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## ARCHITECTURE AND HISTORY – THE INFLUENCE OF THE MEMORY PROCESS ON THE PERCEPTION OF ARCHITECTURE

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### ARCHITEKTURA I HISTORIA – WPŁYW PROCESU PAMIĘCI NA PERCEPCJĘ ARCHITEKTURY

#### Abstract

The discussion focuses on the process of memory as a connecting factor in the relationship between people, architecture, and history. The aim of the article is to provide an interdisciplinary reflection on the role of memory in the perception of the built environment, including the shaping of social identity, the commemorative role of architecture, and the shaping of users' aesthetic preferences. The text presents and analyses the types, mechanisms, and content of memory in the context of architectural space.

*Keywords: aesthetic preferences, architectural psychology, history, identity, memory process, perception of architecture*

#### Streszczenie

Rozważania koncentrują się na procesie pamięci jako czynnika spajającym w relacji człowiek-architektura-historia. Celem artykułu jest interdyscyplinarna refleksja nad rolą pamięci w percepcji środowiska zbudowanego, w tym w zakresie kształtowania tożsamości społecznej, upamiętniającej roli architektury, a także kształtowania preferencji estetycznych użytkowników. Tekst stanowi prezentację i analizę rodzajów, mechanizmów i treści pamięci w kontekście przestrzeni architektonicznej.

*Słowa kluczowe: preferencje estetyczne, psychologia architektury, historia, tożsamość, proces pamięci, percepcja architektury*

### INTRODUCTION

Memory is the element that connects architecture and history. History refers to the past, hence its strong connection with memory. The built environment is not only a physical structure, it is also a record of human experiences, aspirations, and social changes. In addition to their functional and aesthetic roles, buildings also serve a symbolic function, which is strongly linked to collective memory, thereby influencing the sense of social identity. The built environment becomes a witness to history. Since ancient times, architecture has been a form of commemoration. Today, by having a stronger emotional impact in the process of familiarising and preserving historical memory, it can also serve a therapeutic role. History also

creates a context for architectural creativity – it is a point of reference, a source of dialogue between the past and the present.

## MEMORY

The dictionary of architectural psychology defines memory as ‘the preserved past’ or the persistence of the past. It is the ability to reproduce or recognise what is past and what was previously perceived, experienced, or acted upon.<sup>1</sup> The importance of memory for humans is demonstrated by cases of people with amnesia or total memory loss who live in an eternal present. In psychology, there are two approaches to defining memory. The first treats memory as a certain ability, while the second treats it as a mental process occurring over time and consisting of specific phases that are universal to all people: encoding (recording and memorising), storing, and retrieving information<sup>2</sup>, whereby the data is collected and may be updated and recoded each time.

Researchers studying this topic have identified many types of memory. One of the criteria for this classification is the length of time information is stored, allowing us to distinguish between: ultra-short-term sensory memory, which stores information received by the senses for a short period of time (e.g. echoic memory – auditory, or iconic memory – visual), short-term memory, which is strongly linked to the present and current processes (including working memory, which allows information to be manipulated in real time), and long-term memory, which has the largest capacity and relates to the past. In the context of the discussed topic of the relationship between architecture and history, the last of these types of memory is crucial.

## THE IMPORTANCE OF MEMORY IN THE PERCEPTION OF ARCHITECTURE

To remember something, it is necessary to perceive it first. Perception is not a purely sensory process and cannot be considered separately from the process of memory, as it forms a coherent system of information processing with it, also including the verification of individual or collective past experiences with current ones. The essence of the perception process is recognition.

Elements of the environment promote ‘event learnability’ and appropriate human behaviour.<sup>3</sup> The concept of a cognitive schema, which is a kind of scenario according to which people interpret situations and participate in them, also applies to architectural space. The combination of design and psychology is evident in the existence of the archetype of a building with a specific function or typical spatial organisation, e.g. a historic city. The predictability of the functional layout, the sequential nature of the rooms, the location

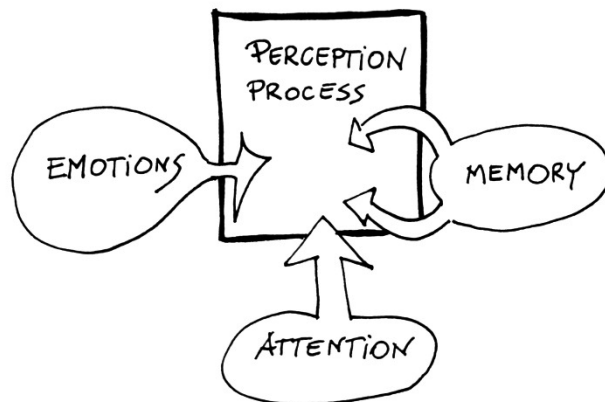
<sup>1</sup> J.K. Lenartowicz, *Słownik psychologii architektury*, Wydawnictwo Politechniki Krakowskiej, Kraków 2005, p. 74.

<sup>2</sup> T. Maruszewski, *Psychologia poznania. Sposoby rozumienia siebie i świata*, Gdańskie Wydawnictwo Psychologiczne, Gdańsk 2001, p. 119.

<sup>3</sup> Z. Nęcki, *Percepcja środowiska – ujęcie psychologiczne* [in:] J. Bogdanowski (ed.) *O percepcji środowiska*, Oficyna Wydawnicza Instytutu Ekologii PAN, Kraków 1994.

of the main entrance, and the external formal features of the building associated with its purpose facilitate spatial orientation and influence user comfort. Cognitive schemas also apply to urban spaces, including street layout, the shape of the city centre, the arrangement and density of buildings, the location of squares, main urban functions, etc.

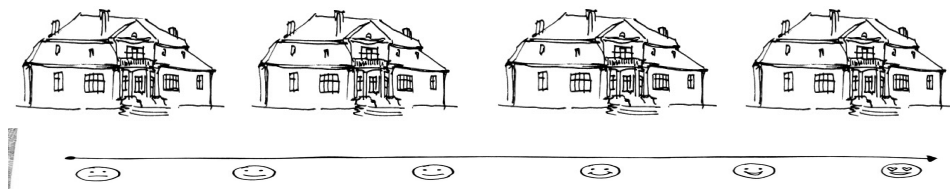
The phenomenon of recognisability is also reflected in a psychological theory developed in the 1960s by R. Zajonc, based on the relationship between the frequency of contact with and its perception and preferences towards it. This phenomenon, referred to in psychology as the *mere-exposure effect*, can also be applied to the perception of architecture. The researcher was interested in the emotions generated just by exposure to an object and visual interaction with it. His experiments showed that emotions can appear before conscious thinking. In the field of architecture, this theory can explain social aesthetic preferences.<sup>4</sup> An analysis or understanding of the relationships between form and shape is not necessary for an increase in attractiveness; simply experiencing it is enough. This effect also appears when contact with the stimulus is involuntary. Daily exposure to a specific type of canon results in a preference for certain patterns over others, assuming that these stimuli were not initially aversive, but at most neutral. Although this phenomenon is based on a subjective attitude and has no scientific value<sup>5</sup> (the evaluation of a work is not based on its characteristics but on its attractiveness to the recipient), it draws attention to the underestimation of the role of the cultural environment (including history) in determining the aesthetic preferences of recipients.



### III. 1. Elements involved in the memory process, own work

<sup>4</sup> The perception of spatial arrangements depends on many factors, including information gained through experience, one of which is professional education. In the case of people who are not professionally involved in, for example, architectural design, and therefore do not take into account compositional factors, the selection of materials, lighting, etc. in their evaluation, according to Zajonc's concept, frequent contact with a structure will have a positive impact on the evaluation of architectural space.

<sup>5</sup> A. Satkiewicz-Parczewska, *Kompozycja architektoniczna a jej percepcja*, Wydawnictwo Uczelniane Politechniki Szczecińskiej, Szczecin 2001, pp. 30–31.



III. 2. Illustrating the phenomenon of the mere-exposure effect using the example of aesthetic preferences for residential buildings in the form of a Polish manor house, own work

### HISTORY OR MODERNITY, COMPLEXITY OR SIMPLICITY – WHAT CHARACTERISTICS DO WE LOOK FOR IN ARCHITECTURE?

The perception of space is not a matter of choice but a necessity.<sup>6</sup> The reception of the environment depends on the structure of stimuli and the reactions that arise as a result of interacting with them. One of the most important factors determining the perception of the environment is the current structure and hierarchy of human needs and the degree to which they are satisfied. A. Satkiewicz-Parczewska distinguishes three levels of perception, the first of which is responsible for satisfying basic needs, including the sense of security, the second is stimulated by emotional needs, and the third is related to the satisfaction of intellectual needs.<sup>7</sup> The American psychologist A. Maslow, defining a list of human needs, described them using the shape of a pyramid. In the so-called ‘pyramid of needs’, he made the realisation of higher-order needs (including belonging, self-esteem, and self-development) dependent on the satisfaction of basic needs (food, protection from the cold, etc., and next in line – the need for a sense of security). The classification of needs is treated differently by different researchers. Among others, W.I. Thomas considered safety, recognition, friendship, and new experiences to be important needs.<sup>8</sup> This means that predictability, familiarity, or even ‘homeliness’, which provide a sense of security, do not have to be the only attributes of space that we seek and strive for as recipients.

Preferences, including aesthetic ones, show a strong correlation with affective responses, including both short-term emotional reactions and long-term feelings. In the mid-1980s, researchers J.A. Russel and U.F. Lanius developed the *Environmental Emotional Reaction Index* (EERI), which assumes that emotional reactions can be described on two independent dimensions: pleasure and arousal.<sup>9</sup> They compiled a circular arrangement of forty terms, including many commonly used names for emotions. These adjectives form a system defined by two bipolar dimensions: pleasant-unpleasant, stimulating-non-stimulating. The term ‘beautiful’ was assigned as a pleasant, slightly stimulating feature (close to the middle of the stimulation vs. non-stimulation continuum). Differences in individual preferences regarding

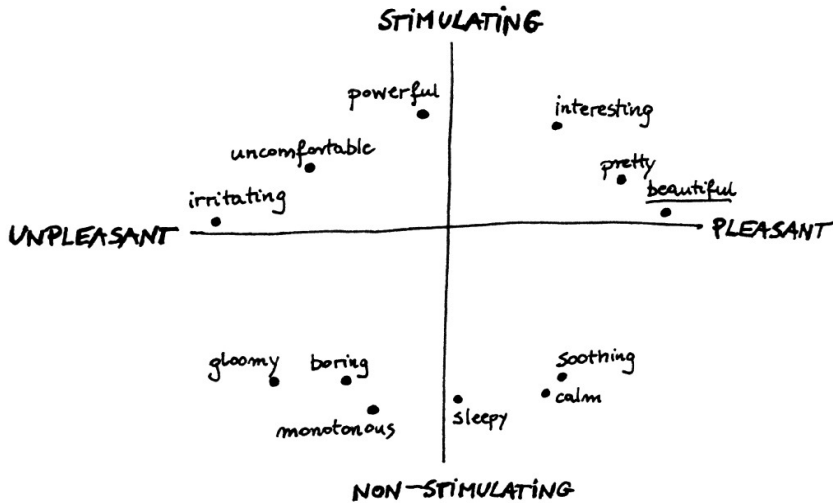
<sup>6</sup> K. Pawłowska, *Krajobraz piękny i pouczający*, “Aura” 1986, no. 5, after: K. Pawłowska, *Idea swojskości miasta*, Wydawnictwo Politechniki Krakowskiej, Kraków 2001, p. 9.

<sup>7</sup> A. Satkiewicz-Parczewska, op. cit., pp. 102–105.

<sup>8</sup> W.I. Thomas, *The unadjusted girl*, Little Brown, Boston 1923, after: A. Bańka, *Architektura psychologicznej przestrzeni życia*, Gemini, Poznań 1999.

<sup>9</sup> P.A. Bell et al., *Psychologia środowiskowa*, Gdańskie Wydawnictwo Psychologiczne, Gdańsk 2004, pp. 57–59.

the environment (especially those concerning the interpretation of its complexity) depend on the recipient's level of adaptation and therefore take into account individual experience (habituation), which determines optimal levels of stimulation.



Ill. 3. Graphical representation of Russell and Lanius' the Environmental Emotional Reaction Index, own work

Another model concerning environmental preferences, developed by R. Kaplan and S. Kaplan, identifies several factors that can be used to predict preferences for different types of environments. According to the researchers, people tend to prefer contexts that provide quick and understandable information.<sup>10</sup> They also emphasise that attractive settings will be those that stimulate information processing (i.e. are somewhat stimulating), but at the same time those in which this processing is effective (i.e. understandable). This means that we like environments that are neither too simple nor too boring, but engaging and intriguing, containing some mystery.<sup>11</sup> Researchers have identified four main components that determine audience preferences. These are: coherence – the degree of organisation of the layout, legibility – the degree of clarity of the elements, complexity – the number and diversity of components, and mystery – the amount of hidden information to be discovered, arousing curiosity. The higher the coherence, legibility, complexity, and mystery of the scenery, the greater the positive interest in the environment.<sup>12</sup>

<sup>10</sup> *Ibidem*, p. 67.

<sup>11</sup> *Ibidem*, p. 69.

<sup>12</sup> According to the Kaplans' model, 'mystery' is a feature that increases viewer preference and engagement. However, it is a factor that will not always be identified with intrigue; it can also be associated with fear (especially in urban spaces). The positive assumption will be realised when the situation is not imposed on the observer, when they have the ability to control the flow of information and choose between participation and resignation.

A. Satkiewicz-Parczewska also draws attention to the complexity of architectural compositions in the context of their reception, noting that simpler compositions (compact forms with a clear structure and logical construction), which are more uniform and easier to explore and compare, trigger similar reactions in people – emotional comfort. In the case of more complex compositions, which are the source of more diverse and individual reactions, it is more difficult to make an evident comparison.<sup>13</sup> At the same time, she draws attention to the aspect of perceptual overload, referring to the limited number of simultaneous perception and reception of stimuli, amounting to 7+/- 2 elements.<sup>14</sup> This limitation applies to both the visual and phonic aspects of the environment. Exceeding this limit in many contemporary architectural forms makes them illegible.<sup>15</sup> Monotony also has a negative effect on the viewer. The repetition of elements forming the composition in an identical form and in the same way contributes to a feeling of habituation, i.e. boredom and even sleepiness.

The multisensory perception of the environment also determines the friendliness of a space. This is particularly important today, when the sphere of sensory experience is slowly diminishing and recipients are becoming more and more passive. However, J. Pallasmaa notes an increasing understanding of sensory experiences among designers, who are trying to restore the sensory dimension to architecture by enhancing the sense of materiality, haptics, texture and weight, the density of space, and the materialisation of light.<sup>16</sup> In his opinion, the authentic experience of architecture consists of approaching and confronting a building, rather than formally admiring its façade.<sup>17</sup> These are encounters that respond to memory.<sup>18</sup> Experiences in the field of architectural psychology confirm the positive impact of including not only visual sensations, but also tactile, kinesthetic, acoustic and olfactory sensations in the perception process.

Aesthetic experiences can also be positively enhanced by the viewer's exposure to a building's familiar features, symbols, allusions to tradition, and recognizable historical forms. This arrangement of elements is often synonymous with experiencing the beauty of architecture.<sup>19</sup> The fundamental compositional principle of historical architecture was symmetry. The facades of monumental structures such as churches, palaces, and triumphal arches were based on this rule. This canon, dominant from antiquity until the Art Nouveau period, as the most obvious and helping to maintain balance, provided a sense of security and stability. These same qualities make it attractive today.

Architecture that draws on traditional, recognisable motifs becomes not only aesthetically appealing, but also emotionally familiar. The idea of homeliness described by K. Pawłowska, understood as a kind of relationship of belonging and attachment between residents and the city, is strongly connected with the preservation and continuation of traditions and local cultural distinctiveness. Giving architecture stylistic features that are recognisable as associated with a region, country, or other territory will strengthen this bond. The sense

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<sup>13</sup> A. Satkiewicz-Parczewska, *op. cit.*, p. 117.

<sup>14</sup> This dependence also applies to the reception of compositions consisting of individual sequences, each of which will not exceed approximately 7 elements. Creating a whole from smaller parts results in the reception of individual parts sequentially over time.

<sup>15</sup> A. Satkiewicz-Parczewska, *op. cit.*, p. 122.

<sup>16</sup> J. Pallasmaa, *Oczy skóry. Architektura i zmysły*, Instytut Architektury, Kraków 2022, p. 47.

<sup>17</sup> *Ibidem*, p. 76.

<sup>18</sup> *Ibidem*, p. 75.

<sup>19</sup> A. Satkiewicz-Parczewska, *op. cit.*, p. 155.

of connection to a place has different dimensions and meanings for different people. The cultural landscape created by people and explored by architectural history is characterised by a great diversity of forms. The most important factors determining this distinctiveness are the time and place of the architecture's creation. Classification according to historical criteria will include features and patterns characteristic of successive eras and periods. On the other hand, differentiation based on place (geographical criterion) will indicate features and patterns typical of a specific territory. As K. Pawłowska points out, this division is evident depending on the type of architecture. In the case of elite architecture, the influences of a specific era dominate, while in the case of folk architecture, the interpretation based on location is stronger.<sup>20</sup> However, the validity of these preferences is not directly visible in contemporary architecture. The tendency towards unification blurs this traditional order of distinctiveness.

### COLLECTIVE MEMORY – FORGETTING AND COMMEMORATION

Collective memory plays a key role in shaping architecture, especially in the context of building its emotional perception by the community. It conveys shared experiences, events, symbols, and values. It is a collection of information shared by a group, concerning both the past and the future (projections).<sup>21</sup> In certain situations, shared information can also take the form of externalisation, including literary, musical and architectural works. One way of storing information permanently is to build monuments, create museums, or archives.

Collective memory, like any other type of memory, undergoes a process of updating, during which some information is replaced by others. This constant evolution of content considered important can be problematic in terms of its physical preservation as monuments and buildings conveying a specific message, such as the Palaces of Culture built in Central and Eastern Europe in the mid-20th century, or the creation of museums with a specific form and theme. This makes certain content permanent despite the changing context.<sup>22</sup> Although their durability is correct in principle, it can also be a source of controversy when, over time, the interpretation of events takes on a different narrative or when the original message is no longer clear to subsequent audiences. The externalisation of memory can also take formal solutions with a non-literal, symbolic meaning. The abstract form of monuments serving as memorials means that outdated content can be interpreted in various ways, without clearly suggesting the original message. An example of the complicated history of objects used for commemoration is the monument 'Żelazne Organy' (Iron Organs) by Władysław Hasiór, located on the Snozka Pass. The composition, made of concrete and steel, represents an original, even revolutionary concept of a monument that plays in the wind. The historical and artistic value contained in the form of the work not only reflects the style of the artist himself, but also the trends in art in the 1960s. Although this abstract design does not impose ideological content or promote it through specific symbols, the source of the sculpture's turbulent history was an inscription located in the lower part of the structure. After renovation work and the removal of the inscription, the monument became

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<sup>20</sup> K. Pawłowska, *op. cit.*, pp. 33–34.

<sup>21</sup> T. Maruszewski, *Psychologia...*, *op. cit.*, p. 51.

<sup>22</sup> T. Maruszewski, *Gdzie podziwiała się nasza pamięć. Od pamięci autobiograficznej do pamięci zbiorowej*, Smak Słowa, Sopot 2019, p. 48.

silent. But, as Sz. Swoboda claims, from the depths of this silence, the cry of truth about its real dedication seems to be heard more clearly.<sup>23</sup>

Material manifestations of collective memory are intended to be a source of knowledge about events or figures considered socially significant. Thus, they are meant to prevent the blurring of memory traces (interference). However, whether a given piece of information is incorporated into collective memory is determined not only by the number of times it is repeated but also by how the new content relates to what is already in memory. People actively seek information consistent with their views, while simultaneously ignoring alternative information.<sup>24</sup> This explains the tendency to remember different sets of data and thus different interpretations of the same facts or events, e.g., by different nations.

Contemporary architecture increasingly considers collective memory as an important element of the design process – not only in terms of aesthetics but also as a tool for building dialogue between the past and the present. This is particularly evident in the approach to collective traumas. It is negative events that are treated as important by communities and thus well remembered.<sup>25</sup> Historical experiences related to war, conflicts or natural disasters not only influence the content stored in collective memory but are also inherited, shaping the identity of future generations.<sup>26</sup> The specificity of trauma lies in the fact that, on the one hand, it is suppressed – manifesting itself in the form of a reluctance to recall memories – and, on the other hand, it is persistently recalled – by commemorating the events that triggered it. The relationship between the processes of commemoration is interesting. They do not take place immediately after the event but only several decades later, when the last eyewitnesses to the event pass away and there is a need to preserve the content in the memory of the next generations.<sup>27</sup> There is a view that the widespread interest in social memory has its sources in the subject of the Holocaust.<sup>28</sup> In groundbreaking museum architecture projects on the subject of the Holocaust, designers focus not so much on presenting historical facts directly but on addressing the sphere of emotions and experiences. Research into the relationship between memory and emotional processes has shown that memory is dependent on emotional state. Moreover, memory is more effective when we are in the same or a similar emotional state during both the memorisation and recall phases. Museum designs by D. Libeskind (Jewish Museum in Berlin, Jewish Museum in Copenhagen) and the monument by P. Eisenman (Memorial to the Murdered Jews of Europe) are described as spatial experiments, intended to place the viewer in the situation experienced by the original witnesses of the event<sup>29</sup> or to provide an opportunity for catharsis for those who directly experienced the trauma. Libeskind himself emphasises that architecture is not only about function and aesthetics but can also be a ‘manipulator of memories’.<sup>30</sup>

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<sup>23</sup> S. Swoboda, *Komu grają Organy? Wokół historii i mitów pomnika na Przełęczu Sznozka*, “Zeszyty Wiejskie” 2016, vol. 22, <https://czasopisma.uni.lodz.pl/zwiej/article/view/19130> (access: 27.08.2025).

<sup>24</sup> T. Maruszewski, *Gdzie...*, *op. cit.*, p. 45.

<sup>25</sup> *Ibidem*, p. 70.

<sup>26</sup> *Ibidem*, p. 76.

<sup>27</sup> M. Lewicka, *Psychologia miejsca*, Wydawnictwo Naukowe Scholar, Warszawa 2012, p. 405.

<sup>28</sup> *Ibidem*.

<sup>29</sup> J.K. Lenartowicz, *Architektura trwogi* [in:] T. Majewski, A. Zeidler-Janiszewska (eds), *Pamięć Shoah. Kulturowe reprezentacje i praktyki upamiętniania*, Oficyna, Łódź 2009, pp. 609.

<sup>30</sup> T. Dyckhoff, *Epoka spektaklu. Perypetie architektury i miasta XXI wieku*, Karakter, Kraków 2018, pp. 318–319.

M. Lewicka, recalling the research of historian P. Nora, argues that the processes of forgetting and commemorating are inseparably linked.<sup>31</sup> The more spontaneous, everyday social memory fades, the more society focuses on creating artificial places of remembrance. There is a need to 'preserve memory'. The more time blurs the traces, the greater the need to preserve them. Even if the increased interest in the past is a kind of reaction to the threat of memory loss, it is a precursor of social activity and an opportunity for creative manifestations of memory preservation.

## SUMMARY

Among the distinguished types of memory in the context of the history-architecture relationship, long-term memory (especially collective memory) is of the greatest importance. Its significance in the perception of architecture is fundamental, due to the constant verification of past experiences with current ones. Elements of the environment also promote the learnability of events, which is why the recognisability of places allows users to act according to a familiar scenario, promoting a sense of security. The recipient's contact with well-known architectural features, historical forms, or symbols referring to tradition makes it emotionally close, often interpreted in terms of beauty. However, it is not always the predictability and simplicity of a space that moves us the most. We prefer environments that engage and intrigue us, harbouring a certain mystery (provided that it is not synonymous with fear).

Collective memory, as a medium for shared experiences, events, symbols, and values, plays a significant role in shaping architecture. Information shared by the community can take on a material form, e.g. in the form of monuments or museums. Designers refer to collective memory, for whom not only aesthetics are important, but also is building a dialogue between the past and the present – especially in emotional terms. The process of commemoration is inseparably connected with the process of forgetting. The more traces are erased, the stronger the need to preserve memory.

Both places and people remember the past. The memory of a place is manifested in the shape of urban planning, often unchanged for centuries, in historical buildings, or in created memorial objects. Human memory, on the other hand, is based on access to history, knowledge, facts, or subjective interpretations of events. It can manifest itself in curiosity, nostalgia, persistently returning emotions, or moods worth recording to preserve them, etc. To paraphrase J. Pallasmaa, experiencing architecture is not simply a series of images on the retina but meetings and combinations that interact with memory.<sup>32</sup>

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<sup>31</sup> M. Lewicka, *op. cit.*, pp. 406–407.

<sup>32</sup> J. Pallasmaa, *op. cit.*, p. 75.

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