University of Banja Luka I Faculty of Architecture, Civil Engineering and Geodesy
ISSN 2712-057 I E-ISSN 2303-6036 I UDC 72

AGG+

2022_10(1)

AGG+ Journal for Architecture, Civil Engineering, Geodesy and Related Scientific Fields
АГГ+ часопис за архитектуру, грађевинарство, геодезију и сродне научне области

018-027

Categorisation I Review scientific paper
DOI I 10.7251/AGGPLUS/2210018K
UDC I 621.875.5:001.891
COBISS.RS-ID I **XXXXXXXXXXXXXXXX**
Paper received I 11/08/2022
Paper accepted I 17/10/2022

Ana Kisjan
University of Belgrade, Faculty of Architecture, Serbia,
2021_41008@edu.arh.bg.ac.rs

Dubravko Aleksić
University of Banja Luka, Faculty of Architecture, Civil Engineering and Geodesy,
Bosnia and Herzegovina, dubravko.aleksic@aggf.unibl.org

THERMAL LANDSCAPES: RAHM'S METEOROLOGICAL ARCHITECTURE

Review scientific paper
DOI 10.7251/AGGPLUS/2210018K
UDC 621.875.5:001.891
COBISS.RS-ID XXXXXXXXXXXXXXXX
Paper received | 11/08/2022
Paper accepted | 17/10/2022

* corresponding author

Ana Kisjan *
University of Belgrade, Faculty of Architecture, Serbia, 2021_41008@edu.arh.bg.ac.rs

Dubravko Aleksić
University of Banja Luka, Faculty of Architecture, Civil Engineering and Geodesy, Bosnia and Herzegovina, dubravko.aleksic@aggf.unibl.org

THERMAL LANDSCAPES: RAHM'S METEOROLOGICAL ARCHITECTURE

ABSTRACT

In this paper, we will consider the issue of climate discourse, which is consistently connected with the emergence of the meteorological approach in the theory and practice of contemporary architecture and urban design. Thermal modernity appears as a contemporary space of critical debate that expands the possibilities of architectural thinking, positioning it in a transdisciplinary knowledge framework. The concept of meteorology is the result of research on biological and ecological causes and processes, thermal factors, actions, and interactions to establish a sensory connection of users with space. Therefore, invisible spatial qualities, atmospheres, are recognised as ontologically important elements of spatial experience. The new paradigm opposes visual dominance, formalism, and semiological interpretations, establishing a new way of social and environmental responsibility.

Keywords: *meteorology, thermal places, atmospheres, post-critical, space experience*

1. INTRODUCTION

The atmosphere of the zeitgeist imposes a change in the paradigm of built spaces through the possibility of transitioning the architectural form from primarily physical to physiological/atmospheric. Architecture is not only visual; it is experienced by people both physically through the senses and extrasensory; it generates a spatial feeling and represents the main bearer of the mood in the building, the city and the space in general. It also implies something indefinite, undefined, something beyond rational explanation. The primacy of the "ocular" must be reduced in favour of a balance not only towards the other senses but also extrasensory and experience.

The research shows one type of transition from a primarily metrical composition to an atmospheric-experiential composition in architecture and urban design. An analysis of the alternative path taken by this transition is shown through Philip Rahm's experiments, which are found in a new paradigm called "atmospheric architecture". The reason for choosing this case study is mainly because the design parameters of atmospheric architecture and its limitations, which shape the architectural space, are set equally according to the macro scale (such as the location of the building in the city and the invisible-soft dimensions of the space) and the micro scale (such as is the sensory and physiological relationship between the tenant and the building). Each chapter revolves around research questions that relate to the bigger picture of environmentalism. Also, the intimate methodological connection between atmospheric architecture and the post-critical phenomenon is shown.

2. POST-CRITICAL THEORY IN ARCHITECTURE

In contemporary terms, criticism is hardly an action. Critical theory does not want to accept general reality as it is, but it is constantly debating and re-questioning. [1]. It allows researching from a wide range of points and different perspectives. Critical theory points to advance self-reflexive investigations of the encounters we have and the ways in which we make sense of ourselves, our societies and our surroundings. Nevertheless, the theory itself is not one or the other, a homogeneous discipline nor a bound-together process [2].

Even though, in recent times, critical theory has ended up solidly set up in numerous arts, humanities and social science disciplines as a question of study in its own right [2], criticism is nowadays seen as outdated, insignificant, and an inhibitor of creativity in design [3]. Critical design is a big obstacle and a block in the creative process. It prevents the free development of an idea and narrows the potential of the multitude of solutions, directs the solution in only one design and creates non-resilient finished spaces that are often doomed to failure due to their inability to adapt to new circumstances. A critical approach in design interrupts and stops the architect in the creative process and puts him in a position to constantly make decisions or make judgments in situations that do not only concern him and often only concern others.

Walter Gropius and Ludwig Mies van de Rohe, the pioneers of the Bauhaus school, justified their departure from the romantic utopianism of expressionist architecture by emphasising the pragmatic need to accept new circumstances and environmental conditions: new technologies, materials and conditions of life and housing [4,5]. Mies van de Rohe claimed that it is necessary to accept the conditions that are in front of us and that are current regardless of everything because the new conditions have their own trends and values. He

explained that the designer must accept current conditions and values and adapt and extract value from them [5]. A critical approach, on the other hand, establishes universal values that the architects draw from theories they identify with or define themselves. Based on theories, through a criticism-based design process, they design a determined and finished space that forces its users to adapt to it. Due to the social nature of humans and the need to communicate with others, they are forced to adapt to the determinism of urban forms if they want to communicate with others in the city.

Contemporary architecture is in a post-critical phase. It is the phase in which ideological criticism and resistance give way to successful implementation, pragmatic efficiency and creative freedom. Progressive contemporary architecture should be inspired by the so-called design intelligence that can arrange and manipulate everyday and unexpected events and conditions interwoven in a network of different information, all with the aim of a pragmatic search for greater efficiency in realisation, i.e. a greater final effect [6]. The post-critical approach is a process in which criticism is not determined by resistance, novelty or fashion but by the need to solve growing global problems of a large scale, and that is why it is increasingly present in the space of contemporary architecture [7]. The diminishing importance of traditional critical methodologies gives preference to a generic or systemic approach to problem-solving that is more flexible and resistant to change. Traditional methodologies are based on values that they impose themselves regardless of the circumstances in which they operate, that is, they provide a very little compromise.

Rem Koolhaas pointed out the problematic relationship between critical theory and the creative act. Post-critical retrospective history highlights his apparent defection as prominent. The common basis of the 'post-critics' lies in the dissatisfaction with the 'negation' of the critical theory of the Vitruvian imperative towards the construction of architecture that aims to create a better world. The question is how long critical architecture can delay the inevitable moment when its hermetically sealed framework of opinion will open under the influence of increasing social disparity, wars of choice and the unfolding environmental cataclysm [8].

3. CLIMATE DISCOURSE IN ARCHITECTURE

At the beginning of the twentieth century, the combination of different interpretations of the climate phenomenon brought an expanded representation of the term, but also the implication of a new climate discourse [9]. The appearance of a large number of studies in this area can be interpreted from two angles. On the one hand, a transdisciplinary field of climatology was constituted in the intersection with a whole series of other disciplines; on the other hand, significant technological progress resulted in innovative thermal control strategies that established new means of expression. As the climate change debate rapidly evolves, different actors are setting new priorities and key questions to create a common understanding of the challenges we face [10].

In an attempt to explain the spread of the climate discourse, Vladimir Janković refers to European naturalists from the eighteenth century, who, in their works, developed new doctrines about the causal relationship of climate with human health. Furthermore, several experiments have been conducted to confirm the hypothesis that sunlight, fresh air, and a comfortable temperature play a central role in increasing the quality of life [11]. As examples of many types of research for that thesis, there are outdoor school projects, the

heliotherapy method, and the British Peckham experiment [12]. Historian Thomas Richards explained that climate from the perspective of European colonialism was positioned in the context of health and global empire, and architecture was an important medium for achieving those goals [13]. Later, in the nineteenth century, Fernández-Galiano pointed out that the first buildings designed as thermal machines were agricultural greenhouses. This means that the term artificial climate appeared as an attempt to reproduce and optimise outdoor climate conditions in the interior, primarily for growing plants. Nevertheless, this led to the use of so-called "residential greenhouses" or even for public purposes, such as the Mechanical Aquatic House (Claudius Loudon, 1817) or the Crystal Palace (Joseph Paxton, 1851) [14]. Even in these early examples, like the greenhouses of Victorian England, we can see the first evidence that human societies were explicitly concerned with controlling the atmospheric nature of their environment. The new possibility of manipulating atmospheres in indoor spaces was an enticing idea that preceded patents such as air conditioners or the "appareil pour laver l'air" (air washing machine) devised by the physiologist Charles Richet. The introduction of air conditioning systems in cinemas, theatres, and public and private facilities, initiated a series of changes that greatly affected the cultural life in cities, both for users and designers [12].

The semantic shift from controlling the air to establishing indoor climate diversity reflects the contemporary belief that artificially created atmospheres could overcome the limitations of nature [15]. Sciences that combined knowledge about the creation of synthetic atmospheres and, consequently, their relations with users' physiological and psychological states appear today as a relevant entry point for the study of thermal perceptions in modern practice. Concepts such as temperature gradations, insolation, and humidity are again recognised as key elements for creating a multi-sensory environment that promotes social, cognitive, and emotional human development.

4. ARCHITECTURE AS METEOROLOGY

While outdoor weather conditions have long been the domain of climatologists, consideration of indoor climate control has gained momentum with the rise of modern architecture, especially since the mid-twentieth century [16]. As discussed in the above chapter, the desire for architecture to be independent of weather conditions has become a kind of obsession in the modern age [17]. As Blagojević and Ćorović claim, the search for new forms and approaches is an essential problem in the relationship between people and the environment and changes in those relationships [18]. An insight into the new, complex trends and forms of modern architecture is given by the architectural historian and theoretician Charles Jencks. In his book "New Paradigms in Architecture", he announces another paradigm shift, introducing the term "architecture of complexity". According to Jencks, contemporary architecture is dedicated to pluralism, heterogeneity, and global culture and acknowledges the diversity of users' tastes, media, and visual codes. It describes an environmentally conscious architecture supported by technology, which creates a "new manufacturing facility" [19].

We may have experienced different concepts that aim to become a new, contemporary practice with ideas more radical than the previous ones. However, what they have in common is the movement of architecture towards a more progressive direction that can respond to emerging challenges. Authorities in these fields stand out, not because of optimistic ideas resulting from technological innovations but because practice is based on

research on causes and processes, climate factors, energy sources, human reactions, and interactions [20]. The German philosopher Sloterdijk claims that the growing awareness of the "atmospheric conditions" we live in, their fragility and changeability, has led us to understand that our atmosphere, now explicit to us, acts as our life support system. He summarises: "The topic of civilisation at the transition from the twentieth to the twenty-first century makes the topic of air and climate explicit", which gives the climate phenomenon an ontological significance [21]. Precisely within these frameworks of transdisciplinary knowledge, and a new dimension of social responsibility, there is a meteorological architectural practice that sets the possibility of an adaptable space generated by the climatic qualities of natural landscapes.

The application of meteorological principles in practice includes the logic of space division and the generation of forms from the perspective of energy exchange in nature. By considering the physical elements of pressure, temperature, and humidity as realistic shaping tools, the space becomes a controlled atmospheric environment with abundant diversity. The idea that started this concept is based on the sensory connection of the user with the space in which gradations of climatic elements, as connected series of microclimates, create physical and biological comfort [20]. This is a clear example of contemporary considerations of sensory and dynamic architecture that comprehensively create the second dimension of spatial experience, thereby questioning the traditional boundaries of architectural practice.

5. THE WAY OF PHILIPPE RAHM

At the Venice Biennale of Architecture in 2008, the "Digestible Gulf stream" by the Swiss architect Philippe Rahm stands out as a particularly indicative work, both an art installation and an experiment. Curator Aaron Betsky emphasizes the possibility of architecture to express light, taste, smell, touch and temperature [22]. The new paradigm of contemporary architecture opposes visual dominance and semiological interpretation in the postmodern era. It is no longer enough to just see architecture; it is necessary to experience it [23]. In his theoretical works, Rahm describes the metrological practice as a phenomenon in which it is not about "images of buildings and their functions, but about climates and interpretations; about air and its movement, about the phenomenon of conductors, evaporation, convection as transitory, fluctuating meteorological conditions...shifting the composition from metric to thermal, from thinking about construction to climatic thinking and from narrative to meteorological thinking". Rahm's meteorological work is freed from formalism and meaning beyond architecture itself, based on the dichotomy of physiological and meteorological [20]. The thermodynamic imbalance in the project "Digestible Gulf stream" created by two sources, two horizontal metal planes, where one heats and the other cools the space, creates a complex atmosphere between temperature polarities, but also subjects between them [24]. After decades dedicated to visible space saturated with symbols, narrative meanings, and individual interests, we are witnessing a "slippage" towards invisible spatial qualities, i.e. its atmospheres [25]. These intangible spatial qualities are recognized as important elements in the experience of architecture, as they connect the inner sensibility with outer space. Outside of all contextual frameworks, thermal perception is primarily associated with atmosphere and sensation [26]. The use of the concept of the atmosphere is mentioned in the works of Hermann Schmitz, whom Böhme believed to be the first to systematically introduce the term into philosophy. As architecture is not visual

but a spatial art that is experienced through bodily sensibility and not only a rational apparatus, these prominent philosophers explain the atmosphere as a spatial feeling or "spatial carrier of mood" [27]. On the other hand, Sloterdijk claims that the climatic qualities are not read as an aesthetic metaphor but as experiments of "air shaping" [21]. One often gets the impression that the atmosphere implies something vague, undefined, almost like Adorno's "more", which evocatively points to something beyond rational explanation. [25].

In the experimental project called "Domestic Astronomy", a prototype of an apartment is presented, in which Rahm primarily deals with atmospheric phenomena. The user occupies atmospheres instead of surfaces, the horizontal way of life is replaced by a vertical one, cold air sinks, and hot air rises. The physical division of space has been replaced by temperature air flows, which, according to their temperature characteristics, have a specific purpose that the user creates at his discretion [28]. Here, we can refer to Gaston Bachelard when he claims that space should be a "polyphony of the senses" because it is made for living and not for viewing. It is perceived by the body and mind in a comprehensive articulated process [29].

Different in scale, another example of the meteorological practice is the "Jade Eco Park", the result of a collaboration between Philippe Rahm and Catherine Mosbach for the city of Taichung in Taiwan. The thermal approach to the design of open spaces goes beyond conventional ideas of beauty and appears as an intriguing model for creating hybrid green spaces [30]. Discussions about an artificially controlled climate are shaped by the processes of accelerated globalisation, climate change, and less and less accessible greenery in cities [31]. Camillo Sitte established the key terminology for green urban infrastructure planning. Among other things, he introduced the notion of "sanitary green", which, unlike decorative green, is characterised by freedom from geometrisation to create variations of shaded, sunny, warm, and cold zones [32]. Using the techniques of artificially controlled climate environments, which are opposed to any visual representation, and closer to Sitte's notion of "sanitary green", the experience of being in an interior space is translated to the exterior and vice versa. Therefore, the Jade Eco Park project demonstrates the treatment of climate as a "building material" where architects use all the advantages of the site to embody the aesthetic dimensions of the thermal experience. Data, such as prevailing cold and warm wind directions, distance from roads, humidity and pollution, were carefully analysed and recognised as starting points for design. The result of these analyses is the creation of three climatic gradations, "Coolia, Dryia, Clearia", in which each one corresponds to a certain thermal parameter [30], allowing the visitor to walk through the diversity of microclimates. In times when microclimates were not yet observed from a scientific perspective, they were described through poetry and painting, where thermal experiences are mentioned as part of synesthetic sensations that foster pleasantness and pleasure. In the 1979 essay "Thermal Delight in Architecture", Lisa Heschong defined the term "thermal delight" as the multi-sensory experience provided by certain "thermal places" such as gardens and parks. She emphasises that pleasure results from a conscious combination of architecture, vegetation, water, and topography that together create a series of microclimatic experiences [33]. We can connect this interpretation of pleasure creation with a park in Taiwan, where the authors, instead of vegetation, topography, and water, use a conscious combination of different thermal parameters to create a modern type of thermal pleasure that is a reflection of the new, more complex needs of the city.

6. CONCLUSION

In the past, the issue of air and atmosphere was viewed from the technological side, while the potential of applying ambient parameters in architectural design remained neglected for a long time. Contemporary efforts to approach architecture from the meteorological side establish new means of expression through research into climatic phenomena and their connection with human beings' physiological and psychological functions. As a result, thermal modernity appears as a contemporary space of critical debate that expands the possibilities of architectural thinking to the fields of politics, medicine, ecology as well as immaterial spatial qualities. The traditional field of architecture is expanding to new atmospheric proportions, breaking down the barriers between interior and exterior, body and space. Thermal environments become the lens through which modern concepts of living and staying indoors are observed and, at the same time, the medium through which they are constructed.

Invisible and "soft" spatial characters are carefully researched, framed, and displayed elements that generate an alternative framework for living in Philip Rahm's practice. This "new aesthetic" relies on the construction of atmospheres, examining the limits of how much a sensory event in space can induce a change in mood and opinion because, according to Rahm, what we can feel is subject to consideration through the deliberation process. The metrical composition becomes a thermal composition that can only be grasped from within, through personal and collective experience, which makes it resistant to the modalities of classical representation and symbolism. It is important to emphasise that the space as the overall result of the architectural process must be read equally visually and ephemerally.

7. REFERENCES

[1] H. Heynen, "A Critical Position for Architecture" in J. Rendell, J. Hill, M. Fraser, M. Dorrian, (eds.) Critical Architecture, New York: Routledge, 2007, pp. 48-56

[2] S. Malpas, P. Wake "The Routledge Companion to Critical Theory", New York: Routledge, 2006

[3] G. Baird, "Criticality and its Discontents", in A. Graafland, L. Kavanaugh, G. Baird (eds.), Crossover: Architecture, Urbanism, technology, Rotterdam: 010 Publishers, 2006, pp. 648−459.

[4] W. Gropius, "Grundstaze der Bauhausproduktion", in Ulrich Conrad (ed.), Programme und Manifeste zur Architectur des 20. Jahrhunderts, Braunschweig: Bauwelt Fundamente, 1926, pp. 90−92.

[5] L. M. Van de Rohe, "Die neue Zeit", in Ulrich Conrad (ed.), Programme und Manifeste zur Architectur des 20. Jahrhunderts, Braunschweig: Bauwelt Fundamente. 1930, pp. 114−115.

[6] R. Shusterman, Thinking Through the Body: Essays on Somaesthetics, New York: Cambridge University Press. 2012

[7] M. Jarzombek, „Critical or Post-Critical?", Architectural Theory Review 7(1) 2002, pp. 149−151.

[8] R. Somol and S. Whiting, "Notes around the Doppler Effect and Other Moods of Modernism", *Perspecta*, Vol. 33, The MIT Press on behalf of Perspecta, 2002 pp. 72-77.

[9] S. Sörlin and M. Lane, "Historicizing climate change—engaging new approaches to climate and history", *Climatic Change*, vol. 151, no. 1, pp. 1-13, 2018. Available: https://doi.org/10.1007/s10584-018-2285-0. [Accessed 14 July 2022]
[10] K. Fløttum, "A linguistic and discursive view on climate change discourse", *ASp*, no. 58, pp. 19-37, 2010. Available: https://doi.org/10.4000/asp.1793 [Accessed 15 July 2022].
[11] K. Anderson, "Vladimir Janković. Confronting the Climate: British Airs and the Making of Environmental Medicine. (Palgrave Studies in the History of Science and Technology) New York: Palgrave Macmillan, 2010, *Isis*, vol. 103, no. 3, pp. 590-591 Available: https://doi.org/10.1086/668990 [Accessed 15 July 2022].
[12] I. Requena-Ruiz, "Building Artificial Climates. Thermal control and comfort in Modern Architecture (1930-1960)", *Ambiances*, no. 2, 2016, Available: 10.4000/ambiances.801 [Accessed 21 July 2022].
[13] D. M. Peers, "Thomas Richards. The Imperial Archive: Knowledge and the Fantasy of Empire." New York: Verso. 1993. Pp. viii, 179. ISBN 0-86091-605-7," *Albion*, vol. 27, no. 3, pp. 555–556. . Available: https://archive.org/details/imperialarchivek0000rich/page/88/mode/2up [Accessed 15 July 2022].
[14] L. Galiano and G. Fernández, *Fire and Memory: On Architecture and Energy*, MIT Press, 2000.
[15] T. Pillon,"Le corps et l'air artificiel." *Communications*, vol. 81, n°1, 2007 p. 85-100. Available: 10.3406/comm.2007.2460 [Accessed 17 July 2022].
[16] M. Kobi, "Keeping Warm in Subtropical Winter", *Cahiers de la recherche architecturale, urbaine et paysagère*, no. 6, 2019. Available: https://doi.org/10.4000/craup.2880 [Accessed 17 July 2022].
[17] S. Healy, "Air-conditioning and the 'homogenization 'of people and built environments", *Building Research & Information*, vol. 36, no. 4, pp. 312-322, 2008. Available: https://doi.org/10.1080/09613210802076351 [Accessed 19 July 2022].
[18] Lj. Blagojević and D. Ćorović, "Uticaj klimatskih promena na planiranje i projektovanje I." *Univerzitet u Beogradu - Arhitektonski fakultet*, 2011. Available: ISBN 978-86-7924-065-1 [Accessed 23 July 2022].
[19] Č. Dženkins, *Nova paradigma u arhitekturi: Jezik postmodernizma*, Prevod Marijana Milosavljević. Orion Art, Beograd (in English), 2007, pp 228–231
[20] P. Rahm, "Meteorological Architecture", *Architectural Design*, vol. 79, no. 3, pp. 30-41, 2009. Available: https://doi.org/10.1002/ad.885 [Accessed 25 July 2022].
[21] M. Bluemink, "Foam Cities: Peter Sloterdijk's Atmospheric Philosophy", *Academia Letters*, 2021. Available: https://doi.org/10.20935/AL2814 [Accessed 01 August 2022].
[22] A. Betsky, "Out There. Architecture Beyond Building: 11th International Architecture Exhibition La Biennale di Venezia", 3rd ed. Marsilio, 2008.
[23] C. Spence, "Senses of place: architectural design for the multisensory mind", *Cognitive Research: Principles and Implications*, vol. 5, no. 1, 2020. Available: https://doi.org/10.1186/s41235-020-00243-4 [Accessed 01 August 2022].
[24] P. Rahm, "Digestible gulf stream: Architecture as meteorology, architecture as gastronomy - Philippe Rahm architectes", Philipperahm.com, 2022. [Online]. Available: http://www.philipperahm.com/data/projects/digestiblegulfstream/index.html. [Accessed: 02 Aug 2022].
[25] G. Böhme, *Atmospheric Architectures: The Aesthetics of Felt Spaces*, Bloomsbury Publishing Plc, (in English), London, 2017.

[26] L. Madsen and K. Gram-Hanssen, "Understanding comfort and senses in social practice theory: Insights from a Danish field study", *Energy Research & Social Science*, vol. 29, pp. 86-94, 2017. Available: 10.1016/j.erss.2017.05.013 [Accessed 03 August 2022].

[27] G. Böhme, C. Borch, O. Eliasson, J. Pallasmaa, "Atmospheres, Art, Architecture: A Conversation between Gernot Böhme, Christian Borch, Olafur Eliasson, and Juhani Pallasmaa", editor, Architectural Atmospheres: On the Experience and Politics of Architecture. *Basel: Birkhäuser Verlag*, p. 91-107, 2014

[28] P. Rahm, "Domestic astronomy - Philippe Rahm architectes", Philipperahm.com, 2022. [Online]. Available: http://www.philipperahm.com/data/projects/domesticastronomy/index.html. [Accessed: 05- Aug- 2022].

[29] G. Bachelard, *The Poetics of Space*, 3rd ed. Boston: Beacon Press, 1969, p. 65.

[30] Rahm, "Jade Eco Park - Philippe Rahm architectes", Philipperahm.com, 2022. [Online]. Available: http://www.philipperahm.com/data/projects/taiwan/index.html. [Accessed: 05- Aug- 2022].

[31] P. Chiambaretta, "The emergence of a new sense of spatiality", *Pca-stream.com*, 2022. [Online]. Available: https://www.pca-stream.com/en/articles/the-emergence-of-a-new-sense-of-spatiality-61. [Accessed: 05 Aug 2022].

[32] S. Roesler, "3 Democratizing Urban Nature", *City, Climate, and Architecture*, pp. 75-112, 2022. Available: https://doi.org/10.1515/9783035624168-005 [Accessed 6 August 2022].

[33] L. Heschong, Thermal Delight in Architecture, 5th ed. Cambridge: MIT, 1979, p. 46.

AUTHOR'S BIOGRAPHIES

Ana Kisjan

Born in Banja Luka, where she finished elementary school and then high school, majoring in sociolinguistics. She graduated from the Faculty of Architecture, Civil Engineering and Geodesy in Banja Luka (2016) with a degree in architectural engineering. In 2019, she enrolled in master's studies - Interior Architecture at the Faculty of Architecture in Belgrade. She got her master's degree in 2021 in the class of prof. Milan Maksimović, PhD, on the topic of "Utopian visions of space", which was singled out and displayed at the "Royal Institute of British Architects" (RIBA). In 2021, she enrolled in doctoral academic studies at the University of Architecture in Belgrade under the mentorship of prof. Lidija Đokić, PhD. The main framework of her theoretical research is in the field of contemporary housing concepts, architectural philosophy, and sustainable development.

Dubravko Aleksić

Born in Brčko, where he finished primary and secondary school. He graduated from the Faculty of Architecture, Civil Engineering and Geodesy of the University of Banja Luka. He earned his PhD from the Faculty of Architecture, University of Belgrade. His scientific research deals with public spaces, quantum architecture, augmented reality and relations between body, space and architecture.

ТЕРМАЛНИ ПЕЈЗАЖИ: РАМОВА МЕТЕОРОЛОШКА АРХИТЕКТУРА

Сажетак: У овом раду размотрићемо питање климатског дискурса који је консеквентно повезан са настајањем метеоролошког приступа у теорији и пракси савремене архитектуре и урбаног дизајна. Термална модерност појављује се као савремени простор критичке дебате који проширује могућности архитектонског мишљења, позиционирајући га у трансдициплинарни оквир знања. Концепт метерологије, резултат је истраживања о биолошким и еколошким узроцима и процесима, термалним факторима, акцијама и интеракцијама у циљу успостављања сензорне конекције корисника са простором. Стога су невидљиви просторни квалитети, атмосфере, препознати као онтолошки важни елементи просторног доживљаја. Нова парадигма супротставља се визуелној доминацији, формализму и семиолошким интерпретацијама, успостављајући нови одос социјалне и еколошке одговорности.

Кључне речи: *метеорологија, термална мјеста, атмосфере, посткритички, просторни доживљај*