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## **NEIDHARDT'S VERNACULAR-MODERNIST GLOSSARY OF BOSNIA AND HERZEGOVINA'S ARCHITECTURE AND URBANISM**

### ***Abstract***

The construction principles underlying Bosnia and Herzegovina's traditional building and the characteristics of its modernist architecture provide a basis for a set of criteria to evaluate its modernist heritage. The architect and town planner Juraj Neidhardt created a modernist-vernacular glossary of Bosnian-Herzegovinian architecture and town planning, with new terms based on analogies with concepts and spatial elements used in the past. Neidhardt's modernism has regional characteristics and is the earliest representation of critical regionalism in Bosnia and Herzegovina in the 1970s. There is a real need to reconsider and conceptualise alternative approaches to the process of revaluation of the entire material heritage of the Bosnian-Herzegovinian modernist era.

*Keywords: Neidhardt's modernism, principles, regionalism, vernacular Bosnian architecture.*

## **НАЈДХАРТОВ ТРАДИЦИОНАЛНО-МОДЕРНИСТИЧКИ РЕЧНИК БОСАНСКО-ХЕРЦЕГОВАЧКЕ АРХИТЕКТУРЕ И УРБАНИЗМА**

### ***Сажетак***

Принципи грађења на којима почива архитектонско наслеђе Босне и Херцеговине и квалитети њене модерничке архитектуре могу бити основа за сет критеријума за валоризацију њеног модерничког наслеђа. Архитекта Јурај Најдхарт креирао је „модерничко-вернакуларни речник босанскохерцеговачке архитектуре и урбанизма“, на аналогји са концептима и просторним елементима из прошлости. Најдхартов модернизам са одликама регионализма види се као најранија репрезентација критичког регионализма у БиХ, 1970-тих. Неопходно је преиспитивање и концептуализација алтернативних приступа процесу ревалоризације материјалне баштине босанскохерцеговачке епохе модернизма.

*Кључне ријечи: Најдхартов модернизам, принципи, регионализам, вернакуларна архитектура.*

## 1. INTRODUCTION

In the mid-20th century, the modernist architect Juraj Neidhardt created a 'modern-day glossary of architecture and town planning – an alphabet of the patchwork town', a series of lace-like visual elements taken from his own architectural and town planning designs, which he used to formulate and explain these new terms based on analogies with concepts and spatial elements from the past. He also compiled a list of rules of thumb, which he formulated and presented in visual form, and which he claimed to have been used in Bosnia to build settlements during the long prevalence of Oriental architecture, such as architecture on the human scale, domiforms and cubiforms, texture-structure, houses with no furniture, growing houses, spatial architecture, nature connectedness, the right of view and the building process, as well as neighbourliness, 'never going against the grain', etc. Also meriting a mention are the creative syntagms and adages he coined, like 'geography of architecture', 'carpet city', 'green city', 'amphitheatre city', 'water as the soul of the city', 'sanctity of ambiance', etc. [1].

Together with architect Dušan Grabrijan, Neidhardt explored the characteristics of Bosnia and Herzegovina's building heritage, looking for the universal in its architecture and town planning. In 1957, they published their observations and conclusions in the book *Architecture of Bosnia and the Way to Modernity (Arhitektura Bosne i put u savremeno)* [2]. Among other things, the book contains a study of the urban physiognomies of Bosanski Brod, Zenica, Mostar and Trebinje, four Bosnian-Herzegovinian cities located along the axis connecting the Posavina (the Sava River Basin) with the Mediterranean. Based on this study, they framed new written principles for selected places and the 'backbone' of Bosnia and Herzegovina, the Posavina-Mediterranean industrial axis. Following the publication of the book, other regions of the former Yugoslavia were investigated to propose axes or directions intended to solve problems of spatial development that were 'complex in a regionally specific way', which could help today to identify and analyse comprehensively trends of urbanisation in Bosnia and Herzegovina and the former Yugoslavia.

Neidhardt was born to a Zagreb-based German family in 1901. He trained as an architect at the academy in Vienna under Professor Peter Berens, one of the most influential modern architects of the first generation. Following graduation, he went to work at Berens' Berlin studio (1930-1932), after which he left for Paris in 1933 and joined the studio of the famous Le Corbusier (1933-1935). During that period, he competed relentlessly with his designs and worked on a great many town planning and architectural projects realised across Europe. Le Corbusier asked him to join his team working on the Brasilia project, but Neidhardt returned to Yugoslavia instead. After spending a year and a half in Belgrade (from 1936), in 1938 he moved to Sarajevo, which fascinated him so much that he spent the rest of his life there. He died in 1979 [3].

## 2. NEIDHARDT'S PATTERN LANGUAGE: BETWEEN TRADITIONAL PLACEMAKING AND MODERNIST ARCHITECTURE AND TOWN PLANNING

Neidhardt compiled a modernist architecture and town planning glossary by coining new terms for spatial elements, which he did by drawing an analogy between the construction elements he used in his projects and those of traditional building, which had originated in the past. He incorporated in them the universal principles and unwritten rules of vernacular building, and as he formulated them, he also represented them in unique visual form. He claimed that they had been used to build settlements in Bosnia during the long period under Ottoman rule, with the Oriental style as the dominant one, as well as under Austrian-Hungarian administration, representative of a peculiar 'regionalist' way of placemaking and town plan regulation.

These principles were an expression of customary law and represented a kind of codex – a set of rules pertinent to different aspects of social life, which had been observed locally for a long time. The most important of those rules were the right of view (vista), the right of way and free access to common goods and amenities, and the inviolability of private property. The right of view, i.e., one's entitlement to a view (vista), was a unique building principle that had its origins in customary law and communal ethics, since it was a standard that ensured the provision of high-quality housing. In Julian of Ascalon's Treatise of Construction and Design Rules (6th c. A.D.; Julian was a Byzantine architect, originally from the Palestinian coastal town of Ascalon), this rule is called 'protection of the view'. The rule stipulated the preservation of direct views of the sea and harbor, with specific guidelines relative to three different categories of view, the foreground, which pertained to the coast, the harbour and docked ships, or the middle ground, and the background [4].

Neidhardt built his pattern language upon the universal principles he discovered in Bosnia's vernacular architecture. He concluded 'vistas and the right of view' were an important standard as it allowed every inhabitant of every town to enjoy a view from their home (Figure 1).



Figure 1. Neidhardt's visual representation of 'vistas and the right of view'

He also adopted the Bosnian traditional principles of layout of the mahala and typical household in it, thus respecting the country's unwritten building rules and codes. When planning the development of an urban area, he respected the right of view, choosing to position structures in such a way that those tall (open) ones stayed in the valley, those medium-sized (semi-closed) were on mild slopes or hillsides, and the low (closed) ones on steep slopes (Figure 2).



Figure 2. Settlement at Ilijaš (1940) built in accordance with the principle that 'each house should command an unobstructed view'

Neidhardt's arrangement of structures into three separate categories is clearly visible, as he strove to re-introduce to the so-called Bosnian town planning the traditional layout and to keep volumes in proportion to man. In planning Ilijaš, Neidhardt employed the principle that had previously governed the layout of towns (residential areas, or mahale, and commercial districts, or charshiye), with mahale winding down slopes and the charshiya, or the commercial centre of town, placed along the riverbanks in the valley (Figure 3). The architecture of his buildings, both residential and commercial, is modernist, but obviously drawing on Bosnia and Herzegovina's traditional settlement architecture.



Figure 3. 'Mahala', a small residential neighbourhood on the slopes above Ilijaš, with 'Charshiya', or the commercial district, located in the valley

The second principle emphasised by Neidhardt was that of 'neighborliness', an ethical principle or standard that had influenced the formation of oriental architecture (Figure 3). Neidhardt says that 'wherever possible, straight rows of houses are avoided. While the pattern of the mahala is meander-like, the charshiya is straight and densely built (Figure 4). Construction land must be used economically, whence the tradition of laying out buildings in charshiya in rows [2].



Figure 4. 'Neighborliness' as an ethical principle that had influenced the making of architecture

In addition, Neidhardt wrote about Sarajevo's oriental architecture and its dainty houses set amidst gardens as 'human-scale'. He described them as low-lying, horizontal and unpretentious, extending in layers over contiguous slopes, their rooflines interrupted only by minarets and poplar-trees. He saw the panorama as marvelously harmonious, calm, and all-embracing – the very image of an old civilisation. Referring to this, he reiterated that overall, the urban landscape appeared as a unique higher form, which he concluded was a result of local people's nature connectedness [2].

Third, claiming that every epoch has its own architectural glossary, Neidhardt used the 'alphabet of the carpet town' to put together his very peculiar building vocabulary – a visual representation of the transposition of traditional building patterns into modernist architectural elements, systems and principles, as used in his own projects (Figure 5).



Figure 5. Alphabet of the carpet town [2:324]

There are concrete examples which expose the postulates, elements and systems Neidhardt borrowed from vernacular architecture and which show how he translated, transformed and put them to use. For instance, the building of the Technical Faculty in Sarajevo is designed as a pavilion characterised by zigzags; the Gallery is a structure with an atrium; and in the case of the Ski Lodge on Mount Trebević, what is obvious is Neidhardt's appreciation of the traditional principle of the right of view, with its space organised to take into account the human scale, in wood and stone used the way these building materials were traditionally locally combined. In the case of the hotel project, he applied the ancient rule of 'receding houses', and in order to ensure the right of view, he terraced the structure. In the case of the Bachelor House in Zenica, he also took into account the rules of thumb by which traditional houses were laid out, but putting several flats under one roof.

Neidhardt compiled a glossary of terms and abbreviations that are essentially a codebook of the fundamental notions and ideas of single architectonic and urban realisations from the period between 1932 and 1956. 'Each of these abbreviations indicates an idea, a point of view, a law (principle, characteristic, composition, unwritten law etc.), varying according to the kind of subject. If a better explanation of a single project has to be found, it is not sufficient to name the same symbolically (e.g. carpet town, ship town, etc.), yet it is necessary to explain it by means of analogy (e.g. old – new, composition – agglomeration, etc.) or on the basis of a contrast (e.g. cupola – balcony, nucleus – heart, etc.). When we have to deal with more of such principles simultaneously, the abbreviations are enumerated as numbers in a mathematical formula. A collection of these abbreviations gives us as result the informative basis of the project' [2: 330]. The Ski Lodge on Mount Trebević may serve as an illustration: ODP + PNV + UP + RE + KAO + LK + DT + JS + KKO + SP = IP (informative or ideal basis). Within this frame the quoted formula reads as follows: ODP, PNV and UP – written laws according to which the object is composed in nature, RE – object purpose, KAO – functional

tripartite structure, LK – symbolic characteristics of the object, DT – dualistic position of the object, KKO – design system, JS – one-flight staircase, SP – surface working, etc [2: 330].

The above illustration of Neidhardt's methodological framework and tools clearly shows the exceptional logic and systematicity behind his intertwining of traditional and modern architecture. In his own words, an architectural tradition that grew out of people's centuries-old building experience and boasts unbroken continuity, which is then enriched with modern technical aspirations, can only be seen as organic. Although his designs are primarily modernist, they are also organic, as they appreciate tradition and rules of design and construction that grew out of experience. As a modernist, he realised and was fully aware of the advantages of using concrete to build the doksat, an Oriental-type enclosed balcony very similar to oriel windows and other cantilevered elements or units, which he used in combination with traditional materials, such as stone and wood. Also, he raised his buildings above the ground by propping them on pillars, thus connecting vernacular architecture with modern architecture.

### 3. NEIDHARDT'S APPROACH TO ARCHITECTURAL AND TOWN PLANNING AND DESIGN: PRINCIPLES AND METHODS

Neidhardt's urban and architectural discourse is grounded in the concept of 'landscape'. It is in the vein of modernism, yet articulated in the spirit of the regional and expressed as contextual design of planned settlements and organic architecture of designed buildings. Owing to Jelica Karlić-Kapetanović and her study Juraj Neidhardt – Life and Work (Juraj Neidhardt. Život i djelo) [3], one can speak with certainty about the key principles of Neidhardt's urban and architectural discourse.

Le Corbusier's discourse of urban landscape – le paysage urbain – was the theoretical cornerstone of all major precepts of urban landscape procedures and practices in the post-WWII Yugoslavia. They developed through the efforts of Yugoslavian urban planners to rise to the challenges of the profession in rebuilding war-torn villages and towns, as well as in planning new ones in a way that would reflect Yugoslavia's socialist society. They were mainly based on the overlapping of ideas and aspirations towards a classless society, and those of a better life for all social orders, as inherent in modernism. Having worked with Le Corbusier on the urban plans of Antwerpen, Stockholm, Algiers and Nemours [8:22], all of which had the urban concept of the 'Radiant City' (La Ville Radieuse) at their heart, Neidhardt built his experiences into his authentic approach to the urbanisation of Yugoslavian cities, bringing with him the latest European trends. He also introduced a key new way of urban thinking, rejecting the conventional method of two-dimensional urban drawing. He thought about cities from the standpoint of plasticity, that is, to him the city was a plastic phenomenon. In his own words, this aspect is especially focused on through close observation and analysis of cities in search for analogies between their identity and modern-day solutions, whereby they develop a new character and new plasticity. Neidhardt's entry to the Regulatory Plan of Novi Sad competition in 1937 contains a photomontage of the main city square, with a new boulevard going from it (Figure 6); it is a perfect illustration of his working principle, as interpreted by Dušan Grabrijan in his 'visual-analytical presentation of the plan': 'Cities should be sculpted. A well-sculpted city automatically answers all technical questions. Town planning is a synthesis, the sum of all the needs of a city representing one plastic whole...' [5:22].



Figure 6. *Regulatory Plan of Novi Sad: a photomontage of the main square with a new boulevard going from it*

Starting just before the outbreak of World War II and continuing in post-war Sarajevo and Bosnia and Herzegovina, Juraj Neidhardt and Dušan Grabrijan, similar to what Nikola Dobrović did in Belgrade, searched relentlessly for universal building tenets, as hidden in Yugoslavia's architectural and urban heritage. This is how they described their work in circumstances that meant a clean break with all tradition, including that of building: 'It was a period of struggle, of choosing between large streets with transit and corridor streets, quads and open neighbourhoods, authentic and colonial architecture, etc. Firmly believing that people only begin to live their lives once they are culturally

and politically free and independent, we thought the only path to creative contemporary architecture was through heritage. Therefore, we set out to discover architectural and urban heritage laws.’ [2:499] Understanding the importance of these principles or laws – spatial, functional, aesthetic and ethical (today also environmental), as laid down in the past, led the two architects to establish a special creative and analytical procedure. It was a highly peculiar and authentic approach, although it definitely relied on the modernist paradigm and urban discourse of the International Congress of Modern Architecture (CIAM) and Le Corbusier.

For Neidhardt, the functionalism as set by the CIAM was implicit, but he arranged functions across a site or place in response to its spirit, the experience of use patterns as defined in the course of its urban development, and the quality of the principal environmental conditions (insolation, ventilation, vegetation and prevention of pollution). Neidhardt combined a sophisticated understanding of and respect for natural givens, inherent qualities and standards of a particular area to create a kind of ‘regionalism’, which was not an administrative and political construct, but was understood as contextualism. In his approach he did not simply copy the past or engage in formalistic reminiscences, but he applied studiously and developed further what was perceived as natural standards or laws, and where a concrete place had previously been settled in and was inhabited, he also used man-formulated laws, adapted to the new needs of the inhabitants living in the new era.

These characteristics of Neidhardt’s approach are clearly seen in most of his plans and projects, such as the Ilidža Spa Urban Planning Project (1937/38), the worker and clerk neighbourhoods of Breza, Ilijaš, Pobrežje and Ričica (1939), the Zenica Town Planning Project (1940), and the urban planning projects of the miner communities of Vareš-Majdan and Ljubija (1941), had mostly been realised, but were partly destroyed in the 1990s civil wars. Also, the unrealised Ilidža Spa Urban Planning Project (which he worked on while at the Central Hygienic Institute in Belgrade, between 1 June 1937 and 31 October 1938) and the regulatory plans and projects that have been materialised – the worker settlement in Pobrežje near Zenica and the blue and white-collar neighbourhood of Ilijaš near Sarajevo – are highly illustrative of how uniquely creative Neidhardt as an urban planner was in his deliberations, as well as of his new concept of the urban landscape of Bosnian-Herzegovinian communities.

Neidhardt’s conceptual ideas to connect the green structure of the hilly hinterland of cities with the valleys they lay in, by allowing it to penetrate the urban tissue transversely, as had ‘traditionally been done in Sarajevo’ (Figure 7), show again how much importance he attached to the concept of ‘landscape’ in his urban discourse.

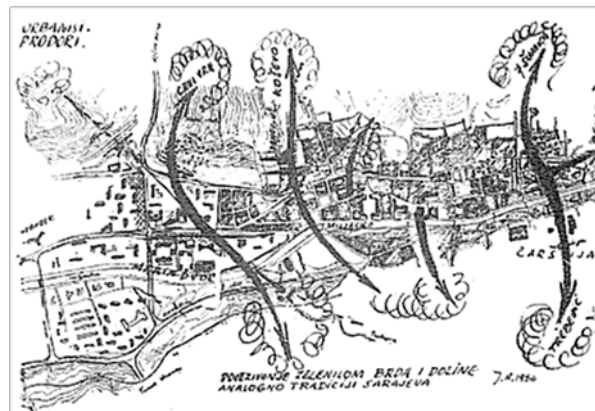


Figure 7. Schematic of Sarajevo as blending with green patches descending from the surrounding area

He believed it crucial to specify that which set each of these places apart – a criterion, a module, a lifestyle – which corresponded best to them individually and could be instrumental in identifying the most promptly those factors that influenced the decision-making processes concerning them. Close attention should be paid to the heritage value of Bosnia and Herzegovina’s abandoned and derelict modernist residential neighbourhoods and tourist resorts. The morphological diversity of these buildings and complexes also merits special attention. They are characterised by common (collective) patterns of use of space, resulting from an aspiration toward a ‘just policy of communal life’, one that would strike a balance between common and individual interests, as well as between public and private ownership, i.e., that would lead to a synthesis of the individual and the communal, and also resulting from collectivist values, as disputed nowadays, and seeing architecture in the wider context of socio-political and economic conditions, as Neidhardt saw it [6:227].

Neidhardt's urban plans and projects of blue and white-collar neighbourhoods across Bosnia and Herzegovina (1939-1945) were based on the above premises, nonetheless with a special approach adopted for each one of them. He planned the future of these neighbourhoods or settlements according to modern principles of organisation of civic and collective life, shaping them to newly created values and lifestyles as well as those inherited, to building traditions and to social relations. He took into account all layers of meaning as present in a given area or place and incorporated into his solutions assumptions about the inhabitants' cultural needs, which were rather forward for the period – their social needs, housing needs, the need to have places of worship, libraries, schools, health facilities – complete with green areas positioned around industrial complexes to be used for exercise and recreation [3:110]. The residential architecture of those neighbourhoods and settlements was morphologically diverse and included houses containing different types of workers' dwelling units or flats, which he also nicknamed to convey the number of the units contained; e.g., houses with two flats were called 'twins', craftsmen's homes with four flats – 'quads', single-family houses – 'clerk homes', as well as 'quintuplets', 'sextuplets', etc. [6:37].

### 3.1 SPECIFICS OF NEIDHARDT'S METHODOLOGICAL APPROACH

Neidhardt explained the nature of his urban discourse and his understanding of urban landscape in the previously quoted *Architecture of Bosnia and the Way to Modernity*, in the chapter titled 'Four Cities – Four Physiognomies', demonstrating the universality and comprehensiveness of his methodological approach in solving the problems of planning four selected Bosnian-Herzegovinian cities – Bosanski Brod, Zenica, Mostar and Trebinje – located along the axis cutting through Bosnia and Herzegovina and connecting Posavina with the Mediterranean.

Starting from the fact that the same problems arise in all places in Bosnia and Herzegovina, with only the climate, vegetation, customs and urban criteria or principles by which a place was built being different, he considered it important to discover the laws which had governed the birth and construction of anyone place originally and to draw conclusions accordingly about how to build new units and places. He concluded that many of the unwritten laws and ethical principles he discovered in connection with Sarajevo's development were also visible in other places in similar environments. However, the most important thing was to formulate, in a broader sense, new written laws for concrete places and the 'backbone' of Bosnia. 'Some of these principles can be easily implemented in the case of our modern places without much ado; such are the green city, the carpet city, water as the soul of the city, neighbourliness, the right of view, the human scale, etc.' The analysis of this study shows his broad – i.e. regional – approach to spatial planning, as mentioned elsewhere in this paper. It is evident in his insistence on the importance of dealing similarly with regions of the former Yugoslavia, by profiling them and finding their 'axes', on the basis of which spatial development problems could be solved in a 'complex' – regional – manner [2: 452].

Neidhardt studied the concept underlying the morphology of the towns lying along the regional axis running from Slavonski and Bosanski Brod ('a town next to a town'), across Bosnia and Herzegovina, all the way to the Adriatic. Recognising in it an industrial 'axis' or belt, he compared the principles on which they had developed, drew lessons from it and made decisions about new urban concepts to develop these places. Since all the towns were lowland and had corresponding physiognomies, Neidhardt used a unitary approach to planning Slavonski Brod and Bosanski Brod, two towns on the opposite banks of the Sava River, treating them as an organic whole comprising two administratively distinct units. The key element of his design is the diagonal street plan – which shortened the distance between the neighbourhoods – laid out as a garden city with small residential areas, composed of urban cores or blocks (neighbourhoods) (groups of residential buildings) complete with schools, playgrounds and other amenities [2:287].

For the cities of Zenica and Mostar, located in the valleys of the Bosna and Neretva rivers, he first identified one common principle by which places were traditionally built in valleys: residential neighbourhoods (mahale) were erected on hillsides, and the commercial town centre, the charshiya ('downtown'), in the valley. Next, he translated this into the principle of building housing on slopes and barren land, allowing the flat part of the valley to be used for industry or agriculture. Developing the concept for Zenica (Figure 8), he blended the new residential neighbourhood units with the hillsides along the valley of the Bosna, respecting the principles of the garden city, not creating isolated 'dormitory' neighbourhoods on Zenica's outskirts, but rather functionally rich organic wholes with all the amenities needed for modern living [2:287].



Figure 8. Axonometric drawing of Zenica town plan

One does not only find vegetation in residential parts of the city and the vast buffer zone that separates them from the industrial zone; it was also ‘let in’ the industrial part, which resulted in the urban form Neidhardt calls the amphitheatre city – ‘that which is so characteristic of our old towns, with the slopes merging with the valley into a harmonious whole’ [2: 457]. He compared Mostar to a crystal ore lump: ‘Like crystals incessantly form and develop inside amorphous ore lumps, may the modern era leave its mark on this agglomeration as well. Yet, the question is, are we, as architects and urban planners, up to the task of making additions to this stone agglomeration?’ In Herzegovina, with the little steep space that it has, serpentine and the like were built to create road infrastructure; just as vegetation changes, so does the structure of a city, and just as nature, the climate, people’s diet and customs impact on the temperament and physiognomy of the inhabitants of an area, so it is with the physiognomy of cities [2: 456].

These characteristics are seen in Neidhardt’s approach to the urban design of Ilidža, which fully adheres to the principles of the European modern movement and which was the first project of its kind in Bosnia and Herzegovina, as well as one of the first in the Kingdom of Yugoslavia. The Ilidža urban design banned all vehicles from inside the spa, with access roads passing along its perimeter, separated from the place itself with a protective vegetation belt. The railway line was separated with both a green belt and a protective embankment to minimise noise and smoke. The design proposed the separation of pedestrian motor traffic (local and collector/distributor roads), with a special system of parallel streets with extensions at their ends to be used by tenants as gathering places in all four newly designed residential neighborhood units.

The spa thoroughfare, the Great Promenade, was a pedestrian precinct, a walkway, which ran in the east-west direction, connecting the beaches along the river Željeznica, via the spa, with the River Bosna Spring. Along its length the walkway had a green median, the purpose of which was to break the monotony of the long promenade, with series of residential neighbourhoods to the north and south [3:262].

Neidhardt’s project of urban development regulation of Ilidža Spa included not only land use zoning of the entire place, but also density zoning, proposing zones of low, medium and high building density (as stipulated by the 1931 Building Act and the Construction Code, (which had a special chapter regulating spas and other tourist resorts), both of which were in effect at the time). Requirements were specified for each of the three density zones, and they all allowed only open-type neighbourhood units, which were an expression of modernist principles, which Neidhardt introduced with this Plan. The quadrangle was considered outdated, which precluded the construction of row houses or buildings in this case as well. Guided by housing quality standards, the project met the strict requirements for insolation, ventilation (airiness) and moisture control, not only by carefully planning the room and building layout, but also by landscaping the promenade to create the chequerboard pattern with trees. Each of the four residential neighbourhoods, which branched north and south of the green walkway, had a square at the centre of its administrative, cultural and economic part, complete with a school, market and other amenities. [6:55].

It is worthwhile noting that by designing such rounded neighbourhoods, which were also self-sufficient to an extent (such as will appear in the 1960s as both a constructive and critical response to the uniform commuter or dormitory towns, replicated before and after that time by stereotypically and formally employing functionalist principles, or the so-called neighbourhood unit concept), Neidhardt implemented an entirely new settlement planning strategy, thus interpreting CIAM’s – in Pantović’s words – ‘suprapolitical urban order’ in a genuinely inventive way, by adopting a just policy of communal life that struck a balance between common and special interests, public and



private dwelling and ownership, that is, a synthesis of the individual and the communal' [6:55, 5:20].

Also noticeable is Neidhardt's reference to the theory of modern functional town planning, as formulated in CIAM's first programme, The Declaration of La Sarraz, issued by architects gathered at the Preparatory International Congress of Modern Architecture in 1928. Not only Neidhardt, but also other Yugoslavian modern architects turned to the Declaration and worked towards its goals (the Declaration was translated into Croatian-Serbian and published in *Problems of Contemporary Architecture* (1932), a book by Croatian architect Stjepan Planić). Emphasising the central point of the Declaration, II. Urbanism, seems particularly important, if we are to understand Neidhardt's town planning postulates as observed in the case of the Ilidža Spa urban development regulation project. It formulates the essence of CIAM's theory of functional planning: '1. Urbanism is the organisation of functions of collective living... Urbanism should not be governed by aesthetic considerations, but exclusively by functions.' [5:18] It is indisputable that understanding architecture in the broader context of socio-political and economic conditions was the creative point of departure for Bosnia and Herzegovina's most prominent town planning figure. [6:56]

Following the above series of examples that illustrate the authenticity of Neidhardt's approach to architecture and town planning, it is important to point out his strong inclination towards exploration, experimentation and social engagement. He believed that an architect should be socially involved and participate in public life, just as he was and did himself. Many of his studies and competition entries, as well as his public appearances, resulted from his exploration of the widest range of urban and architectural phenomena and problems. His investigation of Bosnia's vernacular architecture did not only produce a book, but it also led to the compilation of the glossary of the modern vernacular language of architecture, in which he 'told' all his designs and projects.

Neidhardt's commitment to experimentation and work with new materials and technology in the field of residential building in the second half of the 1960s led to an initiative that, unfortunately, foundered. In a study presented at the Exhibition of Fine Artists of Yugoslavia in Sarajevo in 1969, as well as in several articles in the press and architectural magazines, he proposed architectural solutions for temporary accommodation of people in extreme situations, such as the Banja Luka earthquake. Thanks to the possibilities of serial production and modular architecture, these solutions were economical and feasible on the one hand, and human-friendly on the other. He introduced the idea of a meandering layout of temporary homes for victims of natural disasters that would give them a sense of individual freedom. This initiative came from Neidhardt's exploration of 'synthetic houses', which he elaborated in detail with his associates from the Sarajevo Institute for Materials and Structures and the Institute of Civil Engineering of Croatia in the period between 1965 and 1968 [3:235-240]. The inspiration for such affordable, modest and adaptable housing, which would be accessible to all, came from Le Corbusier's ideas on mass production of houses. Yet, Neidhardt's idea received little public attention at the time, despite the fact it clearly met the requirements that insisted on rationality and economy, and that it additionally catered to users – who were more often than not sadly neglected in these matters, as they are today – and their experience of architectural space.

#### **4. UNDERSTANDING THE ORIGINS AND IMPACT OF NEIDHARDT'S DISCOURSE**

Essentially, what ensured the contemporaneity and vitality of Neidhardt's modernist practice and complex architectural and urban discourse was his authentic use of elements of the local and traditional, i.e. vernacular. In Ljiljana Blagojević's words, modernity is understood as the quality of an architectural work that, while belonging to its epoch, interacts critically with the approved models and canons of that epoch [5: 213]. It was like this that Juraj Neidhardt's international modern architecture expressed the spirit of the place, fit in the new socialist society, and corresponded successfully with the peculiar social and cultural context of Bosnia and Herzegovina. 'Juraj Neidhardt's sensibility and his modern architecture, whose contemporaneity stems from his respect for the principles of local and vernacular architecture, reflect his simultaneous "living in two worlds": they have to do with the area in which he worked, to the state of architecture in the Austro-Hungarian Monarchy at the turn of the century and its attitude towards regional traditions, as well as to Le Corbusier's modern architecture and urbanism' [8: 223].

It is in that context that one should see Neidhardt's architecture as modern and search for the origins and influences of his architectural and urban discourse, because at the turn of the century the attitude towards heritage and the past became an important topic of architectural discourse in general and in the Austro-Hungarian Monarchy in particular. Setting a broad frame of reference for studying the

relationship between the vernacular and modern in the context of Banja Luka's urban transformation, Jelena Savić highlights the Austro-Hungarian period as a period of special dynamics in the history of the city and region, during which 'Viennese architects' discovered 'vernacular architecture' and reinterpreted creatively the experience of local building. She suggests that it is possible to link architectural themes in the capital of the Monarchy with the new Austro-Hungarian provinces because of the studies and projects by Ernst Lichtblau, from Otto Wagner's distinguished school. She assumes that it was Lichtblau's explorations, whose designs basically transposed the principles of vernacular architecture he had discovered, probably influenced the modern architect and professor Juraj Neidhardt [8: 215]. Also, there is indication of indirect influences of the work of a number of architects of the Austro-Hungarian period in Bosnia and Herzegovina, notably that of Josip Vancaš. They drew on vernacular architecture for the creation of structures that belonged to their era both functionally and logically. They emphasised the peculiarities of local identity, distancing themselves from historical styles and Ottoman heritage. Although they used the term the 'Bosnian bond' to label the style they had discovered the 'proper' one, these authors did not seek to create a 'national style' [8: 208].

Neidhardt's modernist architectural and urban designs also possess regional characteristics, and they may be seen as the earliest representation and expression of critical regionalism, which was to grow in strength in Bosnia and Herzegovina in the 1970s. It is a true embodiment of the ideas of modern architecture due to its being a 'synthesis of the universal and the regional', and it is dedicated to creative dialogue with heritage [8: 224]. Critical regionalism is proof of the capacity of the local and vernacular to be contemporary and initiate self-renewal under the umbrella of modernity, and it is also a critical element of modernity as such.

In addition to Juraj Neidhardt, in the 1960s and the 1970s, Bosnia and Herzegovina saw the work of such great critical regionalists as Zlatko Ugljen, Ranko Radović, Nedžad Kurta, Radivoje Jadrić and Džemaludin Karić [8: 224]. Although Kenneth Frampton (1983, 1985) is responsible for making critical regionalism popular on a planetary scale, it was the Greek architect Alexander Tzonis and art historian Liana Lefaivre who coined the term 'critical regionalism' in their 1981 poetic description of the work by Dimitris and Susanna Antonakakis [13:32]. In his *Towards a Critical Regionalism: Six Points for an Architecture of Resistance*, Frampton describes critical regionalism as a concept of 'architecture of resistance', one that opposes the imposition of universal standards for all, cultural commodification and the worship of technology, and one which should encourage the integration of tradition and modernity. [10:21]. As such, it does not mean vernacular architecture born spontaneously out of climate, culture, myth and crafts in contact, but regional schools of modern architecture turned in a sense to their roots [13:33].

## 5. CONCLUSION

The conclusion of this investigation into the lasting appreciation of the qualities and principles of local building traditions and their creative power in Bosnia and Herzegovina's architecture in the period between the end of the 19th century and the end of the 20th century is that the complexity, modernity and vitality of Juraj Neidhardt's urban and architectural discourse truly set it apart from the work of other architects and builders. Although it is clearly distinct from the romantic regionalism of the Austro-Hungarian period and the subsequent critical regionalism, it also connects them, being the predecessor of the concept and an influencer, assuring us that they can all be important in the future for creating new value and architectural works, i.e. for re-examining the relationship toward old or inherited values and their creative renewal.

In addition, the above-given examples of universal principles underlying the architectural heritage of Bosnia and Herzegovina and the special qualities of its modernist architecture can provide a firm basis for assessing the modernist heritage still awaiting valuation, including both early modernism and its post-WWII, social realist version. These facts bring us face-to-face with the process of reevaluation of the entire material heritage of the modernist era [1:39]. Given the fact that a number of Neidhardt's buildings have been destroyed or seriously damaged in the last civil war, as have great architectural pieces by other Bosnian-Herzegovinian architects, there is a real need to reconsider and conceptualise alternative approaches to their restoration.

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