration which comes from the intersection between Thomas Hischhorn's schema in Fig. 2 ("The place of a work of art", 2022) and The Quintuple Helix model by E. Carayannis and D. Campbell, 2010, informed by assemblage theory.

2.3 The Cultural Values Model

The conservation community employs the term 'cultural significance' to encompass the various values attributed to objects, buildings, or landscapes, ranging from aesthetic to economic. Despite efforts to classify these values and promote value-driven conservation policy and management, there remains a gap in understanding how heritage functions within society and how cultural significance is best evaluated over time. Cultural significance in conservation decision-making cannot solely rely on scholarly constructs; instead, it requires negotiation among professionals, academics, and community members who value the object or place [13]. In evaluation, the explicit recognition of the existence of multiple interdependent values, which may sometimes even overlap with each other, allows us to include instrumental and intrinsic heritage values within the evaluation process. Intrinsic value allows us to go beyond the private sphere and reflect on collective benefits and externalities, making a clear ethical dimension explicit. It expresses the 'glue value', the intangible relationship system, its specific character, its particular identity. The recognition of values allows us to highlight different perspectives that can be of fundamental importance in the normative exercise related to a problem of public decision-making. These issues, therefore, are closely linked to decision-making processes, which strongly depend on the link between knowledge and values. When we talk about the recognition of values, we mean to reconnect to the multiplicity and diversity of knowledge. Already in 1999, McGlade proposed that the core issue lies in the "systematic fragmentation of individual specialist observations, which are subsequently 'incorporated' into a synthesized reconstruction of the cultural environment" [33]. Zeleny [34] speaks of the value complex as a concept anchored and deeply embedded in a cognitive equilibrium, based on mostly qualitative principles rooted in specific contexts.

The methodology presented here can be extremely supportive for decision-making processes concerning management and/or development strategies for heritage-rich sites. The recognition of the different values within the cultural landscape, but also of how these intertwine and mutually reinforce each other, is not unique. The Cultural Values Model seeks to discover what communities themselves value about their landscapes, to prevent decision-makers from relying exclusively on the version of 'landscape' proposed through the lens of the expert method or the canonical evaluation tools [35]. Thus, values that are not captured by these typologies may be ignored and therefore not legitimised. The methodological structure of the model adopts a participatory approach, which aims to offer insights that are less constrained by legal precedents or established valuation practices and more reflective of the actual cultural dynamics between communities and their landscapes. Drawing on contemporary landscape theories and holistic models, we can define some key points that define the structure and originality of the Cultural Value Model (CVM) for evaluation presents several challenges to conventional evaluation methods: abandoning traditional top-down metrics and the adoption of user-defined values; addressing the data collection methods to diverse stakeholder concerns; integrating the evaluation to the complete project design; approaching a participatory evaluation, which allows stakeholders to play a significant role in shaping processes and outcomes [36].

3 Case Study

3.1 Hadrian's Wall: An Eco-System of Values

Hadrian's Wall, in the UK, constitutes an archaeological resilience of great impact in English history, forming a whole with the surrounding landscape, since, if separated from it, the wall in itself loses meaning. In this sense, it represents a pertinent example of what we understand as both a natural and cultural ecosystem, where cultural heritage, in this case historical-archaeological, and the surrounding landscape are closely connected. The Wall constitutes an archaeological resource that, together with the surrounding landscape, is composed of economic, ecological, aesthetic, etc. values. The report published by the Getty Conservation Institute in Los Angeles constitutes a reference for the analysis of an emblematic case in the world of natural and cultural heritage, within which the values recognised by the experts can now, thanks to the established management model, be extended to the entire region. Recently, the archaeological sites and their socio-natural context have been the subject of an evaluation, contained in the aforementioned report, which has expanded the range of perceived values that have evolved and succeeded in this area over time. This has made it possible to adapt the management model of the archaeological sites, achieving a deeper understanding of the historical and cultural landscape, so richly stratified, bearer of narratives from different eras and places [37]. Such a territorially broad view requires an equally broad consideration of values (Table 1). The land is currently in active use and under the control of many distinct owners, but over time a non-exclusive approach to archaeology and historical value has settled in, which has allowed for a broadening of contemporary use values, allowing for complex and extensive landscape management.

Table 1. Hadrian's Wall values assessment: author's re-elaboration based on Getty Conservation Institute Report about Hadrian's Wall and site management plan (https://hadrianswallcountry.co.uk/management/values/, last accessed May 8, 2024).

Values Typologies	*Single values*	*Values significance*
Socio-cultural Values	*Historical and archaeological value (including academic/educational value)*	It represents the capacity of a site to transmit, embody or stimulate a relationship or reaction with the past (Roman Empire remains)
	Cultural/Symbolic Value	It refers to fundamental elements of culture, such as ideas, materials and customs handed down over time (identity as World Heritage Site)
	Social Value	It enables and facilitates social connections, networks and other relationships in a broad sense (promotion of management partnerships)

(*continued*)

Table 1. (*continued*)

Values Typologies	*Single values*	*Values significance*
	Aesthetic Value	It represents the visual appeal of heritage, encompassing notions of beauty and formal relationships, enriching the overall sensory experience of heritage and influencing individuals' well-being
Natural Values	*Landscape Value*	It represents the influence of the Wall archaeological remains on land morphology and in shaping the surrounding context
Economic Values	*Touristic Value*	It represents a strong but not primary value in site management, which is anyway integrated with heritage values
	Agricultural Value	It is represented by traditional agriculture and pasturage, which are still a powerful lever for managing landscape and site and it's strongly connected to the aesthetic and historical value of H.W. site
	Non-Use/Non-Market Value (including Bequest Value)	It represents an economic value that is not traded in or captured by markets and is therefore difficult to express in terms of price, for which individuals would be willing to allocate resources/money to acquire and/or protect them

Since the emergence of modern historical inquiry during the eighteenth and nineteenth centuries, the significance of the Wall has predominantly been understood through the lens of Roman-era archaeological and historical artefacts. However, in recent times, there has been a notable shift in perception, with the recognition of a much broader and more diverse range of values and contemporary uses associated with the site. This expanded understanding now encompasses a deeply layered historic landscape that reflects multiple periods and narratives, while also embodying significant contemporary values [37]. The site today takes on a new position, where the integrated landscape of archaeology, and natural and historical heritage is composed as an assemblage of agencies, each of which is recognised through shared values. Indeed, the management policies adopted by the site have influenced the international landscape, creating a historical precedent where the collaboration of private owners, agriculture and pastoralism and culture sustain an entire region.

4 Conclusions

4.1 Values, Cultural Significance and Policies

The presence of heritage in most European cities has led to the search for worthy solutions for issues of great relevance for the preservation of the local built, archaeological, cultural and natural heritage. When contemporary urban transformations meet the so-called *historic urban landscape*, which brings together multiple aspects characteristic of Europe's stratified urban fabric, great changes and exceptional procedures for the local planning system can occur. As pointed out in the previous paragraphs, some authors have shown some limitations of the UNESCO Recommendation on the Historic Urban Landscape, revealing that most of its references to sustainable development were related to the conservation of the built heritage. As David Lowenthal notes, "Heritage is never merely conserved or protected; it is modified—both enhanced and degraded—by each new generation." Conservation, like all social activities, is not objective; it is influenced by the values and perspectives of various individuals and interest groups. Values assign significance to certain objects and places, thereby transforming them into "heritage" [38]. The risk of a heritage-driven approach, when based only on conservation principles attributed through academic or expert knowledge, circumscribes the possibility of a democratic recognition of true values of heritage and so of shared and sustainable policy decisions. This happens unless such an approach is imbued with participatory planning and environmental concerns related to sustainable living in communities [5]. Serving as a unifying theme, landscape enables the consideration of various contributions from multiple disciplines, facilitating a holistic understanding of landscape values. It allows diverse researchers to explore different topics while collectively contributing to a more comprehensive grasp of spatial, temporal, ecological, and cognitive concepts [39]. Moreover, the landscape offers opportunities for collaborative endeavours among disciplines and communities [40]. The growing need to assess and monitor landscapes also calls for the development of open methodologies to evaluate the impact of policy measures and their effects. Furthermore, these methodologies are crucial for sustainable conservation and protection of natural and cultural capital, as well as for territorial planning and landscape management [41].

In this sense, by presenting the case of Hadrian's Wall and its ecosystem, this research attempts to set precedents that serve to identify and recognise the impacts that contemporary interventions have within heritage-rich contexts. Over time, there has been a notable evolution in the understanding and management of the diverse values associated with this heritage site. What used to be considered only for its archaeological presence, today constitutes a multifaceted cultural landscape, made up of practices and strategies, people and actions that have contributed to making this site of great historical and environmental significance.

Acknowledgements. The obtained results of this research synthesise data collected within the TUPACH project – Transnational Urban Projects Assembled within Cultural Heritage sites – conducted by prof. Laura Lieto (Department of Architecture, University of Naples Federico II) and her team, prof. Davide Ponzini (Politecnico of Milan) and his team, and Dr. Matteo Basso (University IUAV of Venice).

Author Contributions. The authors jointly conceived and developed the approach and decided on the overall objective and structure of the paper: Conceptualization, M.C. and S.V.; Methodology, M.C. and S.V.; Software, S.V.; Validation, S.V.; Formal Analysis, S.V.; Investigation, S.V.; Data Curation, S.V.; Writing-Original Draft Preparation, S.V.; Writing-Review and Editing, M.C. and S.V.; Visualization, S.V.; Supervision, M.C. All authors have read and agreed to the published version of the manuscript.

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