

Analysis of the Relationship between Childhood Sense of Place and Adulthood Architectural Taste; Case Study: Architecture Students of Imam Khomeini International University (IKIU)*

Ahmad Ali Irajia** - Mahdi Zandieh^b- Mohammad Sadegh Falahat^c- Reza Sameh^d

^a Ph.D. Student of Architecture, Faculty of Architecture and Urbanism, Imam Khomeini International University, Qazvin (Corresponding Author).

^b Associate Professor of Architecture, Faculty of Architecture and Urbanism, Imam Khomeini International University, Qazvin.

^c Associate Professor of Architecture, Faculty of Architecture and Art, Zanjan University, Zanjan.

^d Assistant Professor of Architecture, Faculty of Architecture and Urbanism, Imam Khomeini International University, Qazvin.

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ABSTRACT

Architectural taste is a faculty that creates sensibility but not reason or quick intellectual discernment plus delicacy of feeling that leads to architectural choices. This is a knowledge that does not come from logic, but from architectural insight, and relies on the intuitive ideas of the person's mind rather than on the logical data of them. One of the ways to understand the behavior of the user's architectural taste is to know the sources that produce this spatial-intuitive consciousness in their minds, and the sense of place is one of these sources. The user's sense of place from previously experienced places is an extract of their intuitive perceptions of those places, which is recorded in their minds as a feeling. The feelings that are most tangible of them can be found in their childhood. The purpose of this study, on the one hand, is to redefine the concept of childhood sense of place and architectural taste, and on the other hand, to find the components of childhood sense of place among statistical society members regarding their childhood buildings to analyze and compare the effect of these components on the pleasant components of their taste in architecture during adulthood. Therefore, this study determines what the architectural taste and childhood sense of place are, and on the other hand, answers the question of why a relationship exists between childhood sense of place and adulthood taste in the architecture of a person and what is the nature of this relationship. According to the findings of this research, the sense of place towards childhood buildings is divided into three major categories: positive sense of place (place of pleasure, secure place, and place of regret), negative sense of place (place of pain), and neutral sense of place (place of repetition). The positive sense of place, especially the place of regret has a considerable effect on the adulthood architectural taste. This study used mixed methods (in-depth qualitative interviews and quantitative weighing of obtained data) for data collection and classification, and the proposed analyses are qualitative and researcher-based.

Keywords: Architectural Choice, Adulthood Architectural Taste, Sense of Place, Childhood, Intuitive Ideas.

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** E_mail: aa.iraji@gmail.com

1. INTRODUCTION

Unbalanced quantitative and qualitative development of built or under-construction buildings is one of the critical problems of Iran's architecture. Many newly constructed buildings are constructed at micro and macro levels to meet society's needs but not only lose their potential for meeting available needs after a shorter time than projections due to qualitative weakness but also become serious barriers against coming accurate approaches causing resource waste and environmental dilemmas. It seems that the low quality of current architecture in Iran, either in architectural design or in the construction field is more caused by poor architectural knowledge and insight of suppliers (architecture designers or executives or architects) and demanders (employers or users). It means that Iranian architects and users in both supply and demand contexts have less concentration on the architecture quality and pay more attention to quantitative indicators (Mahdavinezhad and Talebhashemi 2017, 103).

Recent relevant studies have paid more attention to the poor knowledge of architects, and to some extent considered the poor knowledge of users, and presented some strategies for promoting architecture education to enhance the architecture knowledge among both target groups (either in the university or in school and society level). Moreover, these studies have not examined the intuitive insight of architecture. Among these studies, some researchers such as Hojat believe that poor demand in the current architecture status of Iran is a more problematic case than poor supply in

both architectural knowledge and insight, so if users look for high-quality architecture, then architects can meet this demand rapidly (Hojat and Aghalatif 2010, 25). From a similar but a little different perspective, this study considers the low demand for high-quality architecture in Iran rooted not only in poor architectural knowledge acquired by users but more in their poor architectural intuitive insight. The reason is that no great capacity exists for enhancing the architectural knowledge of society through school or media, so it might be better to create a culture of using architectural consultation and advice based on the same facilities among ordinary users instead of direct training. However, architectural insight cannot be promoted through direct architecture education or receiving architectural consultation. An insight that originates from the intuitive ideas recorded in the unconscious mind directly affects the architectural taste of users (instant and intuitive likes and dislikes), and subsequently their architectural choices (Haidt 2019, 45).

Regarding the immediate effect of users' architectural choices on increasing high-quality demand in Iran, it seems necessary to study this topic and examine the effect of various factors on it. Among the factors affecting architectural choice, the component of economic limitation is out of the scope of architecture studies, but the components of knowing functional needs, choice portfolio limit, and media influence receive attention from researchers. Attention to the architectural taste or intuitive factors has been missed in this case (Fig. 1).

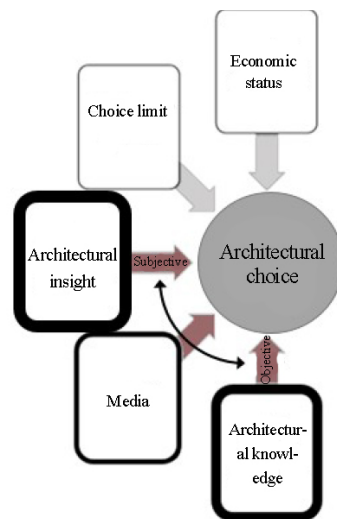


Fig. 1. Factors Affecting the Architectural Choice

Frasconi defines architectural taste as "a faculty which creates sensibility but not reason or quick intellectual discernment plus delicacy of feeling" (Frasconi 1986, 5). Therefore, architectural taste is one of the most important factors affecting the users' architectural

choices, which are fed with intuitive ideas of unconscious mind. Hence, this study assumes that the identification of factors creating intuitive ideas in the mind leads to a better knowledge about architectural taste, which sense of place particularly the childhood

sense of place are the most important factors. It should be noted that the intuitive insight considered in this study is not the outcome of temperament and genetic affairs, but the purpose is to study developmental matters in the personality growth of the person in the semantic-individual dimension that shapes their mentality during childhood when facing architectural places at that time and has the most important influence on the formation of a childhood sense of place, and subsequently the adulthood sense of place. However, the architectural taste of users is not just influenced by their spatial memories, and the spatial memories of the user from previously experienced spaces are not fully summarized in his or her sense

of place. However, it can be stated that the user's sense of place based on the previously experienced spaces is an extract of his/her intuitive perceptions of those spaces that remain as a sense in the mind of the user. The senses that their most tangible can be searched during childhood, and the main reason for this subject is having prelogical projections instead of logical thinking during childhood (Chawla 1992, 64). Additionally, childhood sense of place would direct the senses a person has towards new places and indeed influences person's architectural taste by creating institutive ideas in mind consciousness (Fig. 2).

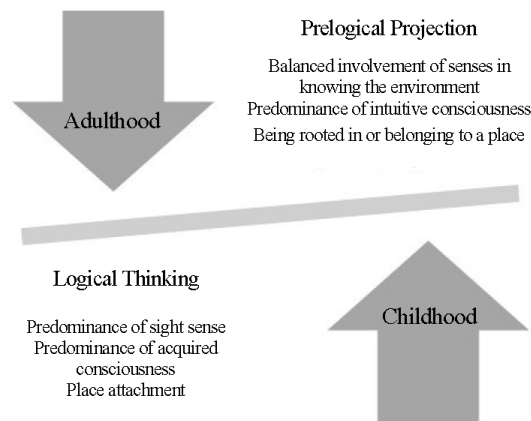


Fig. 2. Difference between Mind Structures of Child and Adult

Childhood sense of place is seemingly more important than adulthood sense of place in terms of four aspects: 1. According to Chawla's opinion, sensory-intuitive ideas shaping a sense of place are more generated during childhood due to the prelogical structure of a child's mind, and remains more tangibly and durably because the child does not have any previous experience in mind; 2. According to Wagih, buildings seen during childhood create a stronger sense of place compared to those of adulthood because those buildings are few, their presence is longer and repeated, and the child sees them permanently for a longer time; 3. The educational sight-oriented system that fosters similar cases (Godin 2021, 54) unintentionally deactivates other sensory receptors and suppresses the eagerness for search in humans, so it disturbs the creation of a sense of place during the next steps of life; 4. Childhood sense of place would direct the feeling about new buildings due to their temporal precedence.

This study aims to redefine childhood sense of place and architectural taste and also to find components of childhood sense of place towards childhood buildings among the statistical society to analyze and compare the effects of these components on pleasant components of their architectural tastes during adulthood. Furthermore, this study provides a suitable

platform for future studies on the architectural taste of future employers by identifying the sense of place of present children.

2. QUESTIONS

Research questions have been sorted from part to whole within a hierarchical framework to achieve the objective of the study:

- What is the meaning of childhood sense of place?
- Why childhood sense of place is effective in fostering architectural taste?
- How do the memories of childhood sense of place influence adulthood architectural taste?

3. HYPOTHESIS

It seems that the concept of childhood sense of place considered in this study is among various notions and theories introduced in sense of place studies, but is not fully matched with none of them. The reason is that the mental features and memory structure of children and their intellectual analysis make their perception and understanding of the surrounding environment (place) distinguished. Hence, these differences must be considered in the answer given to the question that asks what is the childhood sense of place.

On the other hand, this study is associated with the key concept of architectural taste, which means many subjective inner factors of individuals play a vital role in their architectural choices. The significant effect of childhood rearing on the inner thoughts and character of individuals during childhood has been confirmed in various science branches. However, this nurture is not just rooted in the relationship between humans and other humans but is also influenced by the relationship between human and their surrounding environments. According to this viewpoint, it is important in this study to answer the question asking why and how childhood place nurture affects the future spatial taste of humans.

Hence, research hypotheses tend to answer the questions ask what, why, and how this effect is, which are as follows:

- Sense of place has triple dimensions: semantic-individual, social-collective, and physical-environmental. In terms of the semantic-individual dimension, a sense of place is the close connection with pleasant (pleasure) or unpleasant (pain) memories of persons during their spatial experiences, which have led to their attachment or dispatch to the place or both of them due to high frequency or immediate but significant influence of these experiences. Childhood sense of place has more affinity with the semantic-individual aspect of the sense of place due to the mental structure of the child and its clear difference with the sense of place that a person experiences during childhood.
- The sense of place experienced during childhood is more influential and plays a more significant role in shaping the intuitive consciousness of a person due to its more profound semantic aspect and a greater

number of intuitive ideas created in the unconscious mind of a child. Hence, childhood sense of place is more effective in shaping architectural taste, which is fed by these intuitive ideals.

- Spatial experiences of childhood and the sense of place that a person has intuitively in mind as the extract of those experiences would affect childhood architectural taste both positively and negatively.

4. BACKGROUND

The studies conducted on the research topic are classified into four categories:

1. Architectural taste: some studies have asked what the taste in architecture is, and addressed the relationship between architects' architectural taste and ordinary users' architectural taste.
2. Memory and structure: studies that have investigated the connection between human memory, memories, and architecture.
3. Sense of place: studies that have identified the concept of sense of place trying to measure the rate of sense of place among different case studies.
4. Childhood sense of place: studies that have investigated childhood sense of place and analyzed the components affecting it.

Although there are many studies conducted on memory and architecture and sense of place, and it has been attempted to collect the most relevant ones, few studies have been done on architectural taste and childhood sense of place, particularly by architecture researchers. Hence, the mentioned titles are among the unspoiled fields for architecture studies. Table 1 reports the number of studies reviews in the research background under the mentioned titles.

Table 1. Number of Background References in Terms of Content

Architectural Taste	5
Memory and Architecture	10
Sense of Place	38
Childhood Sense of Place	4

On the other hand, references of research background have been scrutinized within two main categories: theoretical studies on sense of place and theoretical studies on architectural taste. In terms of research type, studies on the sense of place are often among documentary-field types. It means that a qualitative approach has been used to gather the opinion of previous studies about this topic based on the library method, and the theoretical framework of study has been formulated based on the classification of references proposed by the researcher, as well as new opinions of the author. A field study that mainly has a quantitative approach was done on statistical society within the formulated framework, and the obtained results answered the research questions. However,

some studies are recently done that use a qualitative approach in their field studies, and the number of these studies is on the rise. The few studies conducted on architectural taste are documentary, and no field study asking questions from statistical society was found. The field studies conducted on this topic are among researcher-based field observations. Table 2 reports the number of studies reviewed in the research background based on their types, and Fig 2 depicts the number of these studies based on their research approach. This graph also indicates the growth rate of Persian and English studies with both quantitative and qualitative approaches carried out before and after 2010.

Table 2. Number of Background References in Terms of Method

Documentary References	13
Documentary (Review) References	5
Documentary-Field References	39

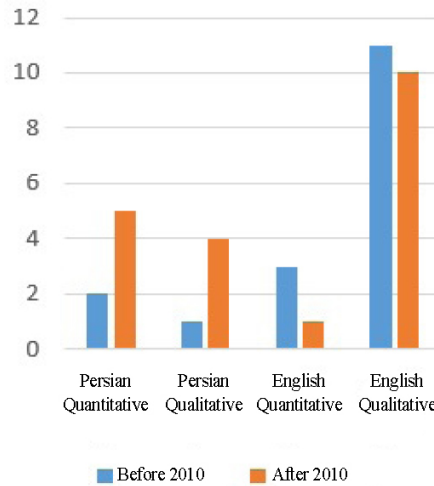


Fig. 3. The Research Approach of Background References

4.1. Research Background of Sense of Place Studies

Among the studies conducted on sense of place, research papers with quantitative approach have used Likert scale-based or multi-option questionnaire for data collection and have used computer software (SPSS, SAS) for classification and analysis of data, and available quantitative analyses include various types of regression analyses (Shamai 1991; Nazer 2004; Falatat 2005; Shamai and Ilatov 2005; Tester et al. 2011; Heidari et al. 2014; Maleki et al. 2014; Rahimi et al. 2017; Eslami Parikhani et al. 2020).

Among sense of place studies, research papers with qualitative approach have used library resources (Hay 1988; Brown and Perkins 1992; Lewicka 2011; Falahat and Noohi 2012; Kudryavtsev et al. 2012; HashemNezhad et al. 2013; Kashi and Bonyadi 2013; Nikravesh and Ghasemi 2014; Jafaripour and Frutan 2015; Falahat et al. 2017; Hernandez et al. 2020; Manzo and Devine-Wright 2020; Seamon 2020; Williams and Miller 2020), or researcher-made field observations (Tuan 1975; Sunyoung 2003; Pallasmaa 2011; Sunyoung 2020), and or in-depth interviews with case studies (Nylander 2011; Lak and Gholampur 2015; Beidler 2007; Gustafson 2001; Hay 1998) for data collection. Qualitative studies are researcher-based for data analysis and classification and mainly use manual coding for this purpose. However, recent studies have also used computer software, including NUD*IST and MAXQDA for coding qualitative data (Beidler 2007; Gokce and Chen 2021).

On the other hand, mixed studies usually convert

the collected qualitative data to quantitative data, and use quantitative analyses parallelly to evaluate qualitative analyses and make a balance between them (Hay 1998; Gustafson 2001; Shamai 2018; Gokce and Chen 2021). Some authentic studies have recently warned about the mismatch between field studies and quantitative approaches to a sense of place and reminded the necessity of field studies with a qualitative approach in this field (the necessity of asking “what” instead of “how much”) (Lewicka 2011; Hernandez et al. 2020; Manzo and Devine-Wright 2020; Williams and Miller 2020; Seamon 2020). Even those researchers insisting on a quantitative approach to this topic have recently used mixed approaches (Shamai 2018).

Among Persian references, studies conducted on the sense of place have mainly identified and evaluated users’ sense of place towards houses, neighborhoods, cities, or public and historical places where they live or commute. Most of these studies have collected and analyzed data through a quantitative approach. Moreover, no study was found on childhood sense of place among field or documentary-field studies in Persian. Few foreign and English studies were found in this scope (Chawla 1992; Hay 1998; Morgan 2010; Sunyoung 2020).

4.2. Background of Studies on Architectural Taste

Although some topics like the identification of aesthetics principles or origins of taste in architecture have received attention from researchers, few studies

have been done on the architectural taste of users and architects (which leads to their architectural choices), and the available studies are documentary, library, and within theoretical frameworks (Imani and Zafarmandi 2017). Research background was reviewed and no field study (with a qualitative or quantitative approach) that selects architectural taste as a dependent variable was found. Moreover, no study on architectural taste was found among field or documentary-field studies in the Persian language. Few English studies are also available (Scott 1914; Scruton 1975; Frascari 1980; Holland 2011; Sauchelli 2012; Kushner 2015).

5. METHOD

This study tends to answer the first and second questions of the study based on an interpretive strategy through qualitative and researcher-based collection and classification of documentary data and creating a theoretical framework. For this purpose, the data extracted from research background on theoretical foundations were divided into two scopes of architectural taste and childhood sense of place. This study then tried to explain what childhood sense of place and adulthood architectural taste are based on these theoretical foundations and field studies of the research. Moreover, some interpretations are discussed on why there is a relationship between childhood sense of place and adulthood architectural taste by analyzing this connection.

To answer the third question about the connection between childhood sense of place and adulthood architectural taste, in addition to qualitative and researcher-made collection and classification of documentary data and creation of theoretical framework based on the scholars' opinions, field studies are done on the target society, and theoretical findings are controlled and adjusted with the results obtained from the final analysis of field data (section 7.2). In qualitative analysis of field data, the collected and classified data are converted to weighed quantitative data based on the coding technique, and then qualitative and researcher-based findings are extracted after interpreting these data. Therefore, this study is among documentary-field research types that have a mixed approach with valuation and detection strategy.

Accordingly, the field data of the study are collected through two ways to identify the effect of childhood sense of place on architectural taste. The first trajectory includes doing interviews and extracting components of a childhood sense of place towards buildings of that time, data orientation, and weighing based on the feeling that individuals of statistical society had about that place or architectural indicators of that place during childhood. In the second trajectory, pleasant architectural indicators in the unconscious mind of statistical society are examined. The indicators extracted from the final projects of architecture

students (statistical society) or their pleasant buildings are compared between two groups of components and mentioned indicators indirectly to reveal the effect of childhood sense of place on architectural taste. To do this comparative analysis, the data extracted from interviews and student projects are classified axially and according to the architectural indicators proposed by Nylander (2011).

6. THEORETICAL FOUNDATIONS

Because no separate study has been done on the relationship between childhood sense of place and architectural taste, the theoretical framework of relevant studies must be illustrated separately to reveal the connection between studies on these two fields and find the position of the present paper among these studies.

6.1. Architectural Taste

In terms of “consequence,” the studies conducted on architectural taste more focused on the aesthetical outputs depending on the taste of architecture users but paid less attention to the architectural taste as one of the main components of architectural choice. In terms of origin, some researchers such as Scott (1914), Scruton (1975), and Sauchelli (2012) have defined taste in architecture and searched the origin of these conscious likes and dislikes in the artistic pleasure and logical inference scope of humans. Although Holland (2011) has had a critical view of the connection between the architectural taste of architects and architecture users and explored the gap between these two tastes, this author has not examined the factors shaping architectural taste in these two groups. Kushner (2015) who studied the influence of media on the architectural choices of designers and users has highlighted media among various factors but ignored architectural taste as a subjective-inner factor in architectural choice considered it a factor fully influenced by media. In this case, Frascari (1980) gathered various definitions of architectural taste presented by various authors and confirmed that architectural taste is rooted in human instinctive tendencies. “Architectural taste is a faculty which creates sensibility but not reason or quick intellectual discernment plus delicacy of feeling that leading to architectural choices” (Frascari 1986, 5; Quoted from Binni 1970, 75). However, Frascari does not examine factors affecting architectural taste, but finds the significant role of architectural taste in European architecture trend by reviewing the architecture of Europe in 17th and 18th centuries.

6.2. Childhood Sense of Place

According to studies conducted by Chawla (1992) and Morgan (2010), childhood sense of place is defined within the theories derived from the semantic-individual dimension of sense of place. It

should be noted that Chawla believes when a child progresses from childhood to adolescence, a sense of place tends from unconsciousness to consciousness. Since the unconscious sense of place has the highest effect on architectural taste, childhood sense of place is seemingly defined within the semantic-individual dimension and in a range between originality and place attachment. However, Hay (1998) and Chawla believe that a sense of place shaped in childhood (6-11) is stronger. According to Chawla, search and discovery are the most important factors in creating a sense of place, so middle childhood (6-11) is the richest period for creating a sense of place during childhood.

Chawla assumes that lasting memories of the place of origin shape a part of a human's identity, whether they like it or not (like the influence of their mother). This level of human place attachment results from limitations and boundaries created as present territories for the child by the family in the first stage and by the society in the second stage, and the child accepts these limitations until the end of childhood due to his/her weakness and need. Home is at the center of this territory.

The child feels attached to this spatial territory and feels happy when is in this place or experiences

anxiety when leaves the place. In this case, childhood place becomes a value for the child. Chawla addresses the sense of place development stages corresponding to child growth by dividing childhood into three periods: childhood, middle childhood, and adolescence. Accordingly, a child's sense towards new places corresponds to the child's growth and power of increasing the presence territory (Chawla 1992, 66). The Child's mind structure growth affects this process. It means that when linguistic abilities are developed, the prelogical projections of the child decrease, and the mind structure approaches logical thinking. This case is accelerated when a child enters the educational system of school (Chawla 1992, 64). Therefore, the motivation source of a childhood sense of place gradually develops corresponding to the child's growth changing from inward pulls to outward attractions. On the other hand, when a child finds the difference between self and others and the surrounding environment then not only shows a desire for social affiliations and exploring in surrounding environment, but also self-identity strains appear in the character of a child through a sense of plurality growth by getting far from the initial Sense of Openness in which, considered itself and surrounding environment unique (Fig. 4).

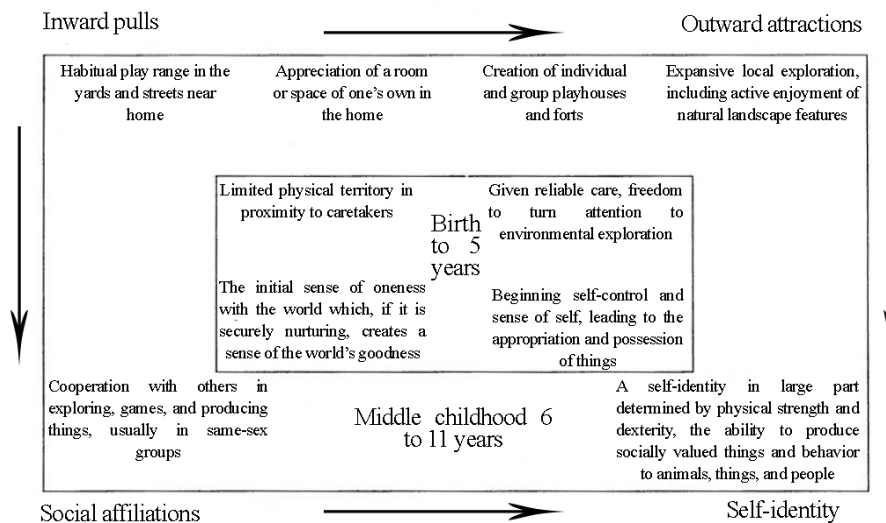


Fig. 4. Sense of Place Development Process (Chawla 1992)

Morgan (2010) defines childhood sense of place as a range of place experiences during childhood, which lead to a strong and long-term bond with the place within an esoteric and unconscious form; a sense arising from exploring and discovering experience, love, and affection, loss, pleasure, and security in place (Morgan 2010, 11). According to the qualitative analyses on the interviews conducted by Morgan, he concludes that not only the memories remained from childhood place experiences can affect the adulthood sense of place, but also simultaneous

exploring in human and place attachments during childhood indicate the profound similarities between these two variables. Following a holistic view of his proposed model (Fig. 5), he introduces human attachments as supporters creating place attachments. On the other hand, he explains that place attachment is a driving force for creating human attachments. He tries to make a connection between place and attachment theories (in psychology scope) and introduces the inner feelings of humans (pleasure and pain) the linking loop between these two variables.

Nevertheless, he assumes that studying inner feelings in the psychology field is easy yet difficult like the study of place in architecture scope.

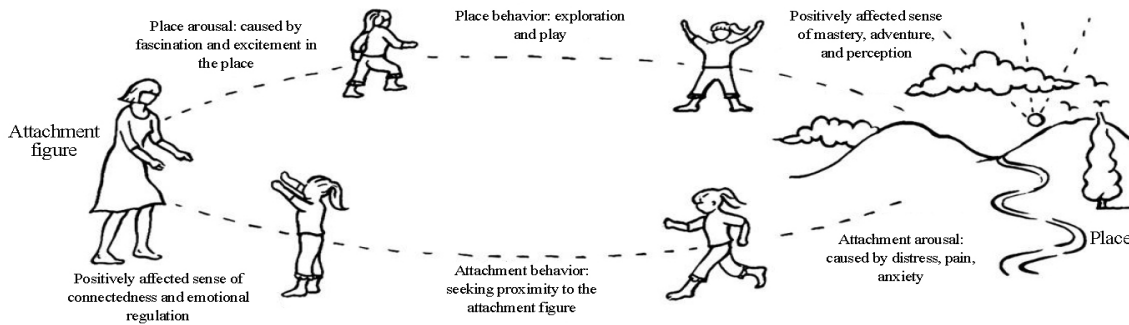


Fig. 5. The Cycle of Creating a Sense of Place during Childhood

(Morgan 2010)

7. FINDINGS AND DISCUSSION

In this study, architecture students of IKIU were selected as the statistical society they have the required skills for describing architectural features of their childhood buildings. On the other hand, the architectural knowledge of these students to some extent has eliminated the effect of external subjective factors, such as media on the architectural choice of statistical society, so the architectural taste (as the internal subjective factor in architectural choice) is assessed more independently. Moreover, the statistical society of study is aware of diversity in the buildings constructed in the world and faces no choice limitation. On the other hand, these students can design a building based on their architectural taste, which is not affected by the economic conditions. This advantage would delete the effect of choice limitation and economic conditions on the architectural choice (objective factors in architectural choice), so the architectural taste is examined more precisely.

The questionnaire of this study asks three questions about “conscious memory,” “unconscious memory,” and “self-identical evaluation.” It is worth noting that the questions of the interview are divided into three mentioned parts by the study conducted by Morgan (2010), and the questions of each part are designed based on the questions asked in the interviews of Nylander (2011) and the requirements of this study. Moreover, the questions are totally and partially revised after doing some primary interviews.

The question asked about conscious memory in the first part of the interview is done by reviewing childhood spatial memories and experiences searching in the semantic-individual aspect of a childhood sense of place. In other words, the sense of place a person has for buildings during childhood is revealed in this part of the interview. The question asked about unconscious memory in the second part of the interview asks indeed about the architectural indicators of childhood buildings, which individuals keep unconsciously in their minds, so more partial

questions must be asked to extract them. Exploration of these features results in the mental durability of architectural indicators of childhood buildings. Questions asked in the third part of the self-identical evaluation search for an architectural taste of statistical society in previous architectural indicators. To do this, The author records descriptions of architectural plans of student courses and selected plans presented by interviewees, and they present their reasons for their likes and dislikes. Ultimately, the data are coded and compared based on given aspects, so the final analyses are obtained based on these comparisons.

7.1. Data Collection and Classification

The qualitative coding method and quantitative weighing are used to collect and extract qualitative data from interviews. The coding process of the first part of the interviews led to the extraction of five main components for childhood sense of place, which provide a summarization of components found by previous studies, especially based on the results of this study. These five sensible components can somewhat occur jointly in a single place, and express the sense of place of interviewees towards their childhood building through a review of their memories.

- Place of repetition: it is a place where, no long-term or immediate pleasure pain, or influence occurs for the child, and the sense of place is shaped due to frequent experience of the presence of the child at a place for a long duration and many times.
- Place of pain: a place where the child has negative memories in the mind from attending to that place and experiencing pain; experience of mental pains, such as discrimination, loss, and fear, or experience of physical pains.
- Place of pleasure: a place that reminds positive memories for the child experiencing pleasure; experience any pleasure in the place except for security!
- Secure place: a place that brings a security experience for the child. Either the fear caused is inside that place

or outside it. Although the experience of security is a kind of pleasant experience, it is examined as a separate component due to its high frequency mentioned by the interviewees.

- Place of regret: this place is indeed a place of pleasure, and which child is regretful to be present there not only during childhood but also still in adulthood. Hence, this place cannot be a place for both repetition and pain simultaneously; however, the pain of its non-repetition still exists in the mind of a person and is most likely matched with the place of pleasure or a secure place. This component has not been addressed in relevant previous studies, so one of the unique features of this study is the consideration of this component.

The coding process of the second and third parts of the interview indeed included exploring what are the architectural components and measuring the frequency of seven architectural attributes introduced by Nylander (2011) seen in the childhood buildings and pleasant or favorable buildings for interviewees. Although it was attempted through interviews to add any required attribute to these seven indicators, it seems that these indicators have completely covered the architectural descriptions of childhood buildings mentioned by interviewees. The mentioned indicators and relevant descriptions are as follows:

- Materials and detailing: any referral to materials, color, furniture, or plants.
- Axiality: any referral to the path or objective or subjective axis in the building as the internal user or external visitor.
- Enclosure: any referral to the connection between indoor and outdoor spaces of the building (privacy, porosity, etc.) or having a sense of security and comfort in the building (solitude, hangout, etc.)
- Movement: any referral to preferring to stay in or

pass by or curiosity about the indoor spaces of the building (physically or mentally).

- Spatial figure: any kind of spatial shape, dimensions, or proportions of indoor spaces or external association of a building.
- Daylight: any referral to the presence of light or darkness in the indoor spaces of the building.
- Organization of spaces: any referral to the deployment of spaces next to each other pointing to the boundary or in-between space, or referring to the importance of the centrality of space in a place.

An in-depth interview was done with six case studies in this study. Childhood buildings of interviewees are classified into five general categories. These buildings are ranked based on the presence frequency of individuals: father's house, grandmother's house, school, relatives' house, and tourist accommodation. In the first part of the interview, the interviewee's feelings about each building mentioned above are examined, and the "frequency of sense of place's components" is measured in percentage for each case study in the mentioned buildings separately and totally (blue-colored cells of Table 3). On the other hand, the "impact rate of each childhood building on pleasant buildings choice" (a variable that is determined by a comparison between architectural attributes of childhood buildings with pleasant buildings based on the researcher's opinion or consultation with the interviewee) is multiplied by the frequency of sense of place components, and then these components are weighted and cumulated to measure the total "impact rate" of each sense of place component on the pleasant buildings (buildings matched with architectural taste) for each case study and then is measured as cumulative rates and expressed in percentage values (orange-colored cells in Table 3).

Table 3. Cumulative Data of Frequency of Sense of Place Components and Rate of their Effects on the Architectural Taste

	Place of Repetition	Place of Pleasure	Place of Pain	Place of Regret	Secure Place
First Case Study	20%	10%	33%	40%	20%
Second Case Study	33%	50%	67%	50%	-
Third Case Study	37%	33%	13%	16%	37%
Fourth Case Study	20%	-	30%	13%	20%
Fifth Case Study	33%	17%	33%	33%	-
Sixth Case Study	50%	33%	25%	34%	-
Frequency	32%	34%	25%	13%	18%
Impact Rate	24%	31%	15%	38%	23%
Impact Factor	0.75	0.91	0.60	2.90	1.28

In the second part of the interview, the interviewee's referrals to any architectural attribute in every childhood building are coded, the frequency of each

attribute in each building of childhood is measured, and the obtained values are expressed for each case study and in cumulative (percentage) values (blue-

colored cells of Table 4). The process done for interviewees' statements about pleasant buildings in the third part of the interview is repeated, and the

frequency of architectural attributes in the buildings is measured for each case study and as cumulative value in percentage rate (orange-colored cells in Table 4).

Table 4. Cumulative Data of Frequency of Architectural Attributes in Describing Childhood Buildings and Pleasant Buildings

	Materials and Detailing		Axiality		Enclosure		Movement		Spatial Figure		Daylight		Organization of Spaces	
First Case Study	22	-	12	-	13	40	10	-	8	10	13	-	22	50
Second Case Study	22	25	8	-	14	25	6	-	8	25	14	25	28	-
Third Case Study	21	27	11	-	24	27	7	-	7	-	7	-	23	46
Fourth Case Study	19	26	9	3	19	26	11	-	14	3	9	12	19	30
Fifth Case Study	16	20	9	-	21	20	14	20	6	-	12	-	22	40
Sixth Case Study	24	33	9	-	12	33	9	-	9	-	12	-	25	34
Frequency of Childhood Buildings	21%		10%		17%		9%		9%		11%		23%	
Frequency of Pleasant Buildings	22%		1%		29%		3%		6%		6%		33%	
Impact Factor	1.04		0.10		1.70		0.33		0.67		0.54		1.43	

7.2. Data Analysis

This part of the study shows the information obtained from interviews with case studies through cumulative values in some graphs and then presents the author's interpretation of these data. These data are scrutinized and divided into two scopes: "comparing frequencies of childhood sense of place and their impact rates on the architectural taste" and "comparing frequency of attention to architectural attributes when describing childhood buildings and pleasant buildings (matched with architectural taste)."

7.2.1. Comparison between Frequencies of Childhood Sense of Place Components and their Impact Rates on the Architectural Taste

Fig 6 has been illustrated based on the information reported in Table 3. Components of childhood sense of place are ranked based on their impact rates on the architectural taste as reported below:

Place of regret (2.9) > secure place (1.28) > place of pleasure (0.91) > place of repetition (0.75) > place of pain (0.60)

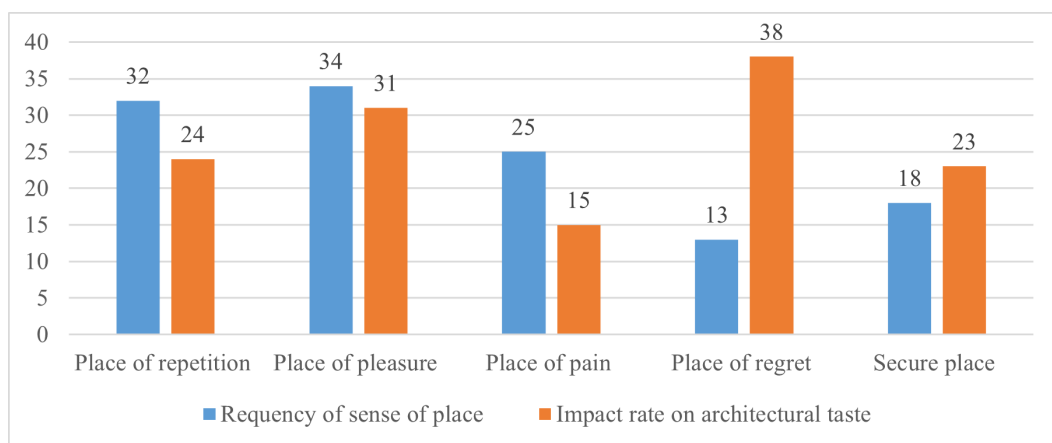


Fig. 6. Comparing Frequencies of Childhood Sense of Place Components and their Impact Rates on the Architectural Taste

- Although the place of regret is the component with less frequency compared to other components of sense of place, it has the highest impact rate and

impact factor on the architectural taste.

- Although the component of the secure place indicates lower frequency rather than other components

(except for a place of regret), it has second rank in terms of impact factor, and even its effect rate on the architectural taste is greater than the place of pain.

- Components of the place of repetition and pleasure have the highest frequencies among other components, so indicate a relatively high impact rate. However, it can be stated that the impact of a place of pleasure on the architectural taste is somehow greater than the place of repetition.
- Although the place of pain has the lowest impact factor among other components, this coefficient is not minor enough to be denied.

As was explained in section 7.1, place of regret and secure place are defined in the general area of place of pleasure, and are investigated separately due to their importance. According to the cumulative data of three

components under the title of place of pleasure, place of pleasure has a greater impact on the architectural taste during childhood rather than place of repetition and place of pain.

7.2.2. Comparison between Frequencies of Architectural Attributes in the Description of Childhood Buildings and Pleasant Buildings

Fig 7 has been illustrated based on the information reported in Table 4. Architectural attributes are ranked based on their impact factor on the architectural taste as reported below:

Enclosure (1.70) > organization of spaces (1.43) > materials and detailing (1.04) > spatial figure (0.67) > daylight (0.54) > movement (0.33) > axiality (0.10)

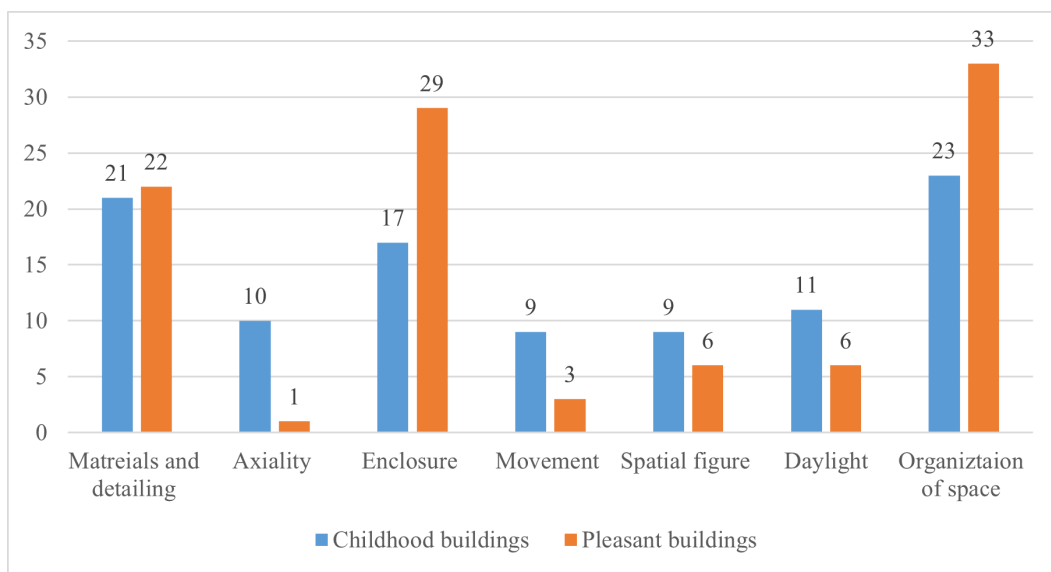


Fig. 7. Comparing Frequencies of Architectural Attributes in the Description of Childhood Buildings and Pleasant Buildings

- In most cases, architectural attributes have been considered by the person during childhood, so that these attributes (enclosure, organization of spaces, and materials and detailing) have the highest impact rate and even impact factor on adulthood architectural choices.

• Although the organization of spaces has a lower impact rate compared to the enclosure, this attribute has a higher effect on the architectural taste because the child's mind pays more attention to it. Hence, this is the most important attribute.

• The researcher assumed that materials and detailing have the highest impact rate among other attributes, but this attribute obtained the middle rank. However, followed by the organization of space and enclosure, this attribute has the greatest impact rate.

• Interviewees' mind in childhood pays moderate attention to axiality and movement attributes, but the impact rate of these attributes on adulthood architectural taste is negligible. However, this minor

effect can be ignored because the spatial perception of these components is difficult and requires in-person presence in the buildings, while more interviewees introduced those buildings as pleasant buildings where they have no physical presence.

8. CONCLUSION

Childhood sense of place is defined based on the theories derived from the semantic-individual dimension of sense of place. Accordingly, childhood sense of place is a range of spatial experiences during childhood, which lead to a strong and long-term bond with the place within an esoteric and unconscious form; a sense arising from exploring and discovery experience, as well as pleasure and pain in place; either these architectural attributes of the place lead to these experiences or only the place is a platform for recording experiences. Although components of childhood sense of place include three main pivots:

place of pleasure, place of repetition, and place of pain, two components of secure place and place of regret defined within the place of pleasure scope have been mentioned specifically during their numerous frequencies in field surveys of this study.

The spatial-intuitive ideas in the mind of a person are linking loops between childhood sense of place and adulthood architectural taste. The ideas created through the relationship with childhood places and their sensory experiences and stored in the unconscious mind, and result in architectural choices when expressing architectural taste during childhood and showing the like and dislike of a person towards new buildings.

Some researchers in this field (first group), including Chawla (1992), Hay (1998), and Wagih (2015) believe that a sense of place that a person receives during childhood when sees relevant buildings, becomes a part of that person's identity regardless of positive and negative aspects of that sense, and the person is willing to repeat the architectural attributes of those buildings in adulthood architectural choices. Another group of authors (second group) such as Morgan (2010) assume that a positive sense of place for childhood buildings has a positive effect on adulthood architectural choices, and a negative sense of place for childhood buildings has a negative impact on these choices.

According to the results of field studies of this study, the sense of place of a person towards childhood buildings is divided into three categories: positive sense of place (place of pleasure, secure place, and place of regret), negative sense of place (place of pain), and neutral sense of place (place of repetition). This study confirms the viewpoint of the second group of authors about the positive effect of a positive sense of place in childhood buildings and the negative effect of a negative sense of place in these buildings on adulthood architectural taste. However, this study explains that the positive impact of a place of pleasure is greater than the negative impact of a place of pain. To complete this viewpoint, those childhood places

that person has neutral feelings about them must also be taken into account. According to the definition presented in this study, a place of repetition is a place where an immediate and significant or long-term pleasure or pain has not occurred for the person, and its positive effect on the adulthood architectural taste appears due to repeated experience of presence in that place frequently and for a long time. This is a place where its effect on the architectural taste is lower than the place of pleasure but is higher than the place of pain. This result is in line with the viewpoint of the first group of researchers.

Regarding the high frequency of place of regret and secure place in the interviews, these two components are investigated separately although they are defined within the component of place of pleasure among other sense of place components. According to the results, although the place of regret has the lowest frequency rather than other sense of place components, it has the highest impact rate and impact factor on the architectural taste. Sense of place component that had lower frequency compared to other components (except for a place of regret), this component obtained the second rank in terms of its impact factor on the architectural taste, and its effect rate on the architectural taste was even greater than the impact rate of the place of pain.

Another significant result of this study that explains the relationship between childhood sense of place and architectural taste is the process of ranking architectural indicators of childhood buildings and their effects on the architectural attributes of pleasant buildings or those buildings that are matched with architectural taste. Accordingly, architectural indicators of childhood buildings that remain more in the mind of a person have more aspects in common with architectural indicators of pleasant buildings (enclosure, organization of spaces, materials, and detailing), so leave most effect on adulthood architectural taste of that person.

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CONFLICT OF INTEREST

The authors have no conflicts of interest to declare.

MORAL APPROVAL

The authors commit to observe all the ethical principles of the publication of the scientific work based on the ethical principles of COPE. In case of any violation of the ethical principles, even after the publication of the article, they give the journal the right to delete the article and follow up on the matter.

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The authors state that they have directly participated in the stages of conducting research and writing the article.

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