Urban landscape in sustainable transformation: cultural heritage and contemporary architecture integration within urban area

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Abstract. Since the debates on the New Heritage Paradigm for Managing Change in 2000s, the polemics on “cultural heritage/urban preservation” vs. “urban development”, challenges of integrating contemporary architecture within historic urban area and gaps between theory and practice still occur despite the adopted Historic Urban Landscape (HUL) approach in 2011. The article provides a research aimed at finding current trends in theory and practice concerning the comprehensive assessment of cultural heritage preservation and urban development practice, critical views on HUL approach and development of new alternative approaches & strategies, including the search of the new forms of urban heritage as contemporary architecture, and the best practices in integration of cultural heritage sites with contemporary architecture within urban area. It contributes to the further researches and discussions on the form, direction and capacity of contemporary architecture integration within historic urban landscape to ensure managing urban changes for sustainable urban development.

Keywords: cultural heritage, contemporary architecture, historic urban landscape, sustainable urban development.

1 Introduction

Today, the dynamic nature of urban development is recognized as a part of the global processes of urbanization and globalization at the local and international levels. As indicated in the UN-Habitat reports, more than half of the world’s population lives in the cities, but close to five billion people are expected living in the cities within two decades [1]. Such huge pressure on cities leads to unavoidable transformations. This applies not only to metropolises and major cities, but also to small cities, which, under the onslaught of urbanization, are facing common challenges as the lack of administrative capacities and the lack of flexible adaptation to demands of current urban development [2]. Experts in the field of cultural heritage protection and urban development accept the fact that a large number of historical cities around the world are on the path to change due to the accelerated pace of structural and spatial transformations [3].

Most of the cities have already lost a significant part of their traditional urban typology and morphology due to the failure of many projects since 1970s [4], geopolitical conflicts, a speculative urban development policy [5], pressure of economic development [1, 4, 5], the decline and lack of interest of the authorities, gentrification or economy-driven new urban development focused on buildings with commercial and/or Star Architecture attributes within historic urban landscape [6] in the hope of receiving so-called “Bilbao effect”. International conservation polices and local standards, as strong as they could be on the paper, were unable to prevent ongoing and sudden transformations performed by new high-rise buildings and new non-contextual large scale constructions in the historic
city centers and areas surrounding cultural heritage properties at national, regional and local levels, including the World Cultural Heritage (WCH) sites (e.g. St. Petersburg, Vienna, Dresden, Liverpool, Cologne, Seville and London). Therefore, identifying ineffective general conservative approach on cultural heritage management and legislation expressed in theory of the discipline that cannot explain and guide its practice, experts have linked the crisis with Vienna case [7-9] by placing its date as 2002 due to debates during the 26th Session of the World Heritage Committee for delisting Historic Centre of Vienna inscribed on the WCH List just only one year earlier because of high-rise constructions within its buffer zone affecting the authenticity and visual integrity of the site [9].

Cities as dynamic urban systems constantly pass through phases of exploitation, conservation, release and reorganization [10], however the conflicts of integration of new architecture from ordinary to “star architecture” into (or even outside) historic urban landscapes and UNESCO sites are placed [11]. The progressive recognition of the fact that historical cities are spaces including the diversity and complexity of cultural expressions at different times [7, 10, 12, 13] leads to the understanding that total the preservation of heritage sites and the historical urban environment impedes the natural development of the city [12, 14]. Thus, the academic and practical studies emphasize the issues of historic urban landscape and its processes of transformations to achieve sustainable & resilient urban development [5, 10, 13, 15-17] and a balance between cultural continuity and sustainability [7, 17-19] which are expressed through integrated process of cultural heritage preservation and urban development [2, 20]. As a consequence, an attention shifted from single monuments, group of buildings and sites to historic urban landscapes and urban heritage with its possible tangible and intangible forms [12, 16, 21]. Urban heritage becomes a model that defines physical and social pattern of the city, and its value is addressed to local socio-economic and socio-cultural concerns [16, 20, 22].

Despite the changed development vector in Heritage Studies, intensive debates on paradigm shift and Limits of Acceptable Changes (LAC) have divided experts into two opposite groups: conservatives (“protectors”), mainly consisting of historians and archaeologists, have focused their attention on cultural heritage conservation, although innovators (“developers”), generally composed of the specialists in the field of architecture and urban planning, have argued for sustainable urban development based on strategy of managing changes [9]. But throughout their polemics between 2000 and 2010, and today, these apparently antagonistic views, resulting in the UNESCO 2011 Recommendation on the Historic Urban Landscape (HUL) towards integration of cultural heritage policies and urban management visions to mitigate of negative consequences in both conservation and development processes [3], have led and still lead ongoing discussions: quantitative and qualitative changes by integrating heritage conservation into local management systems against opposite actions addressed to avoiding changes in favor of ‘classical conservation’ [7]. Nevertheless, the crisis in the conservation policy and the change of the conservation paradigm in the early 2000s gave a transition from the classical practice of “conservation” to the paradigm of “managing change” – the New Heritage Paradigm for Managing Changes – expressed in the Historic Urban Landscape (HUL) approach by “placing heritage at the focus of strategic planning” [23] where “change management has been replaced by the term management of continuity in the context of World Heritage” [7], but, also, contemporary architecture has come to be seen as one of the cultural heritage form [3, 24, 25]. Originally, the HUL approach was aimed to bring the same significances of the past as “urban conservation”, the future as “urban development” and the present as their both permanent connection and arbitrator [12]. However, numerous experts and authorities in the field of heritage protection and urban development are still raising theoretical and practical challenges by highlighting the methodological gaps between academic researches and practical tools as well as missing links between conservation and development disciplines [1, 7, 12, 16, 20, 21, 23]. Therefore, the focus of this research is to explore the current status of the issues of theories and practices concerning the cultural heritage preservation, urban planning and integration of the contemporary architecture with historic urban area within HUL approach, urban resilience context and framework of the sustainable urban development.
2 Materials and methods
The primary literature review shows the challenges in cultural heritage preservation and urban planning within the strategy for implementing of the HUL approach. Therefore, the first part of the current research relates to the selected literature analysis of the authoritative publications from 2015 to early 2020. Results reveal six key trends in theory concerning to: (1) understanding a conflict between conservation and urban development transformed into the strong criticism of weak relationships between theory and practice within the New Heritage Paradigm of Managing Changes; (2) searching for Conflict-Solving Strategies in Heritage Studies within HUL approach; (3) exploring the New Heritage Paradigms as an alternative to current paradigm of heritage in sustainable urban transformations; (4) searching for alternative visions to cultural heritage preservation and urban development beyond the traditional perspectives in the Heritage Studies; (5) exploring new forms and representations of urban heritage as well as dealing with contemporary architecture; (6) searching for the best practices in integration of cultural heritage with contemporary architecture within urban area. The second part of the current research includes the analysis of six case studies: the integration of multifunctional pedestrian bridges as contemporary architectural properties with historic urban context under the influence of social & urban development factor, historic & cultural factor and factor of the presence of visual connections and landmarks.

2.1 Trends in Managing Urban Changes within Historic Urban Landscapes for Cultural Heritage Preservation and Urban Development
The first trend in the selected literature evidences a conflict between conservation and urban development transformed into the strong criticism of weak relationships between theory and practice within the New Heritage Paradigm of Managing Changes. Various literature highlights not only this conflict, but tries to identify the cause-and-effect relations. In particular, some papers appeal to Bandarin and van Oers’s statement “modern conservation is a modern utopia?” [12, 26], but Sonkoly [12] argues that their phrase expresses inner contradictions of HUL approach as a modern utopia of presentist, being a new phase in the evolution of urban planning and architecture. The shift from the theory to practice to implement HUL approach as an escape from static concepts of heritage is still in the progress and may be defined as an unsolved problem due to “ambiguity in characterization methods of tangible heritage in the built environment” [20] or “new theoretical and practical challenges regarding how ongoing and sudden transformations in cultural World Heritage properties, and their environment, should be managed in a wider context” [7], or management deficiencies with unplanned development factors [23].

According to Kloos [7], such problems relate primarily to the overall direction of HUL approach where a focus from conservation of isolated monuments and sites devoid of people have turned to sustainable development of the cities and inhabited areas on a wider scale with a high level of complexity in a relatively short period. However, Taylor [1], Jokilehto [22], van Oers [5], Bandarin [4], Ginzarly et al. [16] and Sharifi et al. [10] point to the international narrow focus on conservation of the urban areas over the last two decades: instead of conservation only famous buildings, the politics should be also based on community-led practice with culturally contextualized and development-oriented approaches as regulatory and planning tools to significantly impact on national implementation of HUL recommendations and to reach sustainable urban development. In considering this issue further, as being not only physical entity, but a living space and socio-cultural construct that changes in time and space, the urban landscape should be contextualized in relation to dynamics of local heritage governance and urban development [16]. Nevertheless, different groups of experts referred in their researches to the privilege of Eurocentric standards on heritage preservation where UNESCO is often linked to such perspectives excluding local value-based approaches and visions for the “non-Western” cities by imposing “authorized discourses” globally [16, 21]. However, UNESCO addresses the protection and management at national and local levels (Articles 97 and 98) in the Operation Guidelines (OG) for the Implementation of the World Heritage Convention [27]. In 2015, Pereira Rodgers et al. has demystified the assumption of Eurocentrism within a trend called “UNESCO
to blame" based on the comparative data analysis including UNESCO documentation and reference texts, but, as authors have claimed, the further researches may not provide the same results [21]. Moreover, although the raise of politicization of UNESCO has been seen in Vienna case (2017-2020) on the city authorities’ (re)negotiation of the urban landscape under the outside international pressure [6] or in conflictive delisting process of the Dresden Elbe Valley in 2009 [9]; or in Liverpool case (2012-2020) where World Heritage Committee requested to adopt a moratorium for new buildings within the property and its buffer zone until all requested management and development plans in Liverpool would not be reviewed and endorsed by the World Heritage Centre in 2019 [28].

In fact, we again faced with dilemma between conservation and limitation of urban development. Even though HUL approach was originally aimed to integrate conservation, development, management and planning disciplines, the systematic review of the literature on the HUL (2010-2018) by Ginzarly et al. [16] shows a missing link between these disciplines: conservation is associated with restoration and architecture, development with cultural recourses, planning with building and place, and management with heritage, approach, integration, values, context and policy. In particularly, Ginzarly et al. [16] indicates the operationalization level of the HUL approach which is “not fully contextualized in relation to local heritage discourses and the dynamics of heritage governance” to move from a conceptual level to an operational level, and to adapt international guidelines to contextualized local policies.

Besides the above-mentioned efforts to bring a shift from theory to practice and to develop a theoretical background for practical tools, some researchers have highlighted a lack of methodological basis and a lack of legitimate status for some internationally recognized tools [7, 9, 20]. Current tendencies in urban planning are often compared to Soja’s “scanscapes”, globalized phenomenon of Disneyfication of the cities and Koolhaas’s Junkspaces [12]. Therefore, World Heritage Management plans, monument protection areas, land use and land development plans, and WCH buffer zones as the traditional tools, in their current applications and visions used before and after HUL approach adoption to management changes (or historic continuity) in WCH sites and their surroundings, have been criticized for being static and ineffective mostly because of their two-dimensional characteristics and their detachment from legislative framework [7]. Different local controversial practices to define the WCH buffer zones have been pointed in Agisheva’s research that shows a weak methodology not only at international level but also within each State Party’s region where there is or not legal status for buffer zones [9, 14]. Such use of zoning tools (e.g. planning practices, buffer zones), in their static condition with conservation of regulatory boundaries, “specialization” or “delimitation” towards creating of “impenetrable” compartmentalization of the historic urban landscape, gives unclear understanding of the role of HUL approach within management framework [20]. Another progressive instrument to be effective in theory as Heritage Impact Assessments (HIAs) was reviewed in diverse local practices by Kloos [7] to give an example of three different HIA end results made by independent groups of experts for evaluation of the same planned new waterfront with high-rise tower blocks in vicinity of WCH site Liverpool – Maritime Mercantile City.

The trend shows the weaknesses and gaps not only in theory in Heritage Studies and practices in urban planning and managing changes, but also in their methodologies and practical tools at their shift from international level to local levels.

The second trend in selected literature covers the searching for Conflict-Solving Strategies in Heritage Studies within HUL approach. Despite the findings and criticism of current holistic approach and conflict of interests with a missing link between theory and practice shown in the first trend, the researchers are exploring ways of scientific and political discourses in cities thought the concepts of urban sustainability and resilience. As to Turner, the UN 2030 Sustainable Development Goals (SDGs), adopted in 2015, resent new challenges to the conservation and development agendas requiring a focus on urban heritage to “ensure inclusive, safe, resilient and sustainable cities and the development of new attributes and indicators compatible with the UN Habitat New Urban Agenda” [13]. Recognizing the dynamics and complexities of urban systems and the need to change and adapt historic urban fabric, experts in urban development management provide discussions on
implementation of the concept of resilience-oriented urban planning addressed to sustainable urban
development that should involve regular monitoring, assessment and scenario making [10, 15]. In
particular, Ripp et al. [15] offers to consider urban heritage directly for contribution of urban resilience
on different levels through (1) design and construction, (2) appropriate materials with height level of
'repairability', (3) adapted uses and (4) residence factors in urban planning. Sharifi et al. [10],
referring to Gunderson and Holling, stresses the occasional exceeding of critical limits of urban
systems due to the alternation between long-term & slow period of shift from the "exploitation" to the
"conservation" (with normal functioning, relative stability and relatively predictable changes) and
short period of shift from the "release" to the "reorganization" (with chaotic changes, high
uncertainty and sudden increase in unpredictability). Inspired by the concept of adaptive resilience
based on complexities and dynamics of urban systems, research of Sharifi et al. [10] is based on the
thesis that urban resilience is defined as “ability of urban systems to continuously develop short-term
coping and long-term adaptation strategies - considering, and in response to constantly changing
system dynamics and complexities over a range of spatial and temporal scales” with its application to
urban planning, land use planning and design.

To manage urban changes and close the gap between theory and practice, Kloos [7] highlights
effectiveness of integrate use of HIAs as an advanced practical tool in planning processes for
sustainable management of WCH sites and their surroundings in case if it is embedded in European
planning legislation, applied on the early stages of planning & design processes, and integrated with
Strategic Environmental Assessment (SEAs) and Environmental Impact Assessments (EIAs).
Extending the list of potentially effective practical tools, Agisheva [9] states that the WCH buffer
zones may be a dynamic and flexible instrument of the applied principles of “conservation &
development” for the urban management system by including terms and conditions of the WCH buffer
zones into the local legislative systems and by elaborating methodology to create these zones within
sustainable and resilient strategies, and spatial and temporal dimensions to set the Limits of
Acceptable Changes (LAC).

The third trend in literature combines exploring the New Heritage Paradigms as an alternative to
current paradigm of heritage in sustainable urban transformations. As seen in the first trend, the
criticized approaches within New Heritage Paradigm for Change Management prompted researchers
to look at this case from another angle. As to Boccardi’s [18] urgent plea to paradigm shift from the
current “mitigation” strategy directed at preventing damage to heritage to the “adaptation” approach
as a New Paradigm for the Anthropocene, such concept is based on idea of a new geological era called
the Anthropocene (human being is responsible for all changes) and aimed to look beyond the Western
perspectives by emphasizing heritage as a “quality” to transfer cultural values for achievement of
continuity and sustainability. More holistic perspective addressed to the ’paradigm of
continuity” was considered by Juma, Harris and Turner who focused an attention on heritage issues in
terms of time, vision and space [19]. In particular, Turner has performed a concept of “spatial
continuity” based on holistic and dynamic approach to go beyond the idea of conservation area
dealing with historical, geographical and contextual aspects for providing urban sustainability,
coexistence, compromise and social inclusion [17].

The forth trend in analyzed literature refers to searching for alternative visions to cultural heritage
preservation and urban development beyond the traditional perspectives in the Heritage Studies.
Researchers find a link within a cross-disciplinary study through the related disciplines such as
philosophy, sociology, psychology and etc. Moreover, as to Kostešić et al. [29], a comprehensive and
parallel approach, comprising sociological, psychological, economic and spatial studies, could provide
a “strategy for creating revitalised space through the synthesis of urbanism, architecture and design” as
well as “simultaneously planning and designing in different scales and grounding the result on both
material and symbolic elements of urban space and life would give way to a coherent and meaningful
environment supporting the integrity and identity of a place”. On philosophical basis including
Heidegger’s spatial theory, Norberg-Schulz’s phenomenology of architecture and etc., Petrović et al.
[30] proposes actively using phenomenological concepts in contemporary spatial design disciplines
within pro-sustainable efforts that reflected the values already captured in phenomenology to implement it in architecture and design. However, Bagnato et al. [31], with reference to epistemological and architecture perspective, referred to appearance of new interpretative approach focusing on “life cycle” of the sites and modalities as a way to dialogue with the “social dimension of the environment”.

Another group of researchers appealed to Foucault’s theories in “heterotopias” and paradigm of governing and power to link it with issues on contemporary processes of cultural heritage preservation and urban transformation [12, 32-34]. Thus, Spanu explains heritage (“heritage space” and “heritage object”) as a heterotopic space by giving arguments of its tertiary and hybrid character due to the evolution of attitude towards perception, meaning, status and conceptualization of the heritage and problems of its authenticity and reconstruction [32], and that heterotopic duality in heritage character allows to identify which architectural space might be modified or preserved to “create alterity” in context of architecture and urban planning [33]. Sonkoly [12] applies Foucault’s trio of security, territory and population to integrate the conceptual history of urban heritage into a wider historical context to identify its changes.

Rethinking and reinterpretation of “urban palimpsest” and “tabula rasa” vision is found in publications of Malaud [35] and it develops in idea of “tabula plena” as an urban system for compromises between preservation and development, and old and new performed by Roberts et al. [26]. Emphasizing the process of formation and transformation of urban space with its diachronic characteristics, the syntactical study of spatial history (space syntax historical research) is used by Palaiologou et al. [20] to examine “space, time and function as interrelated layers of formative processes of the urban landscape, which is seen as complex system” and to study the ways of “how these layers and processes initiate change in the urban landscape and how they are affected by change”.

For deeper understanding of the urban “past”, “future” and “present”, Fouseki et al. [37] links heritage and sustainable urban transformations through a “deep cities” approach that provides knowledge on the possibility of integration of the long-term, temporal and transformative character of urban heritage into urban polices for the future of sustainable historic cities. However, Pokka [38] has appealed to the origins of the Soviet avant-garde architecture schools to identify the original approaches of the past on reconstruction issues of the urban environment and working with historic urban context within dialectic of “traditions” and “innovations”: an attention is being given to Vesnin’s concept for synthesis of functional, constructive and plastic characteristics in architecture forming & perception, to Leonidov’s contextual approach, and specially to Ladovsky’s methodology due to objective psychophysical principles of architectural space perception.

Seeking to re-examine the visions and perceptions of the traditional and current visions in Heritage Studies in view of the HUL implementation, the trend could have positive perspectives for further clarifications in systems of values to manage the urban changes in respect of cultural heritage preservation with intelligent interventions by contemporary architecture.

The fifth trend in literature is revealed in the exploring of the new forms and representations of urban heritage as well as dealing with contemporary architecture.

Originally, since the late 1960s, the recognition of the artistically or historically important recent sites, structures and new architecture has began to be considered on the international scene as a variety of cultural property (UNESCO Recommendation,1968) and “the heritage of tomorrow” (the Declaration of Amsterdam, 1975). Later, recognition of the diversity in forms of cultural expression and cultural heritage (The Nara Document of Authenticity, 1994) has secured a new stage in the compromise of the “new” and “old”, and also has led to the final transition from recognizing the value of only ancient architectural monuments, group of monuments and sites to the modern heritage, the built heritage of the 19th and 20th centuries (the Program on Modern Heritage, 2001– now) and protection & management of ‘urban heritage’ and historic cities (The World Heritage Cities Program, 2006-2011) [9].
Indeed, based on understanding of diversities and complexities of the urban systems, a real breakthrough in identifying urban heritage varieties was made by a paradigm shift in 2000s. By developing the concept of “spirit of the place” defined through tangible and intangible elements (the Quebec Declaration, 2008), historic towns and urban areas are translated through tangible elements (e.g. “urban structure”, “architectural elements”, “the landscapes within and around the town”, “panoramas”, “skylines”, “view - lines”, “landmark sites”) and intangible elements (e.g. “symbolic and historic functions”, “cultural practices”, “traditions”, “memories”) (The Valletta Principles, 2011) [39]. Therefore today, new interpretation of the concept of “urban heritage” is understood not only “monumental heritage of exceptional cultural value”, but “non-exceptional heritage elements”, as well as “new urban elements” in the form of “urban built form” and a system of open spaces as “streets”, “public open spaces” (SUIT, 2004) [3]. Becoming one of the most important documents broadcasting a paradigm shift in heritage policy and integrating discussions on “cultural heritage” and “contemporary architecture”, the Vienna Memorandum (2005) first defines “architecture of quality” for contemporary buildings (Article 22) within the HUL concept in the context of the cultural heritage conservation and managing changes of their urban surroundings [25]. As a result, such variety is highlighting a complexity and integrity of the “historical urban landscape” which includes components as “built environment, both historical and contemporary”, “infrastructures above and below ground”, “open spaces”, “perceptions and visual relationships”, etc. (Article 9 in the UNESCO Recommendation on HUL, 2011) [3]. Such interpretation of the historic urban landscape is reflected in a deep understanding of the urban heritage specifics and determined on historical layering of the values [16, 20, 23] by expressing in urban planning and architectural forms of the ancient and contemporary periods.

By identifying the terms elements, context, future, natural, environment, buildings, place, time, and change that are clustered at the same level and reflected the holistic dimension of the HUL within the results of the study of Ginzarly et al. [16], the authors argue that “urban heritage, instead of being a marginal fragment of the urban landscape, is approached as a model that defines the city and its physical and social pattern”, but, also “value is associated with local socio-economic concerns”.

As to Spanu, cultural heritage is a “heterotopic space” [32] and “heritage itself reveals its utopian encoding” and the impact of heritage listing is addressed as the main trigger of heterotopic functioning of the built heritage as “cultural heritage-as-utopian-projection” [40]. However, Guttormsen [34] sets a conceptual tool for urban conservation and development by integration of four archaeological conceptualizations as “dissolution”, “collage”, “palimpsest” and “stratigraphy” into urban planning toward providing variations of heterotopic urban heritage to implement the links of the past in various cityscapes. Moreover, Fouseki et al. [37] uses “deep city” perspective that promotes a “post-rational aesthetics” which is valuing ruins, rubbish, junk and trash as heritage” to exploring cities not with the long-term depth that “challenge our perception of heritage”. Such studies may provide new series of discussions on heritage values and form.

The advanced understanding of the spatial configuration’s role in production and reproduction of space-time events gives a critique of the current built environment typologies: Palaiologou et al. [20] advances “heritage urbanism syntax” towards issues of urban heritage based on Griffiths’ comprehensive review of the interdisciplinary interaction between urban history and space syntax historical studies. In particular, an inclusion of spatial dimensions in recent Smith’s distinction between “authorized” and “alternative” heritage discourse has given a chance to authors to identify three categories of space syntax work on heritage such as “designed urban heritage”, “assigned urban heritage” and “lived/emergent urban heritage”. Thus, as to Palaiologou et al. [20], designed urban heritage relates to monumentality of the city where both architecture and planning curate form of the urban space and its cultural symbolism, although assigned urban heritage refers to old city core and historic urban areas defined as heritage to be protected by planning law, and lived/emergent urban heritage demonstrates a trend in space syntax efforts to give interpretations of collective cultural value and identify everyday urban spaces.
Moreover, Palaiologou et al. [20] proposes to use conservation areas, street scales and spatial cultures as three study areas for the development of heritage urban syntax to contribute the research outcomes to “policy-making for inclusive, sustainable and resilient heritage futures”. Thus, walkspace systems, according to concept of Zaninović et al. [24], are the “basis for heritage urbanism approach as means of achieving vitality and quality of public space in heritage revitalization”: firstly, walkspace is defined as a specific model of the new and alternative cultural heritage within urban landscape where pedestrianisations, landscaped streets, historic park streets and urbanscape parks are engaged in interconnection of the cultural heritage and creation of the new heritage such as contemporary promenades through public space design, and, secondly, representing the “heritage values in practices of everyday life”, the public spaces might actually act as a “mediator and spatial networking as a planning criterion”. Guided by the general HUL principles defined as continuity, complexity, diversity, conceptuality, integrity, authenticity and sustainability, researchers are trying to identify new forms and typologies of urban heritage within the category of cultural heritage to implement a control & monitoring systems for cultural heritage preservation and urban development in the areas surrounded by cultural heritage properties.

As a result, a list of WCH sites may include not only monuments and sites of ancient times (until the 20th century) and recent past (modern heritage of the middle of 20th century) as it happens today, but properties of contemporary architecture. Thus, for example, about 30-50 years must pass on average from the moment of building construction to the moment when it can be registered as cultural heritage property at the national level (e.g. 50 years in the Netherlands, 40 years in Russia, and 30 years in England or less than 20 years as we observe in USA, France and England). Moreover, as practice shows, contemporary architecture as unique buildings for their positive aesthetic, technological, cultural or social influences on the urban surroundings may become cultural heritage at the local level immediately after construction or after less than the stated time period (e.g. the Willis building in Ipswich, England, designed by Foster Associates or Maison Bordeaux in France, designed by OMA) [9].

The sixth trend in analyzed literature covers the searching for the best practices in integration of cultural heritage with contemporary architecture within urban area.

Studies are focusing on building new practice models for urban adaptation, renovation and planning within the framework of HUL approach [31, 41] or the methods for implementation of various development projects in the historic urban areas [42-44].

Since the challenges of contemporary urban heritage preservation and assessment of urban and design interventions are examined by way of analytical framework to assess heritage cities and quarters, Alföldi et al. [41] proposes to develop diverse adaptation techniques for “managing urban heterogeneity”, which “fit its diverse built, social, cultural, and environmental legacy”. By searching the balance between planning methods and design experience, Bagnato et al. [31] considers the issues of recycling heritage together with contemporary approaches to “sustainable urban and landscape renewal” as the “triad Reuse/Reduce/Recycle” which defines “new interpretative matrices on the relationship between heritage protection, sustainable design and urban planning”.

As to design interventions in the historic urban landscapes, for new development and building reconstruction it is necessary to apply a “contextualization” method (Article 29, The Vienna Memorandum, 2005) [25] by taking into account the continuity of composition and existing spatial structure (Articles 2 and 4, the Valletta Principles 2011) [39], and with a respect of the regional context (Article 12, the UNESCO 2011 Recommendation on HUL) [3]. In connection with the requirements for ensuring the scope of the integrities for the historic urban landscape formed by Jokilehto in 2006 – visual, structural and socio-functional integrities, the focus shifts to formation of the visual integrity between cultural heritage properties and contemporary architecture within the current design practices by using digital documentation, 3D-modeling and HIA tools to apply a monitoring and modeling quantitative and qualitative changes. The primary requirement complies with the principles of large-scale construction (height of buildings) and architectural diversity. Visual impacts of the new buildings could be categorized under “visual intrusion” and “visual obstruction”.
Thus, various methods are being developed for height regulation of new buildings based on vertical restriction of new housing’s parameters by placing sectors of visibility from viewpoints not only on the principle of forming a view forward “to the monument”, but a view back “from the monument” [43]. However, as to Gambassi’s [44] searching, a high-quality design of the new architecture in the territories of historical cities should be expressed by paying attention to three different layers (information layer, interpretation layer, creative layer), with integrity between “old” and “new” building, structures and urban spaces should be based on “simulation” (rebuilding or restoring), “integration” (new elements blended with the old), “analogy” (new elements detached from the old) and “contrast” (new elements in contrast with old). Using new and progressive methods and technologies, Parrinello [42] argues that Digital Survey and Documentation phase creates an integrated Database including information on the state of conservation, Structural analysis of buildings & structures, 3D Models of the existing urban environment, while a determination of valuable elements to be preserved and the limits of urban changes to be followed are permitting the configuration of possible scenarios for urban development within Concept & Design phase.

Six trends, clearly defined in the revised literature, demonstrate the studies focusing not only on one aspect, but numerous. Most studies have been simultaneously identified in various trends. The result of the study shows the trends in theory and practice that require interdisciplinary approaches and further comprehensive researches and discussions.

2.2 Impacts on Sustainability, Continuity and Diversity of the Historic Urban Landscape by Integrating Contemporary Architecture within its Urban Context

While new interpretations of the “urban heritage” have shifted from single monuments and sites to new urban elements as streets and public open spaces [3, 37, 39] including their intangible features as symbolic and historic functions, cultural practices, traditions and role of socio-economic factors affecting formation of the architectural and urban planning environment [39], the comprehensive study of the walkspaces [24] and urban recreational systems with pedestrian spaces and architectural properties [45], as new forms of cultural heritage within historic urban landscapes, should be carried out to define what needs to be preserved, how to manage changes of the surroundings and how to integrate new architecture into historic urban context.

As to the UN Habitat New Urban Agenda (2016), the Goal 97 indicates the intention to “promote planned urban extensions and infill, prioritizing renewal, regeneration and retrofitting of urban areas, as appropriate […], providing high-quality buildings and public spaces, promoting integrated and participatory approaches involving all relevant stakeholders and inhabitants and avoiding spatial and socioeconomic segregation and gentrification, while preserving cultural heritage and preventing and containing urban sprawl” [46]. Considerable attention is paid to public spaces as multifunctional areas and “drivers of social and economic development” (Goal 53), which aim to be safe, inclusive, accessible, green and quality urban spaces (streets, sidewalks, squares, waterfront areas, parks and etc.) for “social interaction and inclusion”, “economic exchange and cultural expression and dialogue among a wide diversity of people and cultures” and “continuity and social inclusion” (Goal 37) [46].

In considering this issue further, developing the research outcomes of Palaiologou et al. [20], such walkspaces and urban recreational systems with all their components and infrastructure might be attributed to “lived/emergent urban heritage” identified as everyday urban public spaces. In fact, a contemporary urban recreational system is formed under the influence of numerous factors: social & urban, economic, historic, cultural, compositional, presence of visual connections between historical and contemporary landmarks. As to the study of Agisheva et al. [45]: (a) under the influence of the historic & cultural factor, the formation of urban recreational system is taking into account cultural heritage (monuments, group of buildings and sites) as the elements of the recreational system; (b) various assets are used for the formation of the urban recreational system under the influence of the social & urban development factor, the factor of the presence of visual connections and landmarks, and the historic & cultural factor. Moreover, contemporary multifunctional pedestrian bridges as an
independent group of structures in the urban public spaces are the elements of recreational systems and their formation happens under the influence of certain factors.

Therefore, this part of the current study is dedicated to the analysis of the integration of multifunctional pedestrian bridges as contemporary architectural properties with historic urban context and some of their architectural capabilities in the formation of recreational systems by taking built and designed multifunctional pedestrian bridges as case studies under the influence of social & urban development factor, historic & cultural factor and factor of the presence of visual connections and landmarks.

Social & urban development factor: the revival of the social & urban significance and interaction with the historical context is analyzed on the example of the competition for the old London Bridge, UK, but communication of the residential area with the historic district of the city is examined on the example of the competition for new bridge in Seville, Spain.

In 2009, The London Union of Architects together with the Royal Institute of British Architects (RIBA) held a competition for the reconstruction of the London Bridge, UK [47]. Previously, in the Middle Ages, it was a favorite meeting and walking place for Londoners. On both of its sides, various shops and attractions are located. A small central part of the bridge was allocated under the carriageway. In the 20th century, the bridge has become completely for car traffic. Thus, the organizers of the competition have urged participants to return additional features to the site. In fact, the bridge is located in the historic center of London which is experiencing a shortage of territories for new constructions and the need for public infrastructure at the same time.

In 2012, the SC2012 Links: Bridging Rivers competition was held for the design of a multifunctional footbridge for the city of Seville, Spain [48]. The city is divided by the Alfonso XIII canal. A place for its development as an inhabited pedestrian bridge was chosen on the border of two districts with different levels of social development. On the right (eastern) side of the canal is an area saturated with historical and architectural monuments including WCH site. The concept of the future bridge is connected with the streets of la Rabida and ave. Chile, as well as from the embankment Delicias. On the left (western) side of the canal is a residential area with dense buildings facing to the coast with a narrow strip of public buildings and green spaces. The building of the tobacco factory also located on the west side is included into the project.

Historic & cultural factor: the several case studies were focused on historic & cultural factor in the functional content of the bridge (e.g. the bridge in Vancouver, Canada) or in the architectural and spatial solution of the bridge (e.g. the tulip bridge for Amsterdam, the Netherlands).

A bridge in Vancouver, Canada crosses the city highway (Lewis and Clark Highway) which separates the territory of the city memorial park and the embankment of the Columbia River. In respecting to the history of the city of Vancouver which came from the historical settlement of the Indians, the park is dedicated to the culture of the Indians [49]. The bridge connects the embankment with the city park to ensure the continuity of urban recreation. The architectural and spatial organization of the bridge is formed by a horseshoe-shaped pedestrian platform with open volumes on it as summer pavilions with information and exhibitions about the historical and cultural sights of this environment.

The idea and imaginative characteristics of the architectural and spatial organization of a multifunctional pedestrian bridge can be caused by the traditional elements, structures, natural forms (including vegetation) for the historic urban landscapes. Versatile tulip pedestrian bridge in Amsterdam, the Netherlands is considered as an ex-ample of such multifunctional pedestrian bridge with the symbolic shape of the bridge which reflects the designer’s intention of its implementation and function with respect to urban context [50]. The Tulip Museum in Amsterdam is located in the historic city center in the Jordaan area as being a part of the WCH site. According to one of the competition requirements, the bridge design had to follow the idea to create a figurative and expressive structure. Being inspired by the tulip as a symbol of the Netherlands, the authors of this project have designed a bridge as a square for Amsterdam in form of open tulip flower due to the moving structures of the supporting-span of the bridge. Thanks to moving construction elements, the petals can open to form an
open area and close to form a flower bud to be a spatial sculpture or installation [50]. Inspiration by certain forms (traditional or natural ones) and application of these forms in architectural structures make them iconic structures in an historic urban landscape, i.e. memorable, delayed in consciousness, associative and contextual properties. These qualities provide the architectural and spatial organization of a multifunctional pedestrian bridge with artistic expressions and values.

The factor of the presence of visual connections and landmarks: the study is focused on the loop bridge in Bosnia and Herzegovina as a connection with the building and bridge in Graz, Austria as a connection with the historic urban landscape.

Originally built as a temple of the Protestant church by Karlo Paržik, the Academy of Sciences and Arts became the main scientific and artistic institution of Bosnia and Herzegovina. The architect designed a complex along the embankment of the Milyacki River in Sarajevo including a church, a priest’s house and a school. The church was connected to the side buildings by arcades. It was built in the early 20th century in neoclassicism. After World War II, the number of parishioners decreased and the building was transferred to the city for placement of the Academy. In 2012, the ensemble was supplemented with a modern architectural structure as a pedestrian bridge. It was built across the river leading to the Academy from the opposite northern bank of the river and organically linking to the historical context. According to the architects, the Festina Lente Bridge [51] is a symbolic gateway to the Academy building.

As to another example, there is a developed urban recreational system with picturesque landscape elements (the Schlossberg hill), historical and architectural monuments along both banks of the Mur River in Graz, Austria. There are several iconic objects of contemporary architecture among the dense historical buildings and area of WCH site: the Murinsel Bridge (island bridge) and the Kunsthaus Museum of Modern Art, which were built in 2003 when Graz was chosen as the cultural capital of Europe. As to Dreher et al., such contemporary buildings pose multifarious effects as “attracting tourists, inducing identification and citizen pride, diversifying the economy and urban regeneration” [52]. The volumetric composition of the Aiola Island Bridge in Graz is focused on perception from the embankments of the Mur River and the additional perception from the upper terraces of the river banks – the Schlossberg hill. The architectural volume is represented by an elongated oval shape with a transparent shell. The steel frame of the volume shell is mainly filled with glass panels and formed the closed part of the building. In the open part of the volume, the shell with its shape forms an amphitheater terrace, which is clearly visible from the heights of the eastern bank of the Mur River.

The case studies demonstrate the positive results of contemporary architecture integration within historic urban landscape that provides cultural continuity and diversity in the urban layering of the resilient and sustainable city.

3 Results
This article performs a study of the authoritative source as literary sources and the main international documents of cultural heritage preservation, and also it gives design examples of cultural heritage and contemporary architecture integration within historic urban landscapes.

As a result, a search is being in progress to determine the limits of acceptable changes and to develop moderate updating schemes, mechanisms for managing changes in the historic urban landscapes. All revised concepts in this study are designed to overcome the barrier between the conservation and development, the theory and practice of urban planning. Conservation is becoming a part of development in respect to the provisions as “development through conservation” and “save through reconstruction”. Both of them do not oppose development with conservation and do not define them as antagonistic characteristics of cultural heritage or the historical urban environment surrounding it. Theoretical works on how the integration of historical and contemporary architecture should begin to appear highlighting certain factors that are especially important for this topic: social & urban development and historical and cultural continuity and diversity. The new architectural study takes theoretical achievements in terms of the Cultural Heritage and Contemporary Architecture.
integration within historic urban context. While the question of their integration remains under discussion, search continues to be carried out at the theoretical and practical levels:

1) Consideration of the urban heritage preservation (all forms and categories) and the development of the urban environment within the framework of the HUL approach and Sustainable Urban Development strategy;

2) Study of the processes for the Limits of Acceptable Changes (LAC) of the historic urban landscapes as a process of managing changes;

3) Development of theoretical concepts and practical methods and tools for cultural heritage and contemporary architecture integration within urban area.

As to adopted typology of the urban heritage, it ranges from buildings, structures, complexes of buildings and structures to open spaces as squares and parks. Therefore, the relationship of historical and contemporary architecture is formed on their mutual combination. With the growth of urbanization of the urban environment, the public spaces began to develop and include additional features and architectural forms. The development of such recreational systems, as public spaces identified as new typology of the "urban heritage", is based on the social & urban planning factor. In the historic urban landscape, recreational systems are also formed under the influence of the historical & cultural factor and the factor of the presence of visual connections and landmarks. Recreational systems in a historic urban landscape differ in location and context between recreational systems in an urbanized historical environment, and recreational systems in a natural environment where landscape is of primary cultural value. To ensure the continuous feature of the recreational system, multifunctional pedestrian bridges are used in the design practice. They get their character depending on the situation in the recreational system and on the context of the prevailing historic urban landscape. Multifunctional pedestrian bridges as new form of the contemporary architectural typology are able to solve the tasks of the urban environment of various kinds (e.g. the social & urban development tasks of the environment to restore the former social activity of the environment, or the tasks of translating the social activity of the historical and cultural potential of the territory to nearby territories). As new typological objects, such new buildings act as a catalyst for the historical and cultural potential of the urban environment, and as visual connections and landmarks focusing on objects that have historical and cultural potential, or become a part of the historical environment by actively enriching it with their appearance.

The research acquires special significant challenge for simultaneous preserving historical & cultural potential and necessity of cultural heritage and contemporary architecture integration within urban context as a mandatory for its further sustainable development.

4 Discussion
The continuous character of the growth of urbanization of the urban environment, the concentration of vital processes, the increase in the density of urban space allow us to talk about the changes that are taking place in the structure of urban space. These changes pose architects and urban planners with the tasks of ecological, social, com-positional nature of the urban environmental design. The similar process happens at the theoretical and practical levels. The development of historical and contemporary urban space is not always directly related to the decisions that are proposed by the existing legislative framework and theoretical studies in this area.

In the existing documentary and theoretical framework, the arrangement of “key” aspects takes place in other areas: the search for adaptation of the heritage according to the requirements of urban development and inevitable modifications; methods for contemporary architecture integration with historic urban landscapes in order to form integral urban structures and reveal the cultural diversity of one or several time periods. Recognition of the city as a “living urban area” with the values of the past (cultural heritage, urban heritage) and the values of the present (contemporary architecture as the future heritage or the heritage of nowadays) does not always ensure the implementation of contemporary strategies. The lack of an established relationship between the main problems of the theoretical and practical base indicates the ongoing crisis that is taking place in this area.
influence of global urbanization and globalization entails not only the transformation of the spatial characteristics in the urban environment, but also contributes to the synthesis of properties of contemporary architecture that are new in typology to express various cultural and socio-economic interests. Therefore, the development of a theoretical base focused on a limited number of the environmental characteristics of the urban space and possible forms of new architecture integration with its fabric is considered to be ineffective.

Bringing into this sphere concepts and ideas from other related fields and disciplines (e.g. philosophical and social sciences) will make it possible to identify other qualities of historic urban landscape by rethinking the semantic, morphological, typo-logical and value characteristics of the urban space. Thus, further researches are necessary.

5 Conclusion

Appeared in the 2000s, a new view on the problem of preserving historical and cultural heritage has given rise to the formation of new tasks. It requires researchers, architects, urban planners and other stakeholders to expand the scope of their scientific and practical activities. Theoretical study is currently being done to find links between theory and practice. The common issues are related to Conflict Solving Strategies in Heritage Studies and Architectural & Urban Design within HUL approach, integrated strategies to achieve the sustainable development of urban area and solve the conflict between these interrelationships.

In practice, the issues linked to the formation of a contemporary urban environment including Cultural Heritage and new buildings. It provides the historical and cultural context which mainly associated with restrictions on function, heights by using HIA and WCH buffer zones to determine the corresponding visual, structural and functional integrities. The issues of social and urban development, morphological nature remain applicable only at the local level or in the conceptual design. A new stage in the development of the Cultural Heritage Policy Documents within the framework of the New Heritage Paradigm on managing changes is marked by the formation of contemporary strategies. It provokes the development of a series of concepts for the contemporary architecture integration with historic urban landscapes. However, the lack of the possibility of their rapid approbation leaves this question open and debatable.

At this stage of the widespread growth of urbanization and the consolidation of the urban environment, changing the conservation paradigm and recognizing the need to create a sustainable urban space, it is necessary to form an appropriate theoretical base that would be related to design practice. A new approach to the formation of urban space is needed: at the same time in the legal fields, in theoretical studies and in practice.

References

[1] Taylor K 2016 The Historic Urban Landscape paradigm and cities as cultural landscapes. Challenging orthodoxy in urban conservation Landscape Research 4 (41), pp 471-480. doi: 10.1080/01426397.2016.1156066

[2] Božić N, Dumbović Bilušić B, Kranjčević J 2019 Urban Transformation and Sustainable Development of Small Historic Towns. In: Obad Šćitaroci M., Bojanić Obad Šćitaroci B., Mrda A. (eds) Cultural Urban Heritage The Urban Book Series. Springer, Cham. pp. 113-125.

[3] UNESCO (2011) Recommendation on the Historic Urban Landscape, https://whc.unesco.org/en/hul/, last accessed 2020/03/15.

[4] Bandarin F 2015 Sustainability in the world heritage convention: The making of a policy framework. In: Albert M-T. (eds) Perceptions of Sustainability in Heritage Studies. De Gruyter Heritage Studies, vol. 4, pp 35-46.

[5] Van Oers R 2015 Cultural heritage management and sustainability. In: Albert M-T. (eds.) Perceptions of Sustainability in Heritage Studies. De Gruyter Heritage Studies, vol. 4, pp. 189-202.

[6] Guinand S 2020 Star Architecture and the Urban Landscape: The Case of Vienna. In: Alaily-
[7] Kloos M 2017 Heritage Impact Assessments as an Advanced Tool for a Sustainable Management of Cultural UNESCO World Heritage Sites: From Theory to Practice. In: Albert MT., Bandarin F., Pereira Roders A. (eds) Going Beyond Perceptions of Sustainability in Heritage Studies, 2, Springer, Cham pp 335-350. doi: 10.1007/978-3-319-57165-2_24

[8] Sonkoly G 2017 Vienna and The Vienna Memorandum. Palgrave Macmillan, Cham In: Historical Urban Landscape pp 77-122. doi: 10.1007/978-3-319-49166-0_3

[9] Agisheva S 2017 Modern Heritage and Buffer Zone: Integrated method for managing protection of the site and development its surroundings in the urban area. ICOMOS, Florence-Warszawa In Szymgin B., Burke S. (eds.) Heritage for Future: Modern Heritage – Identifying, Assessing and Managing its Protection and Conservation, 1(4) pp 17-28.

[10] Sharifi A, Yamagata Y 2018 Resilience-Oriented Urban Planning. In: Resilience-Oriented Urban Planning Springer, Cham Lecture Notes in Energy, vol. 65, pp 3-27. doi: 10.1007/978-3-319-75798-8_1

[11] Cominelli F, Jacquot S 2020 Star Architecture Landing in UNESCO Sites: Local Frictions and Regulations. Springer, Cham In: Alaily-Mattar N., Ponzini D., Thierstein A. (eds) About Star Architecture pp 247-266. doi: 10.1007/978-3-030-23925-1_15

[12] Sonkoly G 2017 The History of Historic Urban Landscape. Palgrave Macmillan, Cham. In: Historical Urban Landscape pp 9-76. doi: 10.1007/978-3-319-49166-0_2

[13] Turner M 2017 Culture as an Enabler for Sustainable Development: Challenges for the World Heritage Convention in Adopting the UN Sustainable Development Goals. In: Albert M.T., Bandarin F., Pereira Roders A. (eds) Going Beyond. Springer, Cham Perceptions of Sustainability in Heritage Studies, 2, pp 19-31. doi: 10.1007/978-3-319-57165-2_2

[14] Agisheva S 2018 Features of World Cultural Heritage Buffer zones’ architectural organization under the influence of conditioning and determining factors News of KSUAE 3(45), pp 16-25.

[15] Ripp M, Lukat A H 2017 (Translation): From Obstacle to Resource: How Built Cultural Heritage Can Contribute to Resilient Cities. In: Albert MT., Bandarin F., Pereira Roders A. (eds) Going Beyond. Springer, Cham Perceptions of Sustainability in Heritage Studies, 2, pp. 99-112. doi: 10.1007/978-3-319-57165-2_8

[16] Ginzarly M, Houbart C, Teller J 2018 The Historic Urban Landscape approach to urban management: a systematic review International Journal of Heritage Studies 10 (25), pp 999-1019.

[17] Albert M-T 2015 Perceptions of the Contributors. In: Albert M-T. (eds) Perceptions of Sustainability in Heritage Studies. De Gruyter Heritage Studies, vol. 4, pp 3-8.

[18] Boccardi G 2015 From Mitigation to Adaptation: A New Heritage Paradigm for the Anthropocene. In: Albert M-T (eds) Perceptions of Sustainability in Heritage Studies. De Gruyter Heritage Studies, vol. 4, pp 87-98.

[19] Concluding Summary of Going Beyond: Symposium on the Pillars of Sustainability of the UNESCO Conventions and Programmes, Bonn, 29. June-05. July 2015, https://heritageandsustainability.wordpress.com/conclusion/, last accessed 2020/03/15.

[20] Palaiologou G, Griffiths S 2019 The Uses of Space Syntax Historical Research for Policy Development in Heritage Urbanism. In: Obad Šćitaroci M., Bojanić Obad Šćitaroci B., Mrđa A. (eds) Cultural Urban Heritage. Springer, Cham The Urban Book Series pp 19-34. doi: 10.1007/978-3-030-10612-6_2

[21] Roders A P, Grigolon A B 2015 UNESCO to blame: Reality or easy escape? International Journal of Architectural Research, ArchNet IJAR, 9 (1), pp 50-66. doi: 10.26687/archnet-ijar.v9i1.681

[22] Jokilehto J 2016 Engaging conservation: Communities, place and capacity building. Routledge,
New York In: Chitty G. (eds) Heritage, Conservation and Communities: Engagement, Participation and Capacity Building pp 17-33.

[23] Guzman P, Pereira Roders A R, Colenbrander B 2018 Impacts of Common Urban Development Factors on Cultural Conservation in World Heritage Cities: An Indicators-Based Analysis. Sustainability, MDPI, Open Access Journal 3 (10), pp 1-18. doi: 10.3390/su10030853

[24] Zaninović T, Palaiologou G, Bojanić Obad Śćitarocić B 2019 Walkspace as Cultural Heritage Within Urban Landscape. In: Obad Śćitarocić M., Bojanić Obad Śćitarocić B., Mrda A. (eds) Cultural Urban Heritage. Springer, Cham The Urban Book Series pp. 263-288. doi: 10.1007/978-3-030-10612-6_19

[25] UNESCO 2005 Vienna Memorandum on World Heritage and Contemporary Architecture-Managing the Historic Urban Landscape, http://whc.unesco.org/document/6814/, last accessed 2020/03/15.

[26] Langdalen E 2016 Utopia and Conservation. In: Roberts B. (eds) Tabula Plena: Forms of Urban Preservation. Lars Müller Publishers, Zürich pp 136-146.

[27] UNESCO 2019, The Operational Guidelines for the Implementation of the World Heritage Convention, https://whc.unesco.org/en/guidelines/, last accessed 2020/03/15.

[28] State of conservation of the properties inscribed on the List of World Heritage in Danger WHC 19/43.COM/7A, https://whc.unesco.org/archive/2019/whc19-43com-7A-en.pdf, last accessed 2020/03/15.

[29] Kostesić I, Vukić J, Vukić F A 2019 Comprehensive Approach to Urban Heritage Regeneration. In: Obad Śćitarocić M., Bojanić Obad Śćitarocić B., Mrda A. (eds) Cultural Urban Heritage Springer, Cham The Urban Book Series pp 65-76. doi: 10.1007/978-3-030-10612-6_6

[30] Petrović E K, Marques B, Perkins N, Marriage G 2018 Phenomenology in Spatial Design Disciplines: Could it Offer a Bridge to Sustainability? In: Vermaas P., Vial S. (eds) Advancements in the Philosophy of Design Springer, Cham Design Research Foundations pp 285-316. doi: 10.1007/978-3-319-73302-9_14

[31] Bagnato V P, Martinelli N 2019 Recycling Heritage Between Planning and Design Interventions. In: Obad Śćitarocić M., Bojanić Obad Śćitarocić B., Mrda A. (eds) Cultural Urban Heritage. Springer, Cham The Urban Book Series pp 155-164. doi: 10.1007/978-3-030-10612-6_13

[32] Spanu S 2020 Heritage as a Heterotopic Space. The Tertiary Character and the Hybrid Characteristic as Arguments of Its Heterotopic Character. In: Heterotopia and Heritage Preservation. Springer, Cham The Urban Book Series, pp 239-386. doi: 10.1007/978-3-030-18259-5_4

[33] Spanu S 2020 Architecture and the Heterotopic Concept. In: Heterotopia and Heritage Preservation. Springer, Cham The Urban Book Series, pp 387-419. doi: 10.1007/978-3-030-18259-5_5

[34] Guttormsen T S 2020 Archaeology as a conceptual tool in urban planning. In: Fouseki K., Guttormsen T.S., Swensen G. (eds) Heritage and Sustainable Urban Transformations: Deep Cities. 1st edn. Routledge, New York pp 35-54. doi: 10.4324/9780429462894-3

[35] Malaud D 2020 From modern utopia to the ‘deep city’: heritage as history, collective memory and embodied energy. In: Fouseki K., Guttormsen T.S., Swensen G. (eds) Heritage and Sustainable Urban Transformations: Deep Cities. 1st edn. Routledge, New York.

[36] Roberts B (eds) 2016 Tabula Plena: Forms of Urban Preservation. 1st edn. Lars Müller Publishers, Zürich.

[37] Fouseki K, Guttormsen T S, Swensen G 2020 Heritage and sustainable urban transformations: a ‘deep cities’ approach. In: Fouseki K., Guttormsen T.S., Swensen G. (eds.) Heritage and Sustainable Urban Transformations: Deep Cities. 1st edn. Routledge, New York. doi: 10.4324/9780429462894-1

[38] Pokka E 2018 Works of the architect Nikolay Ladovsky News of KSUAЕ 3(45), pp 54-61.

[39] ICOMOS 2011 The Valletta Principles for the Safeguarding and Management of Historic Cities,
Towns, Urban Areas, http://www.icomos.org/en/charters-and-texts, last accessed 2020/03/15.

[40] Spanu S 2020 Heterotopia and the Utopian Project. In: Heterotopia and Heritage Preservation. Springer, Cham The Urban Book Series, pp 5-150. doi: 10.1007/978-3-030-18259-5_2

[41] Alföldi G, Benkő M, Sonkoly G 2019 Managing Urban Heterogeneity: A Budapest Case Study of Historical Urban Landscape. In: Pereira Roders A., Bandarin F. (eds) Reshaping Urban Conservation. Creativity, Springer, Singapore Heritage and the City, vol. 2, pp 149-166. D doi OI: 10.1007/978-981-10-8887-2_8

[42] Parrinello S 2018 A Development Project for the United Nations. The Digital Survey for the Planning of East Jerusalem. In: Amoruso G. (eds) Putting Tradition into Practice: Heritage, Place and Design. INTBAU-2017 Springer, Cham Lecture Notes in Civil Engineering, vol. 3, pp 551-559. doi: 10.1007/978-3-319-57937-5_57

[43] Vavilonskaya T 2017 Height regulations as a method of managing architectural-historic environment. In: MATEC Web of Conferences, vol. 106, p 06025. doi: 10.1051/matecconf/201710606025

[44] Gambassi R 2016 Identity of Modern Architecture in Historical City Environments. In: Architecture and Engineering, vol. 1, Iss. 2, pp 27-42. doi: 10.23968/2500-0055-2016-1-2-27

[45] Agisheva I, Pokka E, Gorbunov A 2019 Evolution of transport and pedestrian bridge architecture News of KSUAЕ 3(49), pp 42-52.

[46] New Urban Agenda 2016, http://habitat3.org/the-new-urban-agenda/, last accessed 2020/03/15.

[47] London Bridge 800: An Inhabited Bridge Competition, https://competitions.org/2009/06/london-bridge-800-an-inhabited-bridge-competition/, last accessed 2020/03/15.

[48] SC2012 Links: Bridging Rivers Competition, https://bustler.net/competitions/latest/2281/sc2012-links-bridging-rivers-competition, last accessed 2020/03/15.

[49] Vancouver Land Bridge, https://www.confluenceproject.org/river-site/vancouver-land-bridge/, last accessed 2020/03/15.

[50] Versatile Tulip Pedestrian Bridge In Amsterdam, http://www.evolo.us/versatile-tulip-pedestrian-bridge-in-amsterdam/, last accessed 2020/03/15.

[51] Ivkovic I, Klisura N, Sljivo S 2018 Bridges of Sarajevo. In: Proceedings of CESCG-2018: The 22nd Central European Seminar on Computer Graphics, pp 107-114.

[52] Dreher J, Alaily-Mattar N, Thierstein A 2020 The Multifarious Effects of Star Architecture: The Case of the Kunsthaus Graz. In: Alaily-Mattar N., Ponzini D., Thierstein A. (eds) About Star Architecture Springer, Cham pp 153-168. doi: 10.1007/978-3-030-23925-1_10