Spatial Memory: A Childhood House a Proposed Model of the Memory and Architecture Relationship

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Abstract. This paper has been shaped and developed on the proposition that a relationship exists between memory and architecture. The mechanics of memory have been studied for many years by various disciplines and its connection with architecture, either individual or collective, forms the spatial memory in architecture. In the formation of this spatial memory, the interaction with one’s environment and the memory of this interaction stored in one’s brain makes the ability to remember and recall the important. Consciously, what significance do people attribute to remembered spaces? How do they value them, in their own words? How do the remembered spaces interact with them? Can spatial memory emerge and bring new values to architecture? This study aims to investigate the importance of the formation of spatial memory in an individual’s dynamic relationship with any particular space. A “Childhood House” has been selected as the space for the study. There are many scholarly books that address the space of the house where it has been a particular focus from a memory point such that it collects an individual’s past relationship with the space. The recollection of the childhood house by an individual relates the spatial relationship one has with memories of the past. Spatial memory, which has been formed on concepts of memory, perception and this house, is analysed in a proposed model aimed at explaining what spatial elements might be the inputs in forming spatial memory. Individual features, the social environment of the era and physical characteristics of the space are selected as the main features to form the spatial memory of a childhood house. The model also puts forward several sub-features which enhance the recall moment of an individual when interacting with a space. Main and sub-feature inputs of the model form multi-layered spatial memory outputs which show the brain’s ability to code, store and recall. Twenty individuals were chosen to contribute to the study, using their recall of childhood house memories to respond to pre-set memory/space related questions. Each individual’s spatial recall verified that the proposed memory/space relationship model showed clear evidence that the spatial memory is formed under the influence of these three important characteristics: Individual, social/cultural and physical interaction act in concert to constitute a spatial memory.

1. Introduction

“In truth, every perception is already memory. Practically, we perceive only the past, the pure present being the invisible progress of the past gnawing into the future” [1].
The concept of memory consistently appears in studies in neurological, philosophical and sociological. Its meaning for neurologists; the memory’s neurological foundations, for psychologists; the processes of an individual’s cognitive and emotional recollection in specific situations, for psycho-analysts; the memory’s being a place for long-term life narratives, for philosophers; the phenomenon of memory, for sociologists; the formation of social/collective memory, for historians; the reliability of a person’s memory against history studies. Architectural memory is studied in terms of collective memory; framing urban memory with buildings and cities; memory and modernism where modernity assumes that present is a new era; it is not a continuation of the past; places within and without memory. Remembering places is like bridging science and humanities. The concept of memory in architecture harmonizes in the brain and visualize the perceived past. In an individual experience it forms a spatial memory which a person codes, stores and recalls the remembered places.

In this study it is aimed to study the spatial memory from an individuals lived memory experiences through a model. The proposed model to understand the space-memory relationship focused not only what one remembers in space but how one remembers and what are the inputs of spatial elements store in mind. Memory appears to be tied to time, to evoke the characteristics of spatial memory, a layered model framed around three contexts in architecture: perception, memory and house. These three contexts were discussed theoretically and conceptually to design the outer frame of the proposed model.

Memory and space relationship is investigated through three key features; individual, social/cultural and physical which believed to have more importance on personal spatial memory recalls. As Chawla mentioned the significance of our past is what we know, its personal significance must be personally defined. No matter how many ways our past may affect us [2]. Schacter, points out that we remember only what we have encoded, and what we encode depends on who we are. A very individual spatial memory encoding shaped the study and therefore individual features such as; sex differences, age groups, time period of interaction with the space, individual meaning of space, senses and emotions within the space analysed and investigated throughout the study [3]. Halbwachs, argued that every recollection, even the most personal and private thought and sentiment, exists in relationship to a social group. Our memories are localized within a social group, situated in the mental and material spaces provided by that group. The apparent stability of these material spaces surrounding us allows us to conserve our recollections [4]. Although the study is shaped in an individual spatial recalling, the social era of the space, socio-economic and politics of time, local traditions and behaviours, human relations, neighbourhood relations, family rituals are defined to observe the individual spatial recalls. Our past lives in a place which is a complex and dynamic phenomenon. Place may refer to geographical and constructed places such as location, topography and landscape and buildings. Remembered places as spatial memories is very important to us; our homes, how we live in them, and how dwellings and spaces affect us and where they are located. The physical existence of the space such as location, country, city, street, orientation, outer and inner spaces, shape and geometry, material usage and physical comfort were selected as the main inputs for spatial recalls.

In order to evaluate spatial memory relationship, literature surveys conducted around perception, memory and house relations, then a model proposed and this model was tested with individuals. Twenty individuals are selected to contribute the study with interviews. Childhood house is selected as the past-space of this study. During the interviews, pre-set questions used to contribute to spatial recalls. Twenty individuals are selected with 3 major criteria’s such as having different sex and work groups (to evaluate the individual features on spatial memory), having childhood house memories from different cities of Turkey (to evaluate the importance of physical features on spatial memory) and having lived in a socially and economically high income group (to evaluate the social and cultural features on spatial memory). Each individual with pre-set questions recalled childhood memories from their houses. They contribute valuable spatial recalls framed around the proposed model. Spatial memories created significant narratives. Each spatial memory narrative was recorded and later texted. This helped to the aim of the study formalized at the beginning “How one remembers? And what are the inputs of spatial elements store in mind? What are the key features to recall remembered spaces?
Each individual’s spatial recall output formed another perceived spatial memory in researcher. The spatial memory narratives are grouped under the key features which is framed as individual, social/cultural and physical.

2. Perception-Memory-House and a proposed Space-Memory Relationship Model
Researchers discusses memory as the most extraordinary phenomenon in the natural world. Examining the brain functions, they find out that our experiences affect the brain’s organization and modification. We as humans interact with the built environment, what a human can later be able to perceive, remember, understand and become depends on the experiences, perceptions and actions interacted within the built environment [5].

From early philosophers to today, memory is studied in various forms. Aristotle discusses that one can remember the past and sense the present and can have hopes and expectations for future, so memory is in the present but it is past. According to Aristotle remembering is on the contrary to sensation and thinking where time is involved. When we remember we already know that it belongs to past. When we recall something we recall from the past and bring to present it is the result of the sensation and thinking but without the objects and processes being there [6].

Plato regarded memory as being like a wax tablet, on which impressions would be made or encoded and subsequently stored, so that we could return to and retrieve these impressions (i.e. memories) at a later time. This tripartite distinction between encoding, storage and retrieval has persisted among scientific investigators to the present day [7].

Our brain functions with left and right side. Psychologists’ studies show that we perceive and remember visual designs and spatial locations from the right side of the brain. Left side is the narrator of the events. We see with our right side and memory of our own home is encoded through the right side of the brain [8].

Bastéa, discusses the distinction between lived and learned memory of space which the term described by the psychologist Schater, as Body Memory and Mind Memory. The memories of space derived from personal and lived experiences such as the layout of our architectural spaces, childhood homes or the streets of our hometown are called as Body Memory which are directly imprinted or encoded in our bodies. [9]. The memories of learned spaces refer to indirect memories of space, narrated experiences that have been passed down to us through our family, friends, community, schooling so it is called as Mind Memory. The spaces that we never seen however narrated from others, studied architectural landmarks but have not visited are such examples of Mind Memory. Stories we heard about places also become part of our autobiographical memory. According to Schater, the autobiographical memory works first with the encoding process. “We remember only what we have encoded, and what we encode depends on who we are,” points out Schater [3].

The spatial memory formed through the relationship an individual establishes with their home is made up of many complexities. Dovey, expresses that a home’s meaning cannot be defined by just one singular concept, rather it is formed from a series of abstract concepts [10]. The life between a home and a person possesses characteristics which are connected to the understanding of experience in the space, the entirety of wholeness and of relationships bringing order and individuals, lived places, the past and the future.

According to Bastéa, the symbolic importance of objects, places, art or language are transferred with memory. Memory acts as the carrier of the remembrance. In her book, the Turkish house is discussed as a memory symbol, as an image to make past meaningful to present. Turkish house where presents the period of Turkish history, builds the past as conflation of place and memory. A historical memory where cultural, political and geological layers form the present [9].

The proposal model putting forward the relationship between space and memory (Figure 1) has been formed by beginning with the idea that in the space-individual relationship in the formation of elements of permanent memory stored from the past up until today, individual characteristics as well as physical and social environmental characteristics are influential [11]. According to the proposed model, time is an important component in the placement of space in individual memory. With the aim
to study the role of the discussed senses as a simple result of the influence of objective environment on a person’s sense organs in space recollection; the evaluation of senses inside the space memory model and recollection of space is also planned [12]. The age in which one’s spatial perception is formed gains importance in terms of the formation of spatial memory. The difference between one’s current age and the age (period) which they want to recall, is effective in recalling different spatial experiences from memory. It is known that differences in the individual’s sex shows variation in the use of space. The usage of home space mainly belongs to the female. For women and men using different spaces within the home, the formation of spatial memory can occur differently. Time as an element takes an important place in the model between the connection made by a person and the space wanting to be recalled. A person experiencing the space in short periods of time usually has difficulty in remembering details [12]. The importance a home carries for the individual alone can differ significantly from the meaning it carries within a family set-up. An individual’s lifestyle changes from person to person, changes from family to family, this has important effects on the usage of the house. When recalling moments, certain activities will appear more prominent than others. Areas of interest within a space take a more detailed position in the memory. In terms of spatial memory, the importance of the senses is because of their role in the individual’s perception of space. From this aspect, senses which play a role in perceptions of space, such as vision, hearing, smell, taste and touch are discussed within the scope of the model.

The town structure and regional characteristics of the place where one recalls sometimes takes prominence. When external settings, courtyards, parks are compared with a man-made environment more memories appear to take place. The geometry of the home where a person lives, appears to be an important element in respect to the memory being able to code spaces. The position of spaces according to each other, entrances or streets are elements recalled relative to space. A space’s dimensions are able to be discussed in plan and cross-section grading. According to climatic data and geographic regions, differential building techniques and local building materials found in the district
influence the way a person defines and perceives the building in which they reside. When recalling the childhood home activities carried out by the stove in a warm setting (making popcorn, listening to fairytales, conversation... etc.) are included in the model as physical characteristics relating to space in the permanent memory. The influence of architecture, political and economic situations of the (lived) time is of importance in the individual’s recollection of space. Socio-political and socio-economic structures lead the main influences guiding architecture, especially the form of housing. Customs and practices, appear to be a measure in the recollection of spaces of cultural environment. For the little children of the family playing games inside the house, in the garden, the street and the district are seen to be important elements in respect to experiencing spaces. In a person’s memory an important occurrence in the space is able to be recalled differently to other occurrences [12].

3. Case Study: Remembering Childhood House_Spatial Memory Narratives

As discussed in the earlier chapters, a proposed spatial memory model has been tested with pre-set questions interviewed with twenty individuals. The narratives of the spatial recalls are collected and grouped under key features. This chapter presents some of the selected six individuals of spatial memory narratives (interviewer one is a retired businessman, interviewer two is a woman retired as a professor from a university, interviewer three is a woman worked as a teacher, interviewer four is a businessman, interviewer five is a man working as a writer and poet and interviewer six is a man working as a lawyer) for similar consequences of their use of spatial memory.

3.1. Individual Features

The age in which one’s spatial perception is formed gains importance in terms of the formation of spatial memory. The difference between one’s current age and the age (period) which they want to recall, is effective in recalling different spatial experiences from memory. Interviewer one in his 60’s remembers the home that he stayed for the longest time in his childhood. He was born in this home, grown up in a highly crowded family. His mother, father, aunt and uncle, grandmother and grandfather, 6 children of two couples and 2 assistants were sharing the home. When his uncle, younger aunt and grandfather attend them in summer, the number of individuals in this home was raising up to 14-15 persons. Interviewer two in her 60’s was stayed in this home for 10 years where she remembers the most about her childhood. It is known that differences in the individual’s sex shows variation in the use of space. The usage of home space mainly belongs to the female. For women and men using different spaces within the home, the formation of spatial memory can occur differently. Interviewer two remembers “…In our garden, plum, pear and fruits were grown in backyard and zucchini, mint and parsley were grown in front yard. Due to the fact that I miss such an atmosphere, I am trying to create the same one in my home now.

The kitchen of the home was taking the biggest place affecting interviewer three’s spatial recall. She remembers copper trays, fire, oven and jugs in the kitchen. Even, she remembers sections suitable for the meal cooked in that period. “...There were areas to make butter and buttermilk, besides a corner of the closet was arranged to store corn flour…”

Interviewer two remembers the yard and children playing in this yard. Besides, she remembers wide corridor and hayloft in backyard. Their kitchen was located out of the home; the storage in the kitchen was also used as cellar, goods such as pekmez (a sweet), bulgur, pickle, tomato paste and noodle, were made up in the home and stored in the cellar.

The importance a home carries for the individual alone can differ significantly from the meaning it carries within a family set-up. An individual’s lifestyle changes from person to person, changes from family to family, this has important effects on the usage of the house. When recalling moments, certain activities will appear more prominent than others. Interviewer four remembers the closet where all cakes and baklavas were stored and available for all types of use, should not be opened. Also oven and around located on barn floor, are amongst prohibited places. He remembers the bread that his mother baked inside big tanks once in 15 days.
Areas of interest within a space take a more detailed position in the memory. In terms of spatial memory, the importance of the senses is because of their role in the individual’s perception of space. Senses play a role in perceptions of space, such as vision, hearing, smell, taste and touch. When interviewer one was describing his home in childhood, he makes it as a big, cold and creepy but also as a lively and a light place. He had very colorful memories that he spent in this home with his sister. However, the large size of home also brings some complex planning. The cellar is that he remembers about the home most differently, there was no refrigerator in Erzurum during those years. He remembers cellar room connected to the kitchen. One room was used just for soudjouk and pastrami. During those times, many families in Anatolia, were cutting cows and lamps in autumn and keep them wait in that room to eat during winter. He remembers double window in these homes because pastrami and soudjouk were dried by hanging between two windows.

For interviewer two, her childhood home was a place full of warm, cute, peace, freshness and colorful memories. She remembers the kitchen with the most lovely memories, butter made up by her mother and honey taken from hubs by her father “...My deceased mother, she was cooking soup in the kitchen in every morning. There was corn bread on the stove and she would not let us leave before finishing soup... This home was heated by stove and bathing place or bathing cubicle was located in the home. She remembers zinc coated bathing cubicle which was like a closet in the room. However, she remembers that her mother was bathing them in the basin in the middle of the room.

Fear and anxiety are compelling emotions. Intense anxiety when remembering or reliving traumatic events can exert disruptive effects on people for many years. Indeed, the problem is not so much being able to remember such traumas but instead being able to forget them. Interviewer four recalls “...The thing that is taking the biggest place in my mind from my childhood memories, is to break my leg and I was scared too much to go toilet in this condition. I remember the gloomy and dark condition of that toilet. My leg was broken, I was around at the age of 7-8, and going to toilet was not different than a torture for me. I was scared a lot to go there...”

The first thing that interviewer five remembers when it is mentioned about kitchen is the scar on his belly. He touched the burning stove to measure how hot it was, it was left a deep scar to him to be seen many years.

3.2. Physical Features
The town structure and regional characteristics of the place where one recalls sometimes takes prominence. Interviewer one remembers his home was once used as Russian Consulate in Erzurum, it was a large home. It was the biggest mansion in Erzurum. The first thing being remembered about this home, is that it was large and had high ceiling. “... We were hearing voices of mouses’ rattles and voices from nowhere because the home was big...” He defined the neighborhood named Gülahmet as a neighborhood where all old houses were located. He remembers that it has a fountain typical for Erzurum; also camels were passing by from this road.

When external settings, courtyards, parks are compared with a man-made environment more memories appear to take place. In the external settings of Anatolian towns, the gardens at the entrance of the house, the courtyard or stone paving are not only of importance in a person’s life through physical characteristics but also through the activities taking place in that setting. The playground in the home is generally stone yard and the area they were calling field right next to the street. Interviewer six remembers that sometimes they were playing football by filling with coals in this courtyard. He also remembers that due to the stepped location of houses all the children in the neighborhood like to jump between the flat roofs of the houses as a play. He remembers that he cannot pass through the places where his elder brothers pass by jumping from one roof to another by running between narrow streets.

The geometry of the home where a person lives, appears to be an important element in respect to the memory being able to code spaces. The position of spaces according to each other, entrances or streets are elements recalled relative to space. A space’s dimensions are able to be discussed in plan and cross-section grading. Interviewer one recalls his house geometry and expresses the first things
details attracting attention are that the home has 12 rooms, being a stone building, hand carving ceiling workmanship and having a separate hammam (Turkish bath) in the home. "...There was a separate hammam room in the home. It was about 14-15 m², with a water installation being heated by wood. The word hammam was used instead of bathroom at those times. He remembers that there was large copper boiler, basin and marbles heated on the ground. After hammam, there was also a resting hall... The first details he remembers are the large and broad size of kitchen, having a dome details raising with cage on upper part, floor furnaces and kitchen stove inside, the barn in front of the kitchen and cow providing milk, poultry in the garden and vision that Isparta roses created in the garden."

According to climatic data and geographic regions, differential building techniques and local building materials found in the district influence the way a person defines and perceives the building in which they reside. Together with their manner of use, couches, cupboards, stove and fixed furnishings within a house and rooms hold an important place in the ‘home’ recollections of the individual.

Interviewer four describes the home as; "…Our home was located on sloping land. When you look at from front site, 3 floors are visible. Also, it had a roof space. There were fruits on the roof in basket and grapevine. Even, they were dealing with silkworm breeding on this roof space. There was storehouse of the home in the lowest floor. Inner part of storehouse was coated by a special wood to keep it cool. There were also wooden coves to prevent mouse or insect enters into this storehouse. There was an installation out of home as a drinking basin, it also had a toe guard. Ladies were sitting on this drinking basin and cracking walnuts, also they were earning money from these walnuts. It was possible to enter into home both from upper elevation and lower elevation. There was a large hall on the ground floor of the home. There were rooms around that hall. One of these rooms was used as kitchen. On upper floor, there were bedrooms...He is using the word “Zal" instead of hall. There was a place where all other rooms faced where can be defined as sofa. This home remained from Armenians that was built before 1925, he remembers a narrow closet expect clothing wardrobe in bedroom of his parents. He remembers that it was actually a bathing cabinet, sized as a one person can enter inside and an installation providing quick bathing. Another detail about the home was that there was a column which had a diameter more than one meter where three bedrooms on upper floor, intersect. There was no stove in the rooms for heating; however he remembers a type of heating system that he describes as “peçko”. Woods are thrown to this column by zal and due to the fact that it was located on intersection of these three rooms, it was feeding other rooms. There was a similar system in the kitchen named “peç”. A big stove and oven stand side by side, there is a section next to the stove which consistently was heating the water inside operating as storage. Water was used while washing dishes. Another feature of the home that he remembers was that rain water was stored in the lowest section of barn, water in Artvin city is plenty and however water in this storage was not used for washing the clothes.

3.3. Social Features
When living inside the house and undertaking activities, whether a space is warm or cold is one of the most important elements recalled. When recalling the childhood home activities carried out by the stove in a warm setting (making popcorn, listening to fairytales, conversation... etc.) are included in the model as physical characteristics relating to space in the permanent memory. ‘…Our family was looking forward for May. First of all, it means holiday comes and picnic days on the roof recalls interviewer one. The roof of this home in Erzurum was made as a flat roof, hence he remembers grass growing on the floor and chimneys. Also, he tells that they were making picnic on the roof with their teapots and this fun was turning out a family feast. He thinks that he has very entertaining and colorful memories that were passed in his childhood time. Families those were gathering in hall, activate social life. Radio was accepted as the most important entertainment tool. He remembers that they were making halvah as a different entertainment and when the temperature reached -15 C in the kitchen, that halvah was turning into sugar candy. “… There was always a cooker on the stove being
heated and that sound that the cooker made due to boiling water, is still on my ears. He describes the home he spent his childhood as: “...When you enter inside from front-entrance door, there was a large guest room. I remember members of parliament who were hosted in this guest room and Quran readings. There is a home plan that has a hall. There was always a piano in this hall. Also, there was an org in my uncle’s room which was taken from the church. The radio standing in the middle of big sofa, was played on all Sundays in the home, I remember music and bezique game played on the table. The heating of the home was provided by stove, there were days when the water remained in the kitchen gets as hard as nails. The living room was mostly used in the home. There was a life circle around the stove. I still yearn for breakfasts made by roasted potato....”

Interviewer four remembers horse playing that was made up by beanpole, was amongst the games he was playing in his childhood. For a period when they cannot find tools to play, he remembers that he was playing games with his friends and siblings that were made up by them not inside the home but out of home.

The influence of architecture, political and economic situations of the (lived) time is of importance in the individual’s recollection of space. Socio-political and socio-economic structures lead the main influences guiding architecture, especially the form of housing. Customs and practices, appear to be a measure in the recollection of spaces of cultural environment. For the little children of the family playing games inside the house, in the garden, the street and the district are seen to be important elements in respect to experiencing spaces. In a person’s memory an important occurrence in the space is able to be recalled differently to other occurrences.

Interviewer five remembers that when he opens the street gate, a corridor comes front, there are toilet and kitchen on left and rooms on right and hall across him. The corridor was very important for him, the stove is burning and it was located on the middle of the corridor to make the home heated. That corridor was the most entertaining place of the home, gathering area is an area where everyone was intersected to go somewhere. Even the raid was located in this place. The corridor is a place as front side of the home.

Interviewer two remembers wooden cedars in middle place where everyone was gathered and there were canvas covers on mat pillows behind these cedars.

4. Results and discussions
4.1. Individual Spatial Recalls
The result that individuals growing up in a big family have social relationships which exist in their recollections of space and in the activities which occur in the space and that these relationships increase recollection of space, became apparent. It can be seen that spatial characteristics of the traditional Anatolian home are included in the majority of space recollections of the individuals who are interviewed. In accordance with basic needs and activities is it seen that spaces disassociate, however, do not completely cut off from each other. The kitchen is recalled as the space in which most activities occurred. Personal endeavours having a determinant role in spatial memory emerges as a result. It is detected that behind all the spaces of the childhood home memories lie emotional connections. The relationships between differences and intensities of these emotions is stored in the memory. It has been seen that the emotional connection formed with space is not only a perception formed through primary visual and audial emotions, but also from senses such as smell, touch, hearing and tied to these the developing emotions of fear, happiness, love, worry, excitement, mystery, prohibition, difference and similarity. It became evident that for recalling space, sight is the most influential sense. Taste is at the very least as influential as smell in the recollection of space. Happiness is the most influential emotion in recalling space. In all adult recollections of space the garden, courtyard, street and other outdoor settings are told with happiness. With this discovery showing similarities to Sebba’s study, it can be said that the place remaining in memory the most is the garden [16]. Fear is another important emotion in recalling space. Among interviewed individuals, the toilet is recalled as the most feared space.
4.2. Physical Spatial Recalls
Individual home settings and open areas are remembered as having gardens and courtyards the most. The direction in which a home faces takes a determinant role in space recollection. The organisation of plans, floors, grades, elevations and spatial dimensions, construction components and material, circulation components are important in the recollection of the space. It is seen that in the majority of traditional Anatolian home organisation plan recollections homes are usually recalled as having two storeys, with locations inside and outside the home, in which a few steps lead to the home and entrance is made from within the garden. When construction materials are remembered as stone, wood or mud-brick, wide sofas and spaces with a kitchen, these homes, recalled in different towns of the country have been made in such a way that all the types of climatic and regional differences become evident through their construction features. It is seen that local differences take place in recollections in a spatial dimension. It was detected that the fixed and moveable furniture of the home is recalled in more detail by women. Moveable furniture is remembered more than fixed furniture. A home’s level of comfort, especially its mode of heating plays an important role in the recollection of space.

4.3. Social Spatial Recalls
For individuals who lived out their childhood up until 1950, social and spatial recollections belonging to the Early Turkish Republic period is evident. In order to pursue better work and educational possibilities, families migrated from lived in childhood towns. In the case of individuals living out their childhood phase after 1950, the beginning of the change of the traditional home typology and the event of apartment lives connected to modernization are recalled as part of space memories. Therefore, it has been detected that the economic, architectural and social environment of the period plays an influential role.

It has been put forward that spatial data quality remaining in the memory is not only formed from a physical structure, but that it embodies various psychological, cultural and societal meanings. Neighbourly and visitor relationships are seen to play an important role in space recollection. Family conversations, Bayram (religious holidays) visits, meals and interpersonal relationships and increases in space recollections connected to this are seen to have an effect on the increase in space recollection are especially influential. The garden and street are the spaces in which games are played. The places in which games together with other neighbours and siblings were played are important for the individual. Activities occurring in a space are recalled according to their being happy or upsetting. A space is recalled with upsetting events more so than in comparison to with happy.

5. Conclusions
Within the scope of this study, it can be said that each spatial memory narrative serves as a catalyst for further dialogue, debate, and research on the intersections of memory and space relationship within the built environment. It is a very timely and critically exciting area that is at the centre of current research in the sciences and the humanities. This model proposed and tested in this study puts forward that a person’s positive or negative experiences with their home are coded, that these codes have a place in the memory and that they can be recalled at a specific time in the future. With their beneficial aspects, the emergent results should be given consideration to guide architecture and memory studies and designs.

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