

Easing  
the  
Transition

Dementia in the Home



# Easing the Transition

## Dementia in the Home

Alyssa Monroe  
University of Detroit Mercy  
School of Architecture  
Fall 2018 - Winter 2019



## Table of Contents:

06	Abstract
08	Introduction
10	Memory
28	Re[Collecting] Objects
30	Architect & Client Relationship
36	Reflection   Moving Forward
38	Memory Loss
66	Designing for Dementia
84	Final Reflection
88	References
90	Appendix A <i>Grandma's House</i>
91	Appendix B <i>Interview with Mary Vargas</i>
92	Appendix C <i>Interview with Giovanni Lavigne</i>
95	Appendix D <i>Interview with Bryan Mortenson</i>
97	Appendix E <i>Interview with Erin Mortenson</i>
100	Appendix F <i>Interview with Rob Clarke</i>

Abstract:

Dementia, a chronic and progressive disorder of the brain, affects 50 million people worldwide. There are no current successful treatments, preventions, or cures for dementia.

This thesis focuses on the design of a set of products that aim to improve the quality of life for individuals in beginning stages of Dementia. By designing simple sets of products that can be easily installed into the individuals' homes, the individuals are able to cope with early issues of dementia while in their home, the place in which they are most comfortable. These products, designed through a set of identified design principles, also ease the transition to a memory care facility.

# Chapter 1

Introduction:



What is memory? With what do individuals associate their most cherished memories with? This process began with the study of memory: what it is, how it functions, how it is altered, and how the stored memories are recalled. Specifically, this thesis will study the memories associated with the home, of which holds such nostalgic value, and is the container of some of individual's most prized possessions. The home is where the individual cultivates their identity, and they reflect upon each other. What happens if an individual develops dementia and slowly forgets their surroundings, physically, mentally, psychologically, and socially. The home becomes drastically important to an individual who develops dementia, the home providing them with their sense of self: past, present, and future. As the individual's dementia eventually progresses, they will no longer be able to stay at home, they need professional assistance. By studying the effects of dementia, professional memory care facilities, and design principles that can counteract or lessen the side effects of dementia, this thesis strives to keep early-stage dementia patients in their home. Typically, memory care facilities are designed to replicate the patient's home and create a comfortable environment for them that they're familiar with. What would happen if the memory care facility was brought to the home?

# Chapter 2

## Memory:

“Architecture provides the stage on which we can enact our lives. Memory, however, creates a special relationship with space, holding on to the essence of it, the best and the worst, letting the rest of the details fade into gray.” (Bastea, 2004)

Memories are at the center of the person, they allow a person to be an individual. Memories create content of self, and these memories shape who they are an individual, who they have been, and who they will be. People would not be individuals if it was not for their memory.

Memory is “a particular act of recall or recollection” and “an image or impression of one that is remembered” [1], and nostalgia is “an affectionate feeling you have for the past, especially for a particularly happy time” [2], and “a longing for a home that no longer exists or has never existed” [3]. In relationship to one another, nostalgia is generally associated with fantasy and regarded as even more inauthentic than memory.

Eleni Bastea states that “Memory inspires us to create or re-create a fleeting vision from a dream or from our waking moment. As that yearning and nostalgia for the visible and invisible past flare up, they inform and enrich our present.” (Bastea, 2004)

Memory is created by processing vast amounts of information, this information taking different forms such as images, sounds, or meanings. First, this information is encoded. This step is where the information enters into an individual’s memory system from sensory input, such as taste, smell, sight, hearing, or touch. Of these five senses, individuals have a stronger memory for things that are seen. The memory of taste is not very strong. Sensory memory is the shortest-term part of memory. It is the ability to retain sensory information after the initial stimuli has ended. The memories associated with these five senses are retained accurately but aren’t around for long. Sensory memories do not require conscious attention, are typically outside of conscious control. As information is perceived and experienced, it is stored in the sensory memory automatically. Sensory memory degrades very quickly, typically at most after half a second after the perception of the sense.

Visual sensory memory is known as iconic memory. Viewing an image of an object, a

room, or a place can bring back a moment of an individual’s life that was pleasant or unpleasant for them. Déjà vu, the feeling of having already experienced the current situation, can be evoked through sight.

Smell is the sense most closely connected to the hippocampus, one of the brain structures responsible for memory. Incoming smells are processed by the olfactory bulb, which has direct connections to the amygdala and hippocampus, both of which are related to emotion and memory. Sight, sound, and touch information does not pass through these areas. A smell can awaken very vivid memories and a sense of nostalgia, these memories also being registered with an association to an emotion that the individual is feeling at that very moment. In a study conducted by Dr. Mercola, young and old adults were able to recall more than twice as many memories when there was an odor associated. (Mercola, 2016)

The relationship between sound and memory is known as echoic memory, a part of sensory memory that refers to auditory memory. The memorization of words and images is different than that of sound. When an individual looks at something, they are able to scan over it multiple times to strengthen the memory. In auditory memory, an individual isn’t always capable of playing back the audio. Once the audio has passed, they will likely not hear the exact word or phrase again at that moment in time. Echoic memory is defined as the short-term sensory memory of auditory stimuli. When an individual hears something, their brain will create and keep a version of that sound for a brief period of time.

When an individual eats and tastes, their brain integrates those sensations with information stored in our memory, looking for data that relates to those same sensations, previous situations, or other foods with which similar stimuli have been perceived.

#### Notes

1. Definition of memory researched in the Merriam-Webster Dictionary
2. Definition of memory researched in the Collin Dictionary
3. Boym, Svetlana. *The Future of Nostalgia*. Basic Books, a Member of the Perseus Books Group, 2016.



*Fig 1: The Memory of a Home*

Haptic memory is the sensory memory associated with touch stimuli. This form of memory is used when interacting with familiar objects, when an individual assesses how to grip the object. This form of memory influences one's interaction with objects in similar size, weight, and materiality. Haptic memory is very brief, staying in the memory for approximately two seconds.

In the process of encoding, the information acquired by the senses needs to be changed into a form the system can cope with so that it can be stored. Information can be encoded visually, acoustically, and semantically.

The next stage of memory is the storage stage. The way in which an individual stores information affects the way in which it is retrieved. Memories are stored in either short-term memory or long-term memory. Short term memory has a limited capacity, holding between five and nine items for no more than twenty to thirty seconds at a time. For example, by breaking up a ten-digit number into chunks, like a telephone number, can remain in your short-term memory long enough to dial the number. By repeating the number, the short-term memory clock can be reset. The more short-term information is repeated and used, it can relocate to an individual's long-term memory. Long-term memory can store an unlimited amount of information which can last a lifetime. Material and information that is of interest to an individual can be more easily stored in their long-term memory because it is mentally being connected to related information that is already stored.

The final step in the stages of memory is the retrieval of a memory. Short-term memories are retrieved sequentially, while long-term memories are retrieved by association.

Up until the 20th century, philosophers understood memory as a storehouse. Our perception deposited images of objects into that storehouse, and these memories would be recalled or retrieved. In this method, stores memories degraded or became harder to access, but otherwise did not change.

During the 20th century, psychologists expanded on this theory by stating that memory selectively stores information, expands part of it, combines it with background information and adds data from context, in which the subject later retrieves the information. In this theory, memory generally alters significantly what enters it. Recollecting is not the retrieving, but the generating of representations of the past. Recollecting actually generates new beliefs about the past. Individual's revisit their earlier experiences, adjust them, edit them, alter them, or erase them.

When we remember, we don't shine a spotlight on a stored picture, we complete a pattern with the best match available. Our memory is selective and is a continuous recasting that reflects one's current experience and preoccupations. Moments create memory. The moments in which we exist are a result of continuous passing of time. From these moments, our memories are written. A memory is not a duplication of an event, but an edited moment stored in the depths of our minds. In remembering, we extract and manipulate, edit, re-write and associate the lived moments. Everything one recalls is a memory, and everyone constantly adds to this memory. With more time, an individual's memory becomes more different.

There are many different ways to look at this topic. Concepts of memory and nostalgia can be looked at psychologically, philosophically, culturally, physically through place, through human perceptions, and cognitively. Memories can apply solely to an individual or can be shared amongst a group of individuals. These memories can take place and be evoked in intimate places like a small home, to large scale national monument.

Episodic memory is the long-term memory of events and experiences. These episodic memories along with day-to-day routine memory makes up the autobiographical memory. Event memory is made up of epochal memory, extended events, and specific memory, memories related to lifetime periods, general events and specific event knowledge.

*"Sensual places leave an emotional  
memory."*



*Fig 2: A Child's Clear Understanding of a House (Bloomer & Moore, 1979)*

David Rubin states that “autobiographical memories are often recalled as stories. These stories have a structure, the structure of discourse affects the structure of recall, which in turn affects the structure of later recall. This structure includes a who, what and where.” Architecture creates a platform on which these memories can be created or recalled. Eleni Bastea states that “Memory creates a special relationship with space, holding onto the essence of it, the best and the worst, letting the rest of the details fade into gray.”

Peter Zumthor states that “Architecture has its own realm. It has a special physical relationship with life. I do not think to fit primarily as either a message or a symbol, but as an envelope and background for life which goes on in and around it, a sensitive container for the rhythm of footsteps on the floor, for the concentration of work, for the silence of sleep.” (Zumthor, 2010)

As stated earlier, there are a multitude of scales of places in which memories can be created or evoked. An intimate place is familiar, private personal, and is a space that a person holds dear. The senses capture the beauty of the moment and the space and create an intimate experience and place.

Bloomer and Moore explain a child’s understanding of a house, with the door like a mouth, windows like eyes, and a roof like a forehead. Real homes, however; details of craftsmanship and artifacts are developed at critical places to tell a story about the interior of the house, just as the expressions of the human face reflect the inner feelings. The façade of the home indicates the complexities of what’s within. (Bloomer & Moore, 1979)

Bachelard discusses the comforting and very intense and vivid memories of the house we were born in, and its maternal features, and labels the house ‘the topography of our intimate being’, both the vessel of memory and the soul. (Bachelard, 1964)

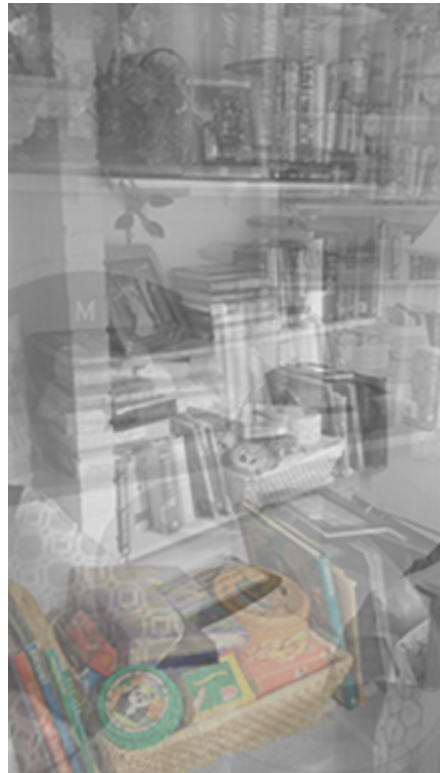
This exploration into memory and nostalgia began by the researcher taking a tour of her grandmother’s house, a place that is very nostalgic to her. The researcher recorded herself as she walked throughout the different rooms, speaking the first thoughts that came to her mind when entering the different rooms (See Appendix A for narrative). Brewer notes that autobiographical memories consist in part of images. (Brewer, 1986) For example, looking at the corner of the family room, the toys that used to be stored there trigger memories of events with family members.

Emotions are another main component of autobiographical memory. Like narrative and imagery, emotions have functions beyond their contributions to autobiographical memory. Emotions can focus attention on one aspect of a scene and they can reduce the ability to retrieve specific, as opposed to generic, autobiographical memories of generalized categories of events. Paolo Bozzato explains that emotional intensity fixes memory traces in the memory system and makes them more vivid over time. (Bozzato, 2017) Personal and meaningful events with high emotional intensity create a sense of continuity to one’s life narrative, structuring an emotional landmark for the individual’s autobiographical memory. Studies by Bozzato show that memories with intense emotions typically were more vivid, with a larger number of details recalled with the memory.

“Home” encapsulates our experiences, recollections, aspirations, and imagination. A home provides one with a physical and social context for experience, and creation of self-identity. The home reminds the individual of their past, and the individual’s current home is a result of their life circumstances, for instance, an individual in an assisted living facility symbolized that individual’s loss of home.



Fig. 3-6: Nostalgia Of Grandma's House



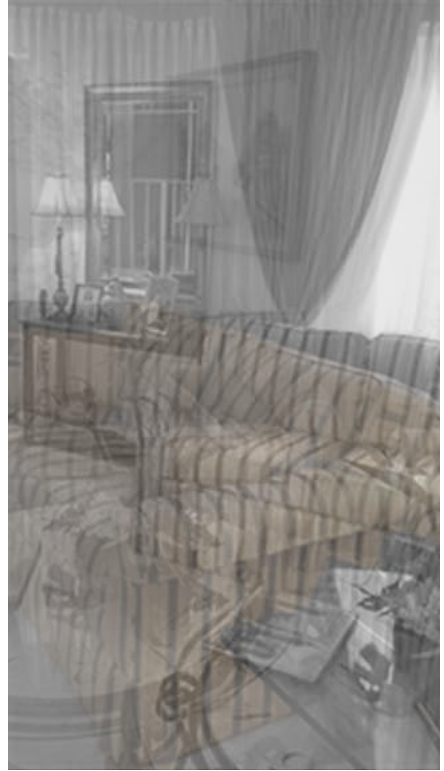
*“As I walk to the front door, I am reminded of planting red flowers in the bed of woodchips with my cousins, that always seem to be eaten by animals within a matter of weeks. I pass by the green watering can that hasn't moved in my 22 years, it has become a distinct feature of the façade.”*

*“The family room holds happy and sad memories. I am saddened by the first rocking chair my grandpa spent his last days and nights at home hooked up to his oxygen tank. I like to sit there and think of him. I am nostalgic about the comfy carpet, always laying on that opposed to sitting on the furniture. The corner which now mainly has books was once filled with my dad and his sister's old toys that I could play with. The triangle turtle puzzle was always impossible - did we ever even finish it?”*





*“The back patio was where I ate all meals at family parties. The white wicker furniture never was comfortable. The deck wraps around a tree, the lifted boards show how much everything has aged.”*



*“The living room feels untouched. The old, dirty, gray carpet and ridiculous blue floral comfy couch are no longer. The room now feeling cold and too proper. The carpet feels as if no one has walked in here because they’re too scared to leave a mark.”*

*-Alyssa Monroe*

The sketch on the right is from an exercise the researcher had their peers complete. The researcher asked the individuals to sketch a memory that they were nostalgic about. This is Rachel Pisano's sketch titled 'Peering into Living Room', looking from her kitchen to the living room. A high percentage of the results from this exercise were memories from the home: the exterior, it's surroundings, and particular rooms in the house.

The topic of memory cannot be objectively studied, but it is possible to study through a series of qualitative narratives. By interviewing five individuals: Mary Vargas, a home buyer, Giovanni Lavigne, an architect who has designed his own homes, Bryan and Erin Mortenson, a couple who hired an architect to design their home, and Rob Clarke, the architect who designed the Mortenson's home. This exploration was conducted to understand the impact that memory has on home, and how it impacts the desires and needs when purchasing or designing a new home.

The exploration began with the four individuals reconstructing the architectural memory they have of their childhood home, or a home of their past of significance. Reconstructive memory is the act of filling in the gaps of absence information. (Lacy & Stark, 2013) This act is performed by utilizing previous knowledge and experience of a situation, or a place. Rob did not participate in this exercise. In *Thinking Architecture*, Peter Zumthor states that individuals cannot recollect specific architectural details in isolation but recollect the combination of these isolated details combined that make an architectural whole. Nostalgia is triggered by the rapid disappearance of familiar things, manifesting itself in the sentimental longing for past or lost times, objects, or places. (Zumthor, 2010) There were no further instructions than to draw from memory the individual's childhood home. All of the participants besides Bryan drew floor plans of their home, while Bryan drew an elevation. This exercise questioned how individuals remember the homes that only existed in their memory and looked to

understand what the individuals were drawn to in their previous homes. What was the process in which the individuals remembered their home? Did they mentally walk through the space? Did they speak as they sketched the home?

This reconstructive memory of the individual's past experience of the physical space, also reconstructed the memories they have of themselves, where they had come from, why they are the way they are, and what they will be like moving forward. The past and the past dwelling shapes the individual. The individual's recollections through conversation with the researcher emphasized relationships between memory and object, as well as memory and events with people, particularly close family.

Furthering the initial exploration with the individuals, the researcher questioned the five individuals on their life growing up, the environment in which they grew up, the events and objects that were associated with the home, and the inspirations for their new home, if they were in the market or designing their home. The researcher questioned the Mortenson's and Clarke on the priorities for their new home, to gather an understanding of the relationship between the residential architect and client. After completing the interviews, the researcher analyzed the results, coding the interviews to find common results and relationships.

Mary Vargas (see Appendix B for interview) had to move from Canton to Byron Center, Michigan in September of 2018 due to a new job. Due to timing restraints, Mary had little time to find a new house. The main necessity that Mary had for a new home was that it could accommodate a baby grand piano. Music is very important to the Vargas family, Mary's daughter being a part of multiple musical groups. Mary stated multiple times that it was difficult to leave her old home in Canton because that is where all of her friends were located. Mary's fondest memories are the time spent with family and friends in the home, particularly in the kitchen. When asked what was special about the old home,

## PEERING INTO LIVING ROOM

Paul Pici  
RACHEL PISANO

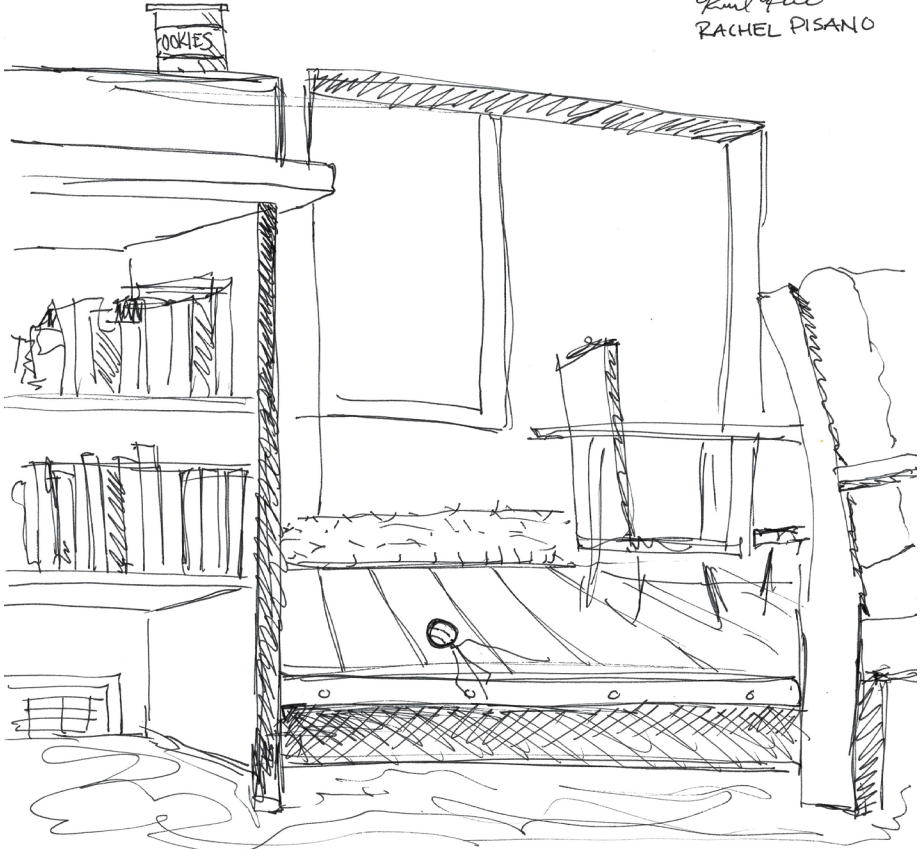


Fig. 7: Peering into Living Room by Rachel Pisano

Mary simply answered “the people”. The new home in Byron Center was a downsize from the family’s old home. This downsize allowed for the family to really question what they needed to make them happy. Having only lived there for three weeks (when the interview was conducted), Mary hasn’t had time to become emotionally attached to the new house, but she is comfortable in it and sees many similarities with her old house.

Giovanni Lavigne, (see Appendix C for interview) is an architect who has designed 3 of his previous homes. The home of most significance was his childhood home in Grosse Pointe Park, MI. Giovanni spoke highly of the neighborhood environment, the sidewalks, trees, parks, waterfront, and

the different house styles. Giovanni was very fond of Sunday dinners with his immediate and extended family, where stories would be shared for hours around the dining room table. The experiences spent around the dining room table with family and friends heavily influenced the designs of dining spaces. Giovanni also spoke of the grief that he relates to this house, when his brother Jimmy passed away. The home transformed into a comfortable space that could allow for grieving. Giovanni designed his family home in Birmingham, MI in 2014. Like Mary, Giovanni’s priority when designing his home was to create a home that could accommodate 3 pianos, and to bring a lot of light into the home, while still creating privacy. Taking inspiration from his childhood

Mary Vargas  
50 Years Old  
Female  
Executive Assistant



2009-2018 | Canton, MI

Giovanni Lavigne  
60 Years Old  
Male  
Architect



1966-1974 | Grosse Pointe Park, MI

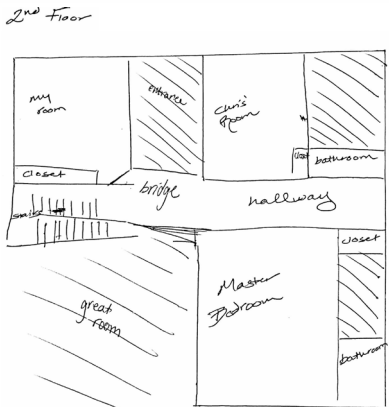
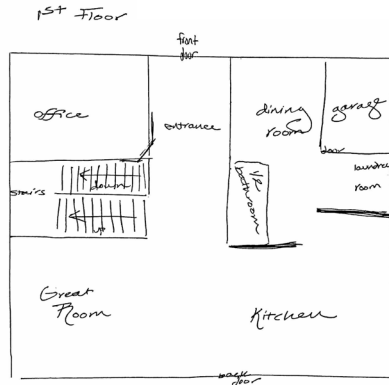


Fig 8: Interview Sketches of Existing Houses. Photos and sketched provided by listed resident.

Bryan Mortenson  
32 Years Old  
Male  
Investment Advisor

Erin Mortenson  
32 Years Old  
Female  
Lawyer





*Fig. 9: Giovanni Lavigne Familial Memory*



*Fig. 10: Giovanni Lavigne Object Memory*

home, Giovanni designed a dining room and living space that could accommodate over 20 people, and his daughter's house concerts. These large spaces also allowed for grieving when his wife's aunt passed away in this home. The entire family was able to stay together and sleeps on mats on the living room floor during her final days. Besides the pianos in the home, Giovanni doesn't care too much for "things", designing the rooms to be containers for people, and not for his "things".

“And then my brother Jimmy died while we lived there. I remember coming downstairs that Sunday morning and my parents had both aged twenty years over night, my mom's hair had just turned grey overnight. The house just filled with people. I realized that, you know, a space like that can function for an event like that as well. A couple days of grieving. It was a comfortable place to go through that.”

-Giovanni Lavigne

Bryan Mortenson (see Appendix D for interview) is an investment advisor originally from New Buffalo, MI. Bryan has lived in 9 houses prior to the new home in Birmingham, MI, he and his wife, Erin, designed. The most significant and memorable home to Bryan was the home he lived in from 1994-1999, before he graduated high school. Bryan enjoyed this home [the one he sketched] because it was on a cul-de-sac, which allowed him to play basketball, baseball, ride bikes, and use rollerblades. The home was a great place for kids to grow up. Bryan stated that this home was where his family was at their happiest, when his parents were still together and were capable of taking care of young kids. Spatially and aesthetically, Bryan liked the skylights, which can be seen in his sketch, as well as the kid's bedrooms. One of the bedrooms could see out to Lake Michigan,

the second bedroom had a skylight, and the third had two corner windows that looked out to the golf course. Outside of the bedrooms was a ladder that led to the third-floor loft, that Bryan and his two step-brothers turned into a video game room. The loft also included a skylight. Bryan was turned away from designing and building his own home after watching his parents go through the struggle multiple times. The relationship with Rob and CBI Design Professionals was personal enough to have a good professional working relationship. In terms of priorities, Bryan wanted to stay on or under budget, wanted an attractive house in terms of curb

“Oddly enough, I would say this house is probably where my family was the happiest. We were still pretty young kids, my stepdad was pretty good with young kids, not so good with teenage kids. My mom was sort of the same way. This was where I saw them be their happiest together.”

-Bryan Mortenson

appeal, a man-cave, a basketball court in the backyard, and high-end appliances that met the standard of the neighborhood. Bryan took inspiration from his experience living in a downtown Birmingham apartment, where he would walk with Erin and their kids looking at homes. In terms of the new home, Bryan spends 90% of his time in the living, kitchen, and dining room corridor, with most of that time being spent in the living room. Bryan's family didn't entertain much except for annual holiday traditions or the occasional friend coming over, and it's been hard for him and Erin to entertain while having young children. Bryan has a lot of heirlooms from his family passed down, but nothing of personal significance. There is china on display in the dining room from his grandmother, and some paintings from the family.

Erin Mortenson (see Appendix E for interview) is a lawyer originally from Wyoming, MI. Her childhood home is the only home she had lived in until she left for school and is still her parent's current residence. She lived in the home with her parents, and her younger sister and brother. Erin describes her childhood neighborhood as quiet because it was a long and winding road, with her house on the end of the cul-de-sac. Much like Bryan, Erin's family didn't entertain much in their home. Erin spent a lot of time swimming in their pool or playing basketball outside. The house was very structured, with dinner every night at 6:00, and done at 6:30. It wasn't the nicest, and it was cheaply made, but the 1,200 square feet was more than enough. She reflects fondly on the home, which has undergone very few aesthetic changes since she left. She still enjoys going there, pretending to be a kid again. In terms of priorities in their new home, Erin wanted the home in Birmingham to be more functional, and she wanted everything to match. When they purchased the home, every door was different, all of the moldings were damaged, and the layout was tight. Erin wanted their new home to feel clean, and didn't want it to feel like a worn, old house. Erin was more admirable of the family heirlooms found in the home. She's especially fond of the illustrations in her Grandma's bible. She really likes the idea of having significant "things" in their home, for instance she had CBI showcase her wedding dress in a shadowbox in their master suite, but she hasn't yet found many unique things that she wants to put in their home. Erin is very fond of family traditions, especially during the holidays, she adores the idea of Christmastime with her family. Bryan isn't very interested in traditions, but Erin enjoys having her family come together, cooking and laughing together. She hopes to host big dinner parties in the future. During Christmas, Erin and her daughter put up the Christmas decorations, and they bake cookies with their friends. Erin longs for more traditions with Bryan and their kids. Erin reminisced about her childhood, when they would go to church on Sunday, and come home and have dinner. Her most cherished

memories spent in their new home involve lying in bed with her daughter and reading to her. Her favorite memories are the times she spends rocking her daughter. Reflecting on the last couple of years in their new home, Erin doesn't feel emotionally or physically attached to the home. She isn't associating the home with negative memories, but it's been a tough chapter of her life, so she isn't associating the home with many positive feelings.

“I think because, not that I've had bad memories here, it's just been a tough part of my life living here, I'm not associating this house with positive feelings

all the time.”

-Erin Mortenson

Rob Clarke (see Appendix F for interview) is an architect at CBI Design Professionals and was the lead architect and designer for the Mortenson's home. Rob works primarily with younger clients that haven't had the family life experience that he has had. This allows him to introduce some of his past experiences to them. The Mortenson's came in with a few requests, like most clients do. The home needed to be brought up to current standards and needed a more appropriate master bedroom suite and garage. The Mortenson's wanted to make the home a family home. In terms of the style of the home, the existing character of the home was expanded upon. The most specific request the couple had for the home was Erin's wedding dress, which was incorporated in the design of the master bedroom suite. Rob designed the home to accommodate a proper office for Erin, a basement that could be an entertainment room for ball games. Both Erin and Bryan went to the University of Michigan, so ball games are a central part of what they do. Rob also created a half-court basketball court in the backyard. Rob has noticed throughout his many years of practice that the men typically more concerned about comfort for the family, while the women care more for the aesthetic details.





*Fig. 11: Erin Mortenson Familial Memory*

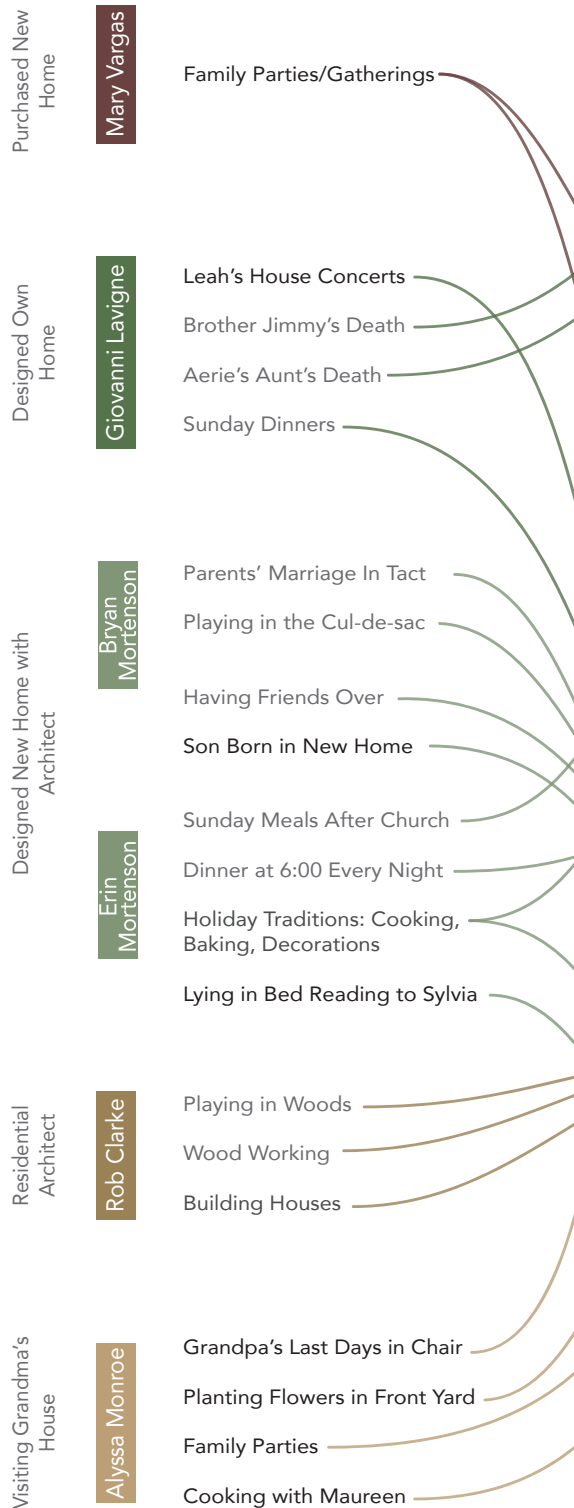


*Fig. 12: Erin Mortenson Object Memory*

## Familial/Relational Memory

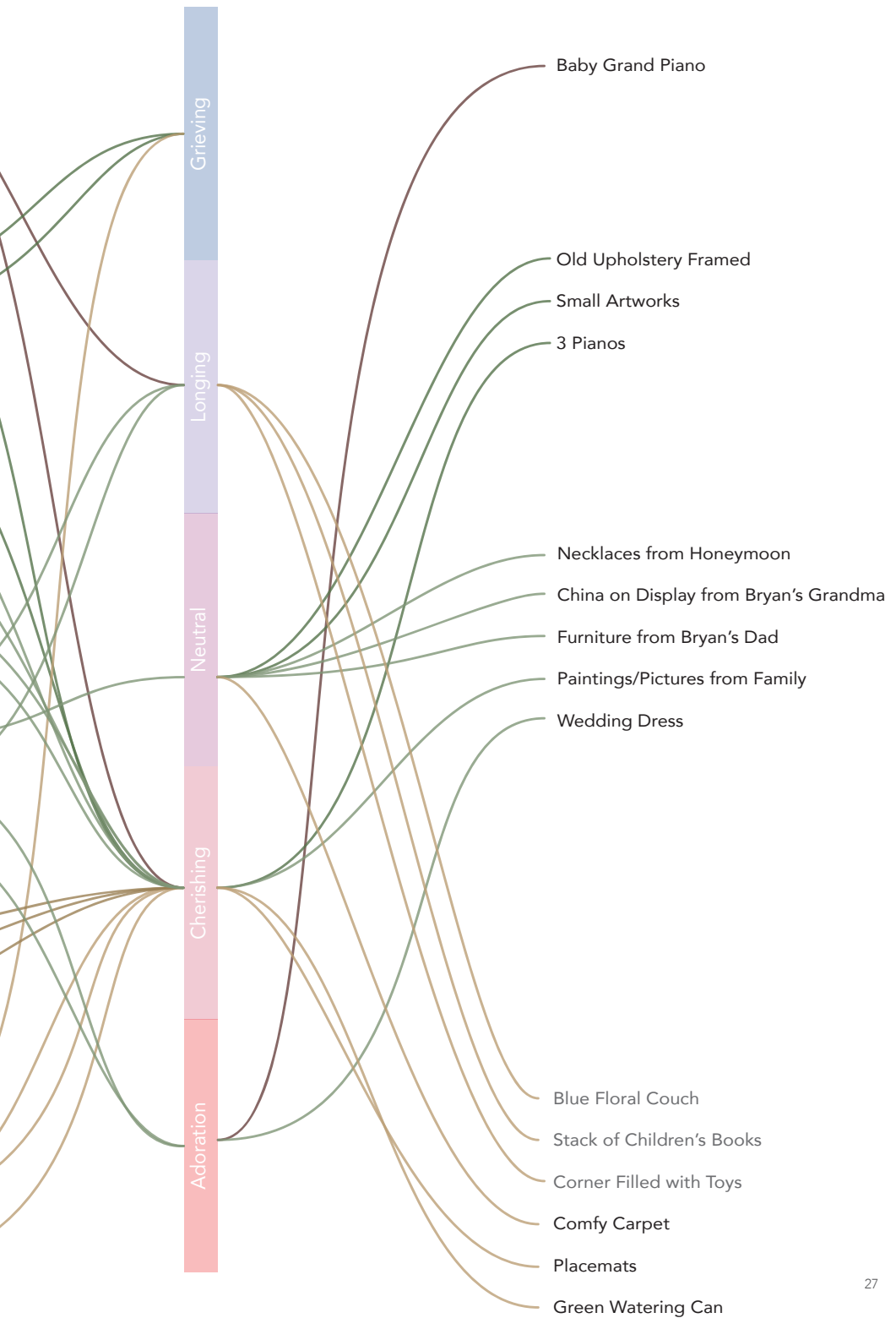
After conducting the interviews, the researcher analyzed the different relationships, extracting the different events and objects in the individual's memory and home. The diagram to the right breaks down these events and objects, relating them to the emotion that the individual corresponded with the event or object. Many of the events mentioned were family traditions, and many of the individuals cherished these events, and even longed for them to happen again. Events that were associated with grieving, including the death of family members. Objects in the individual's homes tended to have a positive emotional connection. Many of the objects the researcher analyzed in her grandmother's home are being longed for or sought after. These objects are no longer in the home. Objects such as Mary's baby grand piano and Erin's wedding dress were sought after in the purchase of their new home, or in the design of their new home. The home had to meet the needs of these objects. Giovanni, for instance, cherishes his childhood Sunday dinners, and his daughter's home concerts. This admiration for these family events has influenced the living and dining areas in his own home designs.

Fig. 13: Coding interviews for relationships.



# Emotions

# Encapsulated Memory



# Chapter 3

Re[Collecting] Objects:

As the home is the place where individuals cultivate their identity, the home is also a composition of personal and family objects. These mementos, or cherished objects and possessions, are often on display in the public and social spaces, though these personal meanings may go unknown or unnoticed to the visitors. Individuals exhibit a very strong connection with personal and family memento, for example a blue floral couch that has been passed down for generations, or china that has been collected for years. Individuals fear the loss of these objects. There is a natural inclination to collect objects within the home, which become cherished possessions, particularly in relationship to older individuals. A study conducted by Edmund Sherman and Joan Dacher with 94 older adults (60 years-old and older) questioned “is there one personal possession you value above all others?” Around half of the individuals were able to identify their “most cherished” object, falling into seven different categories. These seven categories included: symbolic jewelry, religious items, personal performance items, photographs, consumer items, and other. Photographs were the most popular cherished item to the individuals studied. The identified items referred to either themselves or their significant other. This study reflects the relationship between “home and its objects with the prospect or reality of loss of home.” Myrna Lewis and Robert Butler wrote that “objects provide a sense of continuity, comfort, and security to the extent that fear of their loss is a frequent preoccupation among older persons.” When older people leave their home and surrender their possessions, they missed the objects themselves, but also the memories and events that are associated with the object. These mementos mark events, and often times shared experiences and relationships, such as family holiday traditions. These objects create the family memory landscape, which showcases the past of the family, but also the present.

“Home” encapsulates our experiences, recollections, aspirations, and imagination. A home provides one with a physical and social context for experience, and creation of self-

identity. The home reminds the individual of their past, and the individual’s current home is a result of their life circumstances, for instance an individual in an assisted living facility symbolized that individual’s loss of home. Seen below are images of what Grandmother described as her most “cherished objects,” when asked to identify them. Following the research, my grandmother identified photographs as her most cherished items.



Fig. 14: Figurines gifted by deceased husband.



Fig. 15: Deceased husband’s Veteran flag

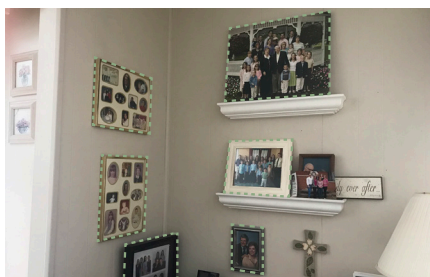
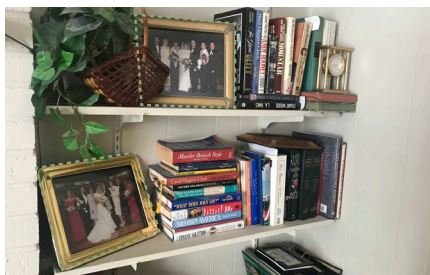


Fig. 16-17: Family photographs.

# Chapter 4

Architect & Client Relationship:

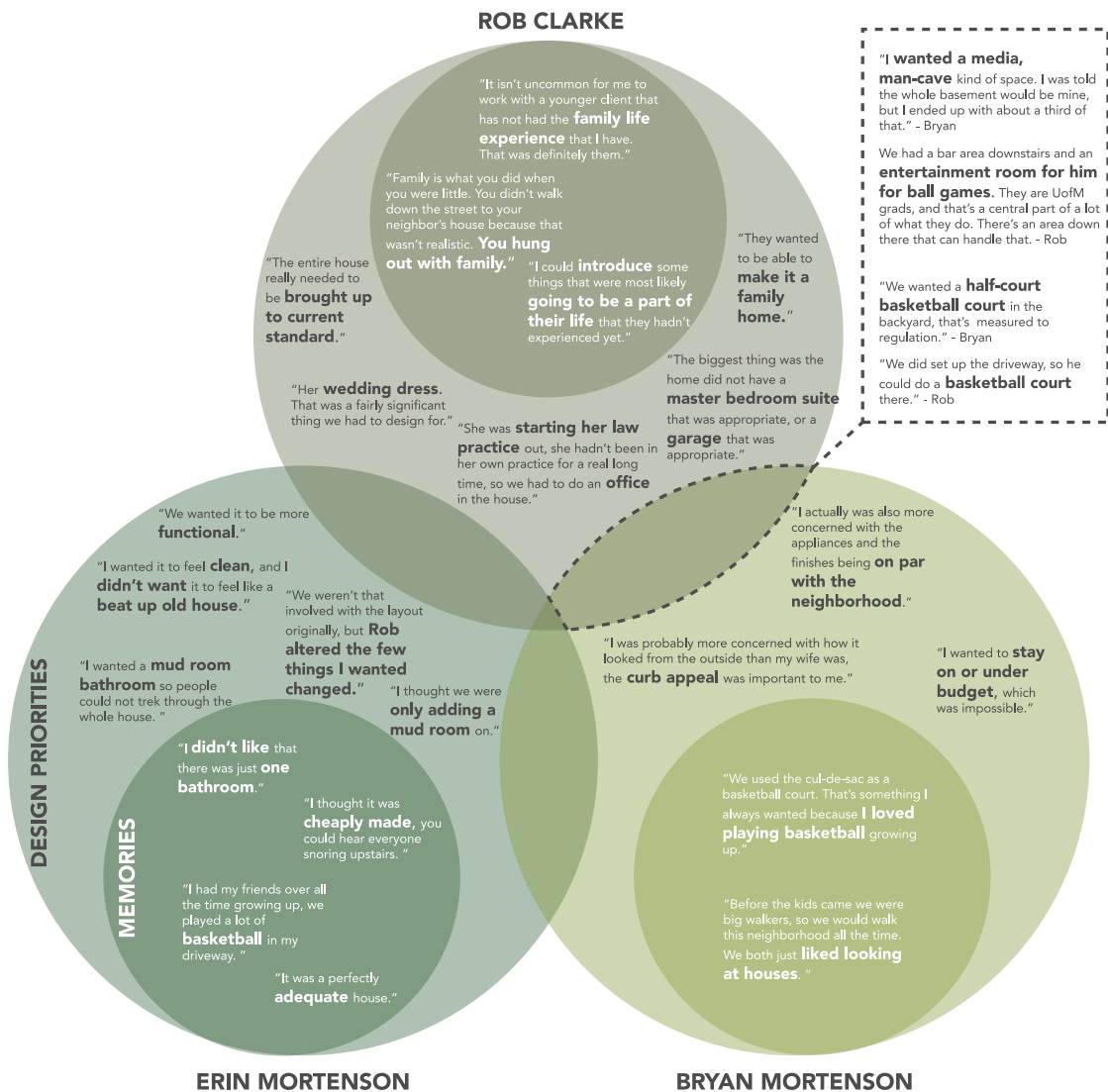


Fig 18: Architect & Client Relationship.

After studying memory in the single-family home, I was intrigued about the relationship between the architect and the client. This is what led me to interviewing individuals that have designed a home with an architect. I asked the couple who designed their home questions regarding their previous homes, to understand what they carried forward in their new home. I then interviewed their architect to understand if he had a similar understanding of what they wanted. I also had to test if he had existing experience he was using when designing their home. The architect has designed numerous homes and

has also lived in multiple and has his own bias of what it is to live in a home. Seen above is a diagram representing the relationships and similarities between the architect and the client's desires and deliverables. This interest and my findings can still be used moving forward with my research on dementia. I've come to realize how important it is to design for the individual when designing for dementia. It is also important to get to know the individual on a very personal level. The designer must understand the patient's day-to-day routine in order to design to their need.



*Fig. 19-22: Mortenson Family Home Designed by Rob Clarke at CBI Design Professionals*





“the meaning of  
home and its objects  
comes into dramatic  
focus with the  
prospect or reality of  
loss of home.”

(Rowles and Chaudhury, 2005)



*Fig. 23-25: Progression of Memory Loss in the Home*

# Chapter 5

Reflection | Moving Forward:

To start the first semester, I had to understand what memory was, how it was created, stored, and then recollected. Memories create a person and allow them to be an individual. A definition for nostalgia that stuck out to me, and I think is relevant to the research I have been conducting is “a longing for a home that [doesn’t exist anymore and may not have existed]” (Boym, 2016). Moving towards second semester, and narrowing my topic, I began studying the loss of the home, whether that be through natural disaster, or eviction. A person with dementia will lose memories, and with this will feel uncomfortable and scared in places that were once comfortable to them, including their own home. My goal moving forward is to lessen this discomfort and fear, allowing these individuals to stay in their home in the early stages of dementia.

I began the first semester investigating the relationship between memory and nostalgia within the home. These recollections and one’s longing for these memories are created and enhanced through objects, people, and events within the home. I began studying this topic because I was interested in understanding why the home is so important to the individual, and how the memories influence their current and future home situations. Moving forward to second semester and studying dementia, I want to continue to focus on the home. When a person develops dementia, the home is very important, it is their earliest memory, and it is where they are the most comfortable.

My first experiment was to take a self-guided tour of my grandma’s house and speak the first words that came to my mind, and what I strongly remembered. In my personal narrative, I was nostalgic of the green watering can which reminded me of planting flowers in my grandma’s garden. I remembered the corner of my father’s toys, the comfy carpet where I used to play with the toys. Through this experiment, I discovered the different orders in which my brain would remember an event, or object. This order was made up of object, event, and emotion. In the case of the green watering can, I would remember the object first, which took me back to the

event, and that recollection made me feel nostalgic. This finding was carried forward in my five interviews with individuals who either designed their own home, purchased a home, and had an architect design their home. The emotions that the objects, people and events connected to were grieving, particularly with events, or objects that relate to a person. More positive emotions, such as cherishing and adoring were strongly related to emotions.

I was intrigued about the relationship between the architect and the client. I’ve come to realize how important it is to design for the individual when designing for dementia. It is also important to get to know the individual on a very personal level. The designer must understand the patient’s day-to-day routine in order to design to their need.

The home is a place where an individual cultivates their identity using personal and family objects. These cherished objects and possessions are very important to individuals, including my own narrative. Individuals fear the loss of these objects. Objects are very important in their home: they reflect personality and can be used as a tool to remember. Objects and personalization become very important to dementia patients, as stated earlier. Personalization is key when designing for dementia. As seen in my visits to memory care facilities seen later on in this book, the patients are encouraged to personalize their room how they feel comfortable.

I will utilize my grandmother’s house as my “site” for the remainder of this investigation, and design it if my grandmother was in the early stages of dementia. The design intervention of this thesis is a series of simple, easily installed products, which helps the individuals cope with early issues of dementia while in their home. These products, designed through a set of identified design principles, also ease the transition to a memory care facility. These products are classified in three categories: activities, multi-sensory, and re[collecting].

# Chapter 6

Memory Loss:

Memory loss is a common experience among many individuals as they get older. Approximately 40% of people over the age of 65 experience a type of memory loss. Age-associated memory impairment is the memory loss that is associated with the typical aging process.

Dementia, on the other hand, is defined by The World Health Organization as a chronic or progressive syndrome, with conditions including memory loss, and difficulties with motor functions. Dementia causes deterioration of the brain, and disrupts its ability to function properly, leading to difficulties with thinking, problem solving, or speech and language problems. Dementia is the result from a variety of diseases and brain injuries, such as a stroke. According to the Alzheimer’s Association, someone develops dementia every 3 seconds. Dementia is the umbrella term for four different types of dementia, Alzheimer’s disease, vascular dementia, frontotemporal dementia (FTD), and dementia with Lewy bodies (DLB). Alzheimer’s is the most prevalent, and is the 6th leading cause of death in the U.S. The common factor in the different dementias is the deterioration of cognitive functioning, resulting in everyday, routine tasks being very difficult. The similarities and differences amongst the different types of dementia can be seen in the graphic on page 38.

Dementia is a major cause of disability and dependency among elderly. This syndrome can unfortunately progress over time, leading the individual to lose basic skills and functions, leading to their death. There is currently no cure or treatment for dementia, or slows its progression, but there are drug treatments that can temporarily improve the side effects.

The earlier stages allow the individual to be independent, and increasingly dependent over time as the syndrome progresses. The side effects and impact of dementia are not only affecting the people that have it, but also their families, friends, and caregivers. Dementia and age-associated memory impairment can be distinguished in numerous ways, seen in Figure 23 to the right. For instance, a person

losing their memory with no underlying medical reasonings may occasionally forget things and events, whereas an individual with dementia may forget these things and events more frequently. The early signs of dementia are subtle and may not be obvious.

Dementia affects every person differently, but it can be understood in three stages: early, middle and late. The associated time frames are only approximated, as everyone’s brain deteriorates at different rates.

MEMORY LOSS WITH AGE	DEMENTIA
Losing an item occasionally	Putting items in strange location and being unable to find them
Forgetting what day it is, but figuring it out later/ forgetting appointments occasionally	Completely losing track of time and place.
Forgetting a word or someone’s name, but remembering later	Stopping abruptly in conversation, repeating oneself often and forgetting what to say next
Getting irritated when one’s normal routine is altered	Getting extremely agitated when a routine is altered
Feeling tired and wanting to stay home to rest	Removing self from hobbies due to forgetfulness or difficulty completing. Becoming isolated and not wanting to leave home.
Declined vision	Increased difficulty seeing, blurred vision, some patient’s experience hallucinations

Fig. 26: (Senior Advisor, 2017)

the number of people (globally)  
with dementia is expected to



double every  
**20 years**

2015: 47.5 million  
2030: 75.5 million  
2050: 135.5 million

**1 in 3**

seniors die with  
alzheimer's or  
another dementia

someone develops  
dementia every  
**3 seconds**



alzheimer's disease is  
the **most common form**  
of dementia and may  
contribute to

**50–75%**  
of cases



**6<sup>th</sup>** Alzheimer's Disease  
is the **sixth leading**  
**cause of death** in the US.



there is **no cure** and **no**  
**treatment** that slows or  
stops its progression, but there  
are drug treatments that may  
temporarily improve symptoms

men have a **10%**, while  
women have a **17%**  
chance of developing  
dementia (nationally, after the age  
of 55)



those between the  
**ages of 75-84**  
make up **44%** of the  
**population** with dementia

in 2019, Alzheimer's and  
other dementias  
will cost the nation  
**\$234 billion**



medicare will pay for up to



**100 days** of skilled  
nursing home care



**60%** live in low  
to middle-income  
countries



The early stage of dementia (1-2 years), of which this thesis will focus on, has the following side effects:

- Become forgetful, especially things that just happened
- Difficulty with communication
- Get lost in familiar places
- Lose track of date and time
- Difficulty making decisions
- Difficulty with complex household tasks
- Mood changes, including depression and anxiety
- May become less active and motivated in activities and hobbies
- May be angry or aggressive

The middle stage of dementia (2-5 years) has the following side effects:

- Become very forgetful, especially recent events and names
- Difficulty comprehending time, date, place and events
- Increasing difficulty with communication
- Need help with personal care
- Dependent & unable to live along safely
- Tendency to wander
- Disturbed sleeping, possible hallucinations
- May display inappropriate behavior

The late stage of dementia (5+ years) has the following side effects:

- Usually unaware of time and place
- Difficulty understanding what is happening around them
- Unable to recognize relatives, friends, and familiar objects
- Increasing need for assisted care
- Difficulty with mobility, may be unable to walk
- Unable to find way around familiar places (home)
- Aggression

Understanding the different stages of dementia and being aware of the side effects can help diagnose individuals and educate family and friends on what to expect in the upcoming years.

Although aging and developing dementia have a high correlation, dementia does not only affect the elderly. Young onset dementia, which is defined as the onset of symptoms before the age of 65, accounts for approximately 10% of all dementia cases. Age is not the only factor towards developing dementia. Other factors include, but are not limited to, physical inactivity and unhealthy diets, diabetes, the use of drugs and alcohol, cognitive inactivity, and social isolation.

### STIGMA:

The United States has a “person centered care”, which respects each person’s background and individuality, working towards reducing the stigma of dementia. Other countries support dementia patients through dementia friendly cities, government funded initiatives and memory care facilities, and also includes educating society. Different dementia care across the world can be seen in the graphic on page 40. Stigma is defined as “an attribute, behavior or reputation which is socially discrediting in a particular way: it causes an individual to be mentally classified by others in an undesirable, rejected stereotype” [1]. Dementia patients in the 1900s were locked away and forgotten. In the 1990s-2000s, society turned to medicalization through diagnosis and drug treatment. The future hope is for non-medicalization and acceptance in society. In order to reduce the stigma of dementia there must be understanding and awareness, less negative connotations, societal empathy, and reduced fear. The Alzheimer’s Disease International: World Alzheimer Report 2012 included dementia patient’s sharing the fear, discomfort, loss of relationships, and embarrassment they experience living with dementia. By taking action to reduce stigma, it can raise awareness and can increase the support, research and prevention, and quality of care for those affected with dementia.

Notes

1. Definition of stigma by Sociologist Erving Goffman

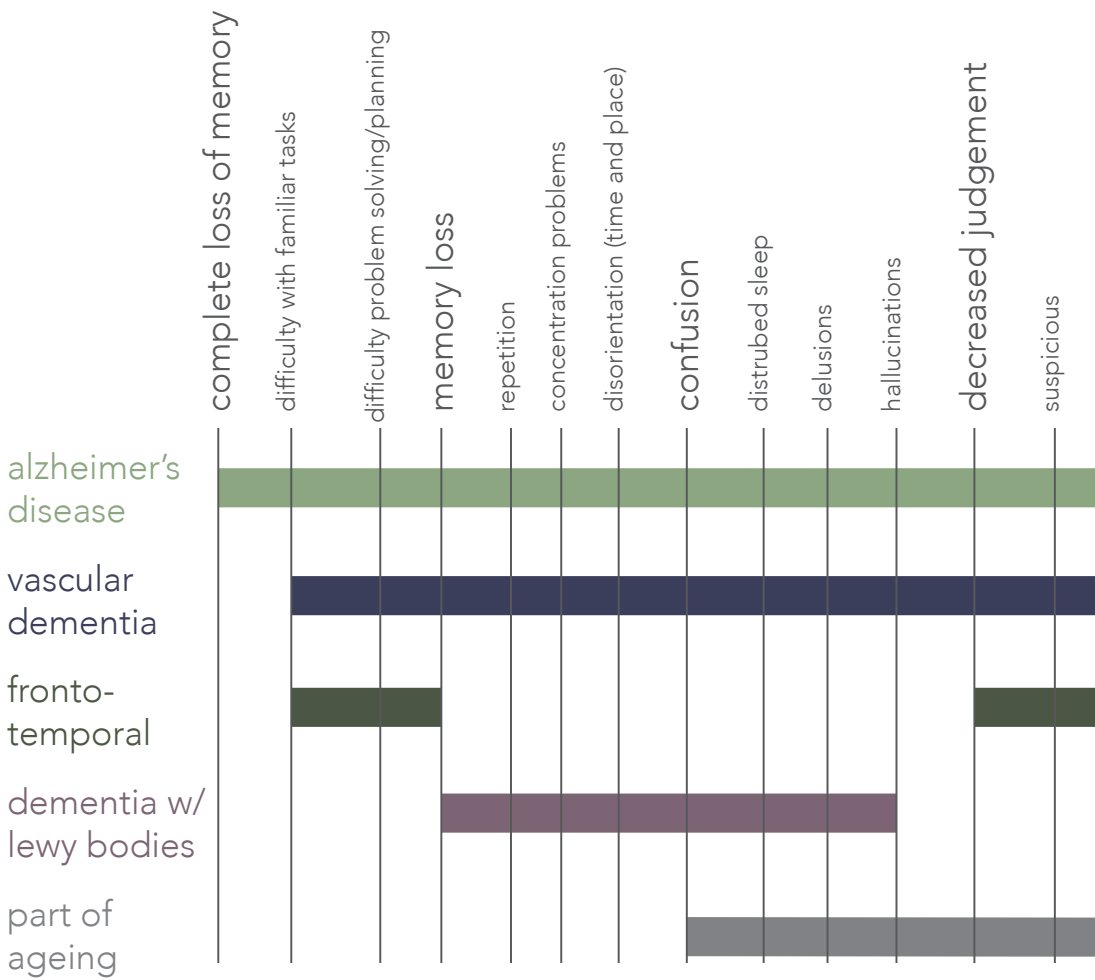
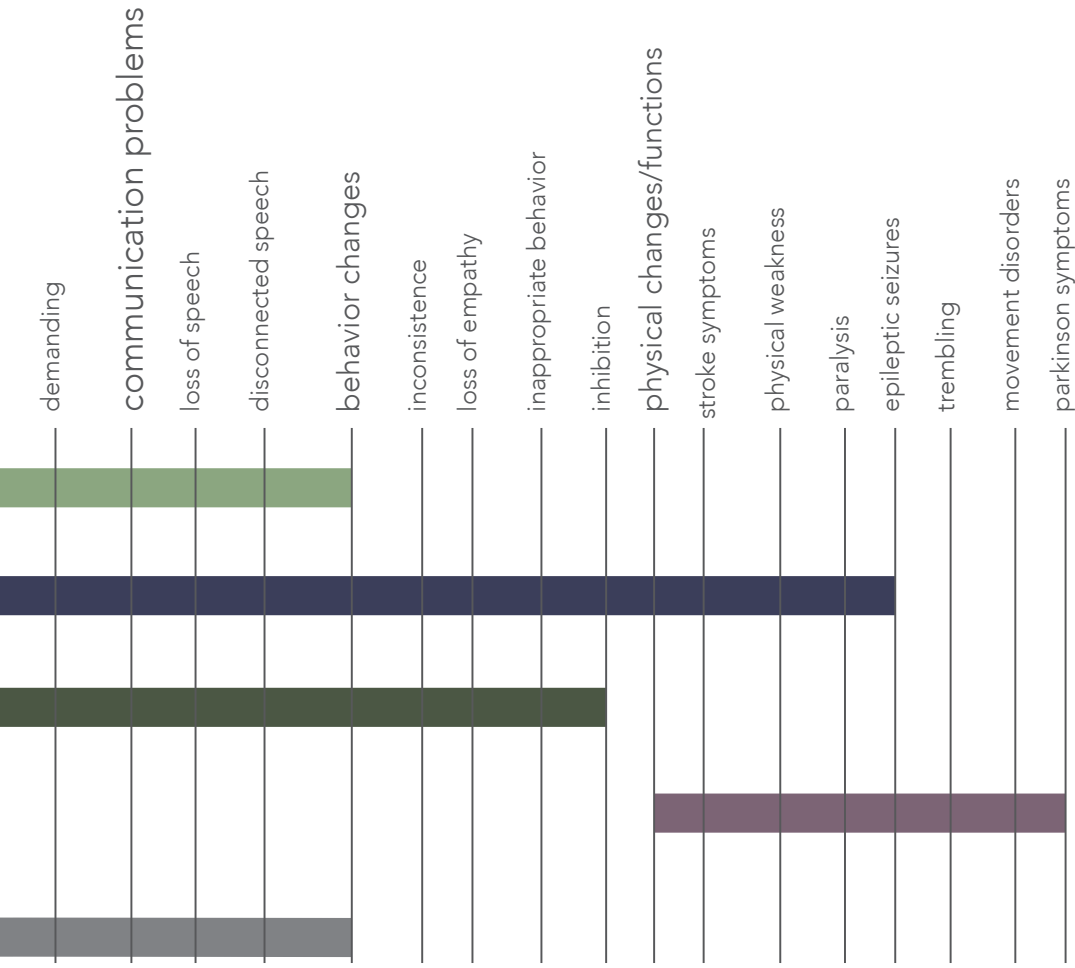


Fig. 28: Different Forms of Dementia



## United Kingdom

- Dementia Friends: a government funded initiative that aims to educate the public and change the way they think, talk and act

## United States

- "Person centered care" - respects each person's background & individuality
- Light, music and validation therapy to help enhance the lives of dementia patients

## Belgium

- Dementia friendly cities: adding special signs to shop windows indicating that they are safe spaces for people with dementia
- Burges maintains a database of people at risk for wandering so that they can be located quickly should they become lost. Databases include the places where the wanderers used to live and work

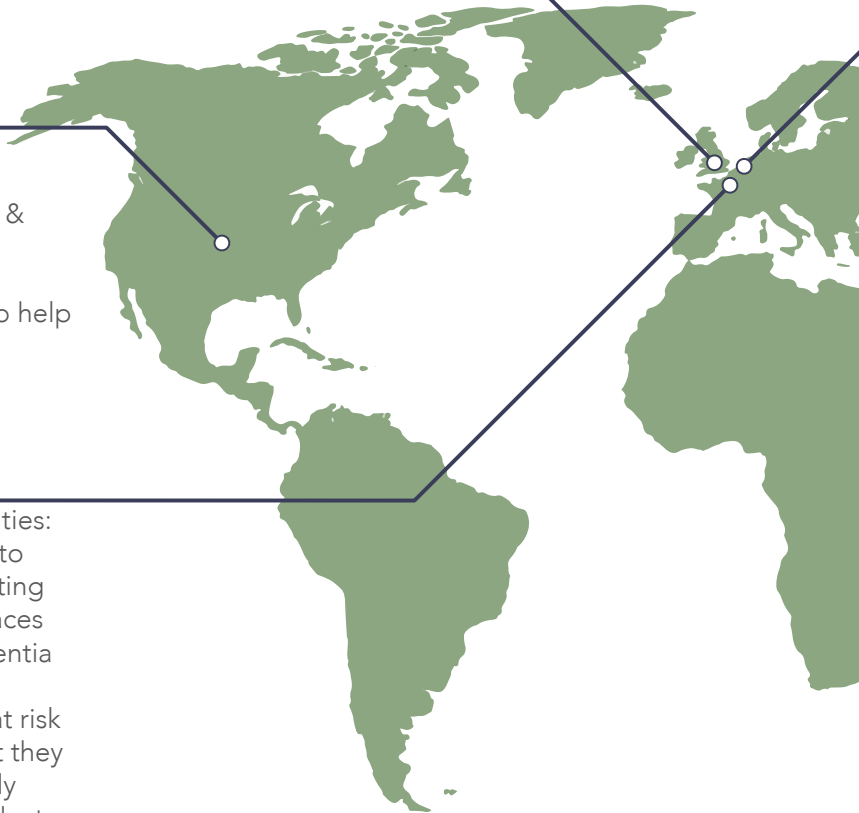


Fig 29: Global Dementia Treatment.



## WHY IT MATTERS:

Overall, dementia takes away the ability for people to recognize who they are currently, and who they were previously. Approximately 50 million people are living with dementia worldwide, and there are nearly 10 million new cases every year. [World Health Organization, 2017] There is expected to be approximately 75.5 million people globally with dementia by 2030, the number doubling every 20 years. The World Health Organization estimates that between 2-10% of the dementia population develop the syndrome before the age of 65. This number is drastically increasing because of the large population of baby boomers aging.

Everyone has a relationship with our built environment; moving throughout different spaces, relating and reacting to the people, the objects, and the architectural elements. With the amount of people worldwide, and the growing number of dementia patients, it is imperative to understand this relationship between design and function. An individual learns from the environment and develops a behavior in reaction to the experience. These experiences, alongside mental and physical health, help craft an individual's quality of life. A person living with dementia does not experience spaces the same as a healthy individual with a properly functioning brain. Dementia patients may become confused, uncomfortable, and scared in spaces that were once comfortable and safe. These individuals look to built and environmental cues to help navigate them and utilize a space. "Living with a diagnosis of Alzheimer's or dementia doesn't mean losing the ability to live life of sense, purpose, and fulfillment." The built environment can provide individuals with dementia a comfortable and safe living condition that can provide to their varying needs, but also help lessen their symptoms. What role can architects play to help improve a person living with dementia have a higher quality of life?

By utilizing previous research, and conducting new studies, this thesis aims to improve the quality of life of people with dementia. Architects can use this knowledge

to enhance a previous environment, or a new environment, and enhance the behavior, well-being, quality of life, function, and social life of people with dementia. This research will specifically explore how these environments can be improved through product design. These products will not only be tailored towards people with dementia, but also their family, friends, and caregivers. The Disability Act defines Universal Design as "the design and composition of an environment so that it may be accessed and understood and used to the greatest possible extent, in the most independent and natural manner possible, in the widest possible range of situations". By designing simple sets of products that aim to improve the quality of life for individuals in beginning stages of Dementia, and can be easily installed into the individuals' homes, the individuals are able to cope with early issues of dementia while in their home, the place in which they are most comfortable. These products, designed through a set of identified design principles, also ease the transition to a memory care facility.

## DEMENTIA SUPPORT:

Dementia does not only affect the individuals diagnosed, but their families, friends, and caregivers. 59% of family caregivers of people with dementia rated the emotional stress of caregiving as high or very high. The demand of caregiving affects the caregiver financially, emotionally, medically, psychologically, and affects their well-being. These caregivers choose to provide care to the patient to keep their family member or friend at home, to be close to the person with dementia, and because they feel obligated, or even guilted into providing care. It is important for families to provide support and care, so they can be involved in their family member's life as long as possible, however; as the person with dementia approaches the end of life, 59% of caregivers stated that they were on-call 24 hours a day and felt that it was very stressful. These caregivers have also expressed some relief when the person with dementia passes away.

Dementia caregivers can be professional, formal caregivers, or family and close friends.



*Fig. 30: Visual Cues by Arden Courts Memory Care Community in Bingham Farms, MI*

Professional caregivers come with more educated understandings of the syndrome. The majority of dementia patients prefer to live in their own homes for as long as possible. As the middle and late stages occur, professional help is needed. The later stages of dementia consist of side effects that increase the need for assisted self-care and dependency. Caring for your family in the early stage (1-2 years) is typically more cost-effective, which plays a large role in dementia care.

The costs of health care, long-term care and hospice for individuals with dementia are substantial. In 2019, Alzheimer's and other forms of dementia will cost the nation approximately \$234 billion, compared to the worldwide estimate in 2010 of \$604 billion. The National average in 2016 for families to place their family member in memory care facilities was at \$3,600 a month. This is an issue because 60% of dementia patients live in low to middle-income countries. The Alzheimer's Association states that Medicare covers inpatient hospital care and certain medical fees, including some prescription drugs (for people with dementia that are 65 or older), will pay for only up to 100 days of skilled nursing home care, and will pay for hospice care delivered in the home, or a nursing facility or an inpatient hospice facility

for patients near the end of their life. This thesis is directed towards the early stage of dementia, allowing the dementia patients to stay in their home with comfort before the syndrome progresses.

### DESIGN PRINCIPLES:

In order to design a space for someone, a designer must fully understand the person they're designing for. They must understand how they view and interact with the space, and what they need to best perform their daily activity. This is necessary, if not more necessary, when designing spaces for dementia patients. Results of a study conducted by Marquardt, Bueter, and Motzek concluded that "specific design interventions are beneficial to the outcomes of people with dementia." (Marquardt, Beuter, Motzek, 2014) The variety, and different levels of needs that come with dementia involve all aspects of a building. Every detail of a space must be taken into consideration and the designer should recognize how the design can offset the effects of the condition. Understanding how a dementia patient will experience a space can help create a space that acts as a tool to aid them. When dementia patients have a space tailored to them, they live more comfortably, peacefully, more securely, and more socially in a space they understand. By implementing these



### Contrasting Colors:

- Too many neutral colors can add confusion
- Warm tones can be seen more easily
- Avoid using a wall color that's the same/similar color to objects



### Effective Lighting:

- Avoid too much bright light
- Twinkles/sparkles can cause confusion and falls
- Natural light is the best way to illuminate a room



### Flooring & Texture:

- Be true to what they are, if a texture doesn't feel how it appears, it leads to feelings of confusion
- Limited contrast between different floorings
- Avoid dark flooring, can be seen as holes



### Wayfinding:

- Patients respond best to objects, objects can help navigate
- Objects create connections for activities/events in certain areas

## Design Principles for Dementia



### Personalization:

- Personalized objects can be comforting to patient
- Create a connection between objects and their home/memories



### Racetrack Concept:

- Patients have tendency to wander
- Allows patients to wander, while keeping them safe
- Return patients to where they started
- Dead ends & dark nooks should be avoided
- Disguise doors & exits



### Familiar/Comfy Space:

- Furniture, finishing, & colors should be selected based on what someone is used to
- Rooms that are too full can be overwhelming
- Soft furnishings make a space feel more like home
- Simple patterns add interest to stimulate senses.



### Dining:

- Kitchens the heart of the home
- Open kitchens that allow patients to observe and engage in meal prep
- Form of therapy in memory recollection



strategies into the patient’s home, it allows them to age in place, with the assumption that they will still require some assistance from family and/or caregivers. Many strategies have been tested to help with the challenges of dementia patients. Examples include constructing memory boxes on patient’s doors to fill with personal photos or objects, and to help the patient recognize where to go, but also to create a connection to their memories. Design strategies are utilized to reduce the unwanted behaviors of dementia, and positively impact the behavior, cognition, function, social abilities, orientation, care outcomes, and the overall well-being of the patient’s life. Marquardt, Bueter, and Motzek conducted evidence-based research, and determined appropriate design decisions that can be utilized to meet these needs.

**BUILDING LAYOUT:**

Building layout is one of the most important and first steps when designing a dementia friendly environment. Layout includes the placement of resident’s private rooms and the shared public spaces, and the hallways shape and size are all taken into consideration. A strong building layout for a dementia

facility should follow a racetrack concept. Dementia patients tend to wander and get lost in familiar places, and this concept allows patients to wander, while keeping them safe. The building layout should return patients to where they started. The design should eliminate dark nooks and dead ends and should disguise doors and exits. The studies conducted by Marquardt, Bueter, and Motzek discovered that long corridors not only make it more difficult to find their way around, but leads to restlessness and anxiety, as well as violence. Designing open floor plans with simple circulation that also allows for wheelchairs and other assistive devices. Another study found that placing relevant programs in the sightlines of each other increased social interaction.

**WAYFINDING:**

People with dementia rely on what they see to understand where they are. Designing a clear layout with visual and wayfinding cues helps orient the patients in the space. According to Marquardt, “direct visual access to relevant places, the integration of reference points, and the implementation of several zones with a unique character” helps orient the



(Left) Fig 31: *Dementia Principles (YTM Care Home Furniture, 2017) (Progressive AE, 2016)*  
(Above) Fig 32: *Wayfinding Strategies at Westbridge Memory Care by Spellman Brady & Company*



*Fig. 33: Natural and Artificial Light at The Moments Memory Care in Lakeville, Minnesota*

resident. Patients respond best to objects, these objects helping them navigate by creating connections for activities and events that happen in certain areas. Besides objects, wayfinding tools include signage, color coordination between zones, murals and artwork, furnishings, and views of nature. Personalization is also a key wayfinding tool. Memory boxes are typically placed outside of resident's doors with personal photographs, the resident's name, and small personal mementos. These memory boxes help the resident identify not only visually cues them to their room, but it can also be a tool to help them recollect their memories. It is important to not overcrowd a room with too much information, which can overwhelm and confuse the patient.

#### **LIGHTING & SUNLIGHT:**

The influence of bright light therapy and daylighting were studied by Marquardt, Bueter and Motzek. Results showed that exposing residents to bright light, a non-pharmacological treatment, could cause behavior issues such as agitation, restlessness, or aggression, but could also positively affect the residents cognitively. Light therapy

improved their functional performance, and also causing them to be more awake and verbally competent. Too much bright light. Twinkles or sparkles can cause confusion and falls. Natural light is the best way to illuminate a room. Further research is needed on bright light therapy and its impact on dementia patients. Overall low light levels were found to have negative effects on the mood and well-being of dementia patients.

Utilizing natural light or mimicking natural light in indoor lighting also improves behavior. Allowing natural light into a space stimulates the patient's sensory information, can positively affect the circadian rhythm, and can offer a therapeutic environment. Providing access to nature, in a secured area, provide patients with a direct connection to sunlight is really important in dementia care.

#### **COLOR, CONTRAST, TEXTURE & PATTERNS:**

Some people with dementia may experience problems with their sight, including hallucinations in some cases. Dementia patients may experience misperceptions, seeing one thing as something else, or

misidentifications, or problems identifying specific objects and people. These sight problems are not a result of problems with thinking, but due to damage to the visual cortex. Other sight issues dementia patients may experience are:

- Being less sensitive to differences in contrast, such as black and white, and contrast between objects and background
- Being less able to detect movement
- Changes to the visual field
- Being less able to detect different colors
- Changes to how the pupil reacts to light
- Problems directing or changing gaze
- Losing the ability to say what has been seen
- Double vision
- Problems with depth perception

(cite)  
The specific difficulties depend on the type of dementia the patient has. Figures 35-40 on the following page reflect the hardships of daily activities for dementia patients, largely affected by visual difficulties.

Too many neutral colors can add confusion, so places housing dementia patients should avoid using a wall color that's the same or similar to objects in the room. Warm, brighter, and more vivid tones can be seen more easily.

Furniture, flooring, and all surfaces should be true to what the texture appears to be, if they don't feel how they appear, it will lead to confusion. There must be limited contrast between different floorings., dark floor can be seen as holes, and can be disorienting. Marquardt, Bueter and Motzek discovered that lower contrast and simple patterns on carpets were beneficial for patient's walking performance. Simple patterns add interest to stimulate senses. Color, as mentioned earlier, can be utilized as a wayfinding tool to help orient the patients, and clarify different zones and spaces.

#### AMBIENCE & PERSONALIZATION:

Creating a home-like ambience results in positive effects on dementia patients. Creating a home-like environment provides the residents a space to personalize and individualize their surroundings. Personalized objects can be comforting to patients, creating a connection between their homes and memories. Furniture, finishing, and colors should be selected based on what the individual is used to, making them feel more at home. Memory care facilities organize the dining areas to reflect a home-like dining area, with small dining tables, and a living



Fig. 34: Home-Like Ambience by Cape Memory Care in Cape Elizabeth, ME



Fig 35-37: "A Walk Through Dementia - Walking Home" (Alzheimers Research UK, 2016)



Fig. 38-40: "Dementia From the Inside" (SCIE, 2015)



*Fig. 41: Multi-Sensory Tube by Snoezelen Multi-Sensory Environments*

room common area nearby. This home-like atmosphere lowers behavior problems. The kitchen is oftentimes the heart of the home, and memory care facilities create interactive kitchens that allow the patients to observe and engage in meal prep. This acts as a social activity, and a form of therapy in memory recollection. Dementia patients need familiar and safe environments.

#### MULTI-SENSORY ENVIRONMENTS:

Research states that sensory enhancement of the physical environment has a positive effect on the mood and behavior of dementia patients. Snoezelen Multi-Sensory Environments, also known as multi-sensory environments, create “relaxed atmospheres with pleasant surroundings, soothing sounds, captivating aromas, tactile experiences, massage and vibration, and gentle movement.” (Snoezelen Multi-Sensory Environments, 2019) These environments can be self-regulated and tailored to the individual’s sensations. Snoezelen Environments can also provide social

interaction and engagement. While multi-sensory environments cannot heal dementia, these environments and the equipment and technology in them are designed to create a stimulating, yet calming atmosphere.

#### ACTIVITIES & SOCIAL INTERACTION:

Activities are highly important to dementia patients to keep them active and may even help them maintain skills for longer. It is also encouraged to adapt activities because it will provide a sense of independence and personal accomplishment. A daily routine is also important to dementia patients, as it gives them predictability and stability, preventing disorientation and confusion. Giving dementia patients something to do, especially with other individuals, can improve their mood and quality of life. Living with dementia can often times be isolating, and it is important to allow for social interaction in a dementia patients routine. Keeping somebody with dementia active and social is important to their personal and emotional well-being and can possibly even slow the



Fig. 42: Gardening by Arden Courts Memory Care in Geneva, IL

progression of the syndrome. As mentioned earlier, building layout can help force social interaction.

## TESTING DESIGN PRINCIPLES:

Reflecting on the design principles researched, this installation was created in the Hot Box in the University of Detroit Mercy Architecture Building to understand what a dementia patient would experience

in their daily life. The installation included a blacked out, unfamiliar space, that utilized lighting, color, texture, and blurred vision to replicate common symptoms of dementia. Individuals would walk into the unfamiliar dark space and be tasked with walking across to grab an object (blue wine glass) off a shelf and walk back and open the door and exit the space. The individual would immediately walk into the space and notice that the carpet tiles did not feel as they appeared. Some tiles were covered in tape to change the texture, and some had rocks placed under to create

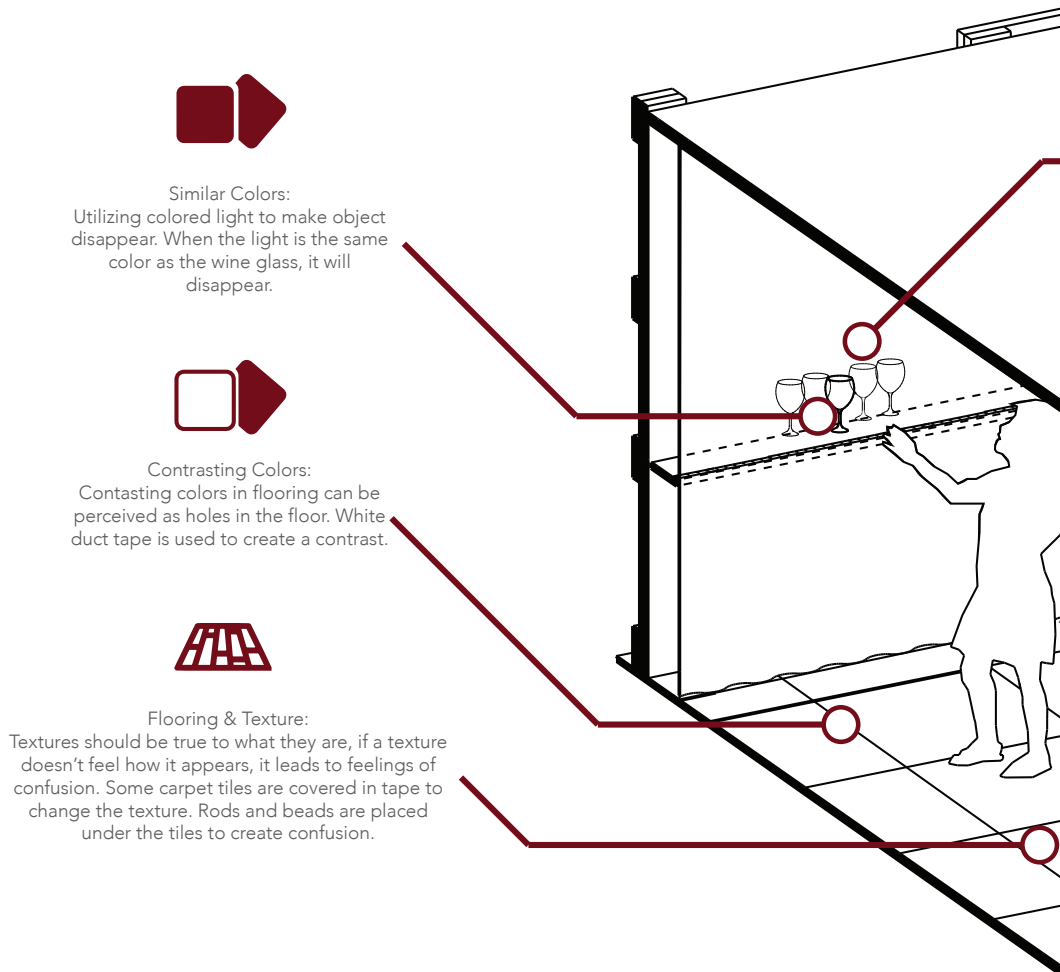
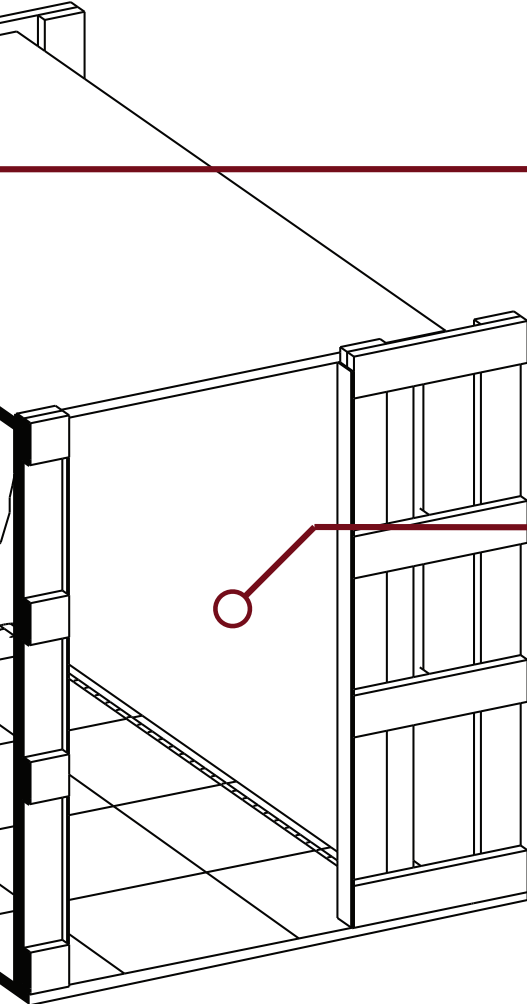


Fig. 43: Design Principles Utilized in Installation



confusion, and discomfort when walking. LED strip lights were placed alongside the space, which created a glow on the carpet tiles, creating visual bumps that were not actually there. The carpet was not all one color and had high contrast between tiles. The user had to be careful and watch where they were walking in order to not trip. The blue wine glass was placed on a shelf in front of imagery that had multiple similar colored wine glasses. This created the illusion of blurred vision, and having difficulty grabbing the real wine glass. This technique

was also utilized at the exit door, where the user couldn't tell where the door handle was. Though this installation was not incredibly successful, it tested out different design principles, and even replicated Snoezelen technology and multi-sensory experiences.



**Multiplying:**  
Utilizing graphics to multiply objects to replicate the decrease in vision in dementia patients.



**Black-Out:**  
Creating a completely dark space to allow misperceptions. Making a familiar space unfamiliar, something commonly experienced with dementia.

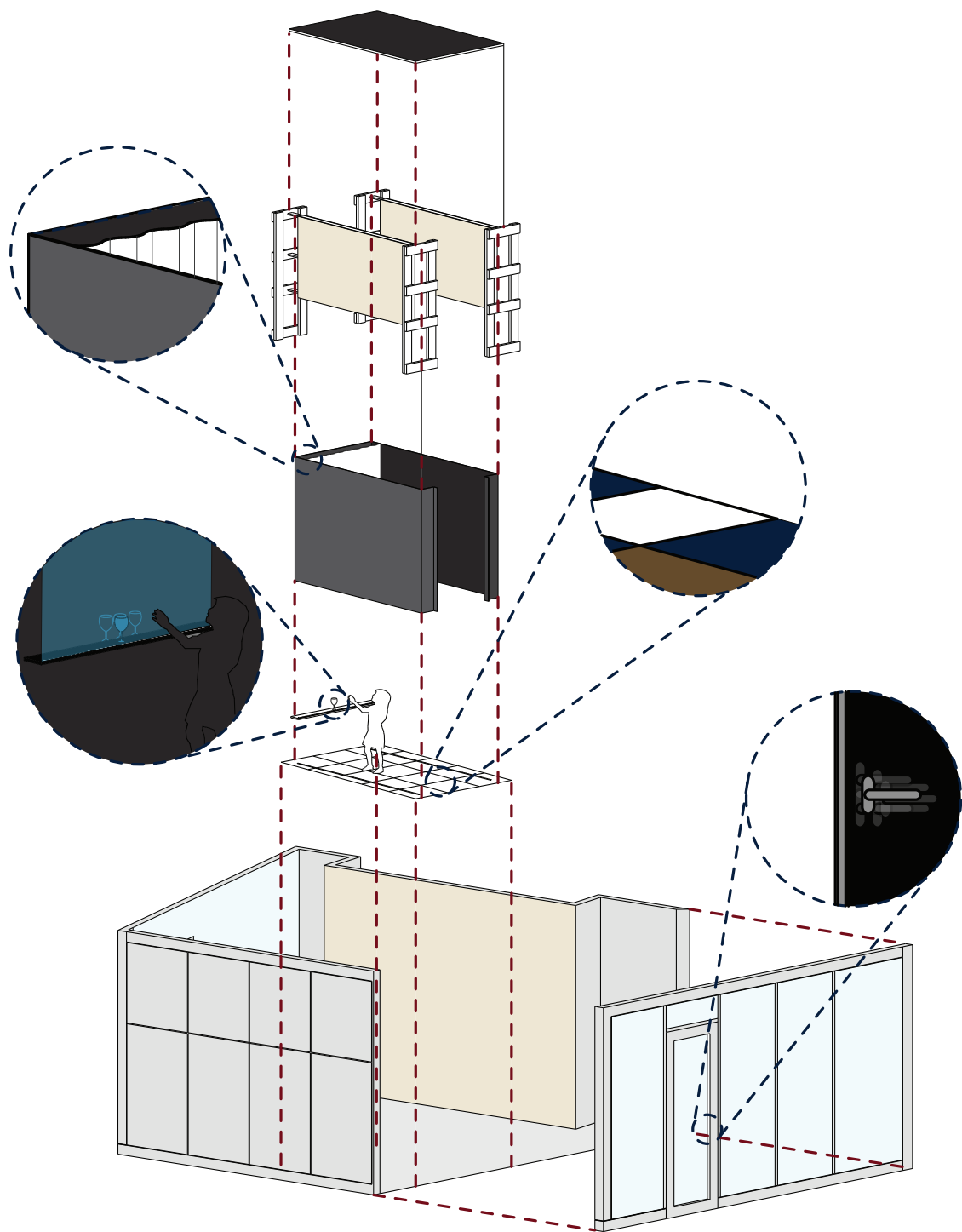
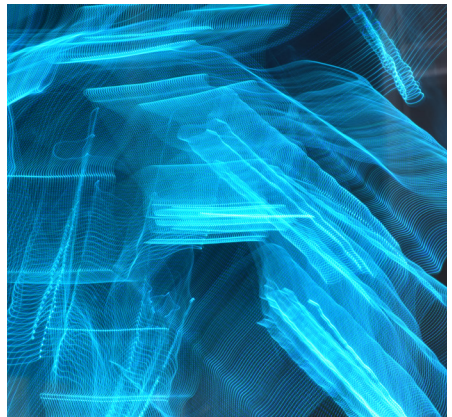
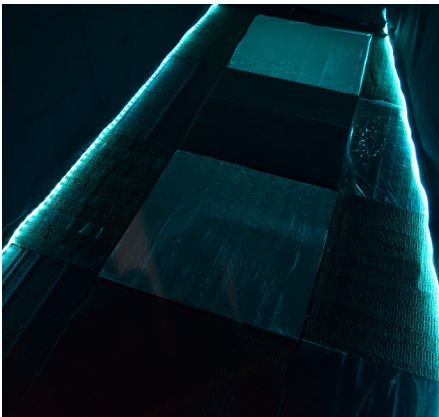
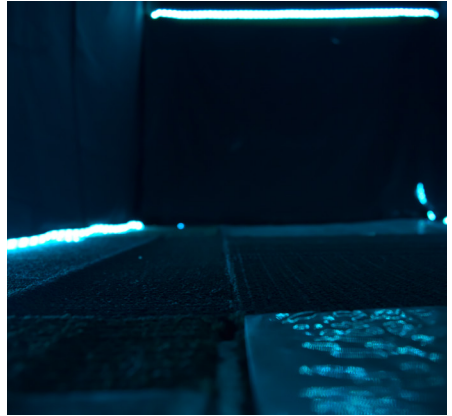
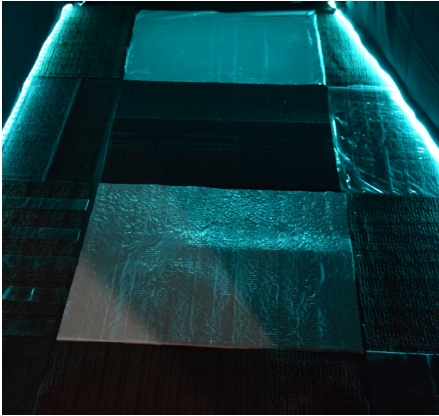
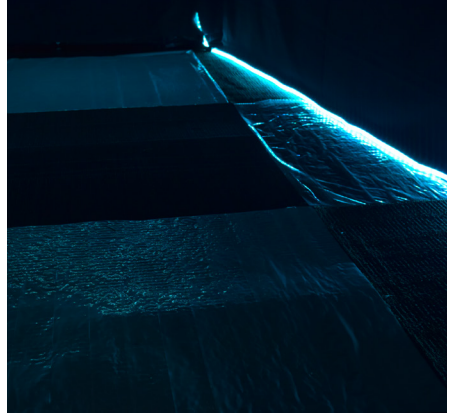


Fig. 44: Exploded Axon of Installation



*Fig 45-50: Images of Installation in Hot Box.*

## CASE STUDY: ARDEN COURTS

Chenoweth states that formal caregivers and memory-care facilities must be aware of how they treat their patients, and do not damage the patient's individuality. Treating patients with respect, trust, recognition, and individualized-care can enhance the patient's well-being. Memory-care facilities should allow the individual to go about their daily, comfortable, routine in a familiar place that is easy to navigate. (Chenoweth, 2009)

An example of this person-centered care is Arden Courts in Bingham Farms, MI. Arden Courts was specially designed not only to be safe and secure, but to instill a sense of home that enables residents to stay as independent as possible. Arden Courts consists of four self-contained "houses" with community and outdoor living spaces. Every patient has their own private bedroom, shared if requested, with a bathroom and small closet. Each house, which is reflected in the

enlarged floor plan below, has its own indoor courtyard, living room, family style dining room, kitchen, and assistive full bath and laundry. There are common areas shared by the houses that include an activity and craft studio, barber and beauty salon, wellness center, secured backyard with a porch, and expansive landscaped walking paths.

Arden Courts was built solely around the design principles studied earlier, researching for 5 years alongside John Hopkins before building the facility, and have more than 20 years of experience and research. The facility is dedicated to memory care, and it is not one level, wing, or locked hall of an assisted living facility. Arden Courts provides a home-like, safe and supportive setting that nurtures the individuality of the persons living with memory loss. Arden Courts recognizes that every person has their own background, history, routine, interests, and needs, and caters to every individual.

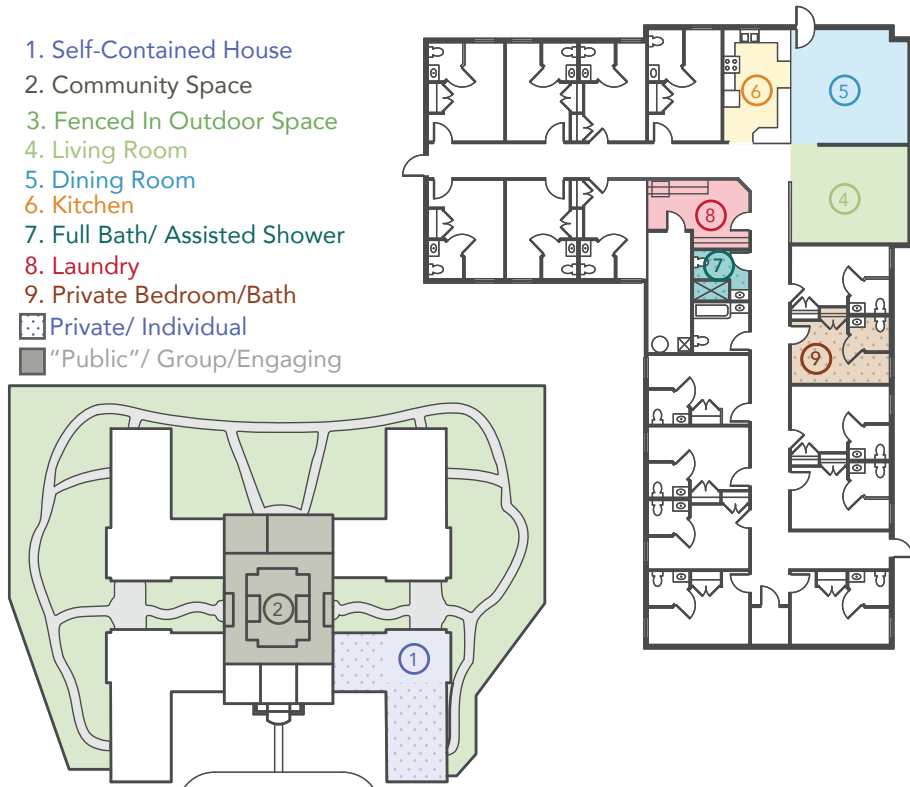


Fig. 51: Arden Courts Site & Floor Plan, created by author.



*Fig. 52: Arden Courts Exterior Walking Paths, Photo by Arden Courts of Bingham Farms, MI.*

Arden Courts provides Daily Life programming to structure a meaningful day to fit everyone's personal needs and interests. There are four different types of programming: Individual Pursuits, Engagement Therapy Treatment, Lifestyle Programming, and Namaste Care.

Individual Pursuits programs are for residents who are unable to participate in group programs. Some activities for these individuals include going for walks, gardening, doing simple chores, or working on word games.

Engagement Therapy Treatment is an opportunity for dementia patients to socialize with others with similar cognitive and functional abilities. These individuals enjoy time together, sharing like interests, such as crafts or gardening. This treatment provided shared communication, and a way to share past and present memories. Lifestyle Programming is scheduled and planned programming that creates structure and stimulation in a social setting. These programs are in a community setting, and are focused on intellectual, sensory, intergenerational, physical, spiritual, community, creative, and social events. The different programs are tailored to the individual's interests and routine. Lastly, Namaste Care is a program to

engage individuals with advanced dementia. This type of care stimulates the senses through smell, touch, taste, hearing and vision. For example, soft music and lavender scents are utilized.

Every patient is encouraged to personalize their room with their furniture from home, and their cherished objects and mementos, to make them as comfortable as possible. There are four levels of locating for each patient: the colored hallways that matches their colored door, the name plate on their door, and the shadow box with personal memories inside.

Though very beneficial, these facilities are very expensive. Arden Courts is currently, in 2019, \$6,825 a month for a single occupancy room. This cost does not include medications, personal supplies, beauty and barber services, transportation, and special outings. Moving forward, I was disheartened by the incredible costs associated with specialized memory care. The remainder of this thesis, and the product design, is geared towards the beginning stages of dementia, where the patient can remain in their home. Personally, I could not move forward with designing a memory care facility, though very beneficial, because of the financial burden that it places on the average patient and their family.

## Individual Pursuits



For residents who are unable to participate in group programs. Often benefit individuals with atypical dementias.



## Engagement Therapy



Provide small groups the opportunity to socialize, to share like interests, enjoying times together, and share past and present memories.



## Lifestyle Programming



Scheduled and planned programming that provides structure and stimulation in a social community setting. Choices are designed to involve individuals based on interests, hobbies and routines.



## Namaste Care



Engages individuals with advanced dementia, in a nurturing environment that stimulates the senses.





Lighting: Avoid too much bright lighting. Natural light is the best way to



Furniture: Based on what someone is used to. Simple patterns add interest to stimulate senses.



Flooring: Too much contrast between flooring, potential tripping hazard



Personalization: Create connection to patient's memories



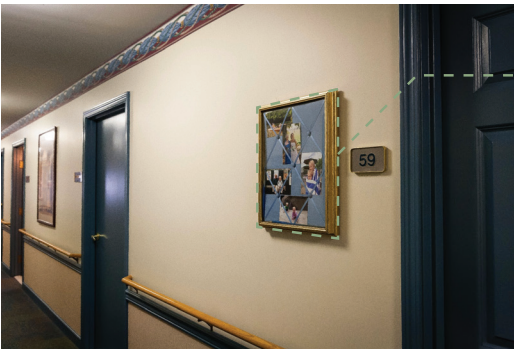
Contrasting Colors: Allows entry to stand out



Flooring: Dark flooring can be perceived as holes



Personalization: Create connection to patient's memories



Lighting: Avoid too much bright lighting. Natural light is the best way to light a room.



Contrasting Colors: Warm tones can be seen more easily. Avoid using a wall color the same color as the object.



Furniture: Based on what someone is used to. Simple patterns add interest to stimulate senses.



(Left) Fig. 53: Arden Courts Therapy Types  
 (Above) Fig. 54: Arden Courts Interiors  
 All Photos by Arden Courts of Bingham Farms, MI.



“The ‘courtyards’ include things to touch, feel and do. The patients enjoy helping with everyday routine tasks, like laundry. The ‘courtyards’ are small and intimate, and allow for social interaction.”



“There are 4 levels of locating: the colored hallway, the colored door, the name on the door and the personalized shadow box.”

*Fig. 55-58: Arden Courts Interiors taken by author during site visit and interview.*





“Everything here is routine. Every day has the same schedule. But it’s still like home. Meals are served family style. The patients sit with the same people every day, in the same chair.”



“Their bedroom can be personalized. Their families rotate clothes out weekly. They have no shower, for safety.”

# Chapter 7

Designing for Dementia:

## RETROFITTING EXISTING CONDITIONS:

The following exercise was conducted at my grandmother's house in Troy, Michigan, utilizing the familiar and accessible home as a case study for an early-stage dementia patient. The purpose of this exercise is to experiment with retrofitting an existing suburban home to accommodate the needs of an early-stage dementia patient. This could be completed without hiring an architect and can be accomplished by simply moving furniture to create new programs in existing rooms. Hiring a contractor or architect may be necessary if there is a need to add new walls and openings to accommodate the patient's needs.

Having a deeper understanding of dementia, this study began by acknowledging potential threats that the home could create for the patient. The most apparent threat was the second floor. It would be very difficult for the patient to access their existing bedroom because of the staircase. By relocating my grandmother's bedroom to the existing living

room, and setting up temporary foldable walls, the space can easily be made more private or public. It is assumed that the second-floor bedrooms would remain and could be utilized by the caregivers who assist the patient. The living room was the ideal location on the first floor because it is off the side, and not in the open circulation areas. This allows the living room to be blocked off from the remainder of the house to provide privacy. The living room is also located next to an existing enclosed patio. This existing space would be safe because it is enclosed, but could also provide direct access to nature, natural sunlight, and social interaction.

Seen in the sections on pages 71-73 are suggestions for how else to retrofit the interior of the home to be safe for dementia patients. Examples include using kitchen appliances, such as a stove, that have the controls on the front of the appliance, so that the user doesn't need to reach over and accidentally burn their body. Other suggestions to make the home more dementia-friendly include utilizing transparent cabinets, so the user can easily see what is in the cabinet, and not



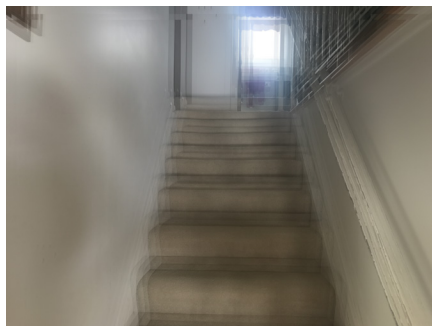
*Fig. 59: Potential Threat of Stairs in Home*

get confused. It may also be helpful to make the knobs on cabinets colorful so they are easily visible. As seen in Arden Courts, it is important that the dementia patient only has access to small amounts of clothing in their closet. This prevents any confusion. Family should exchange clothing weekly, and only have weather appropriate clothing.

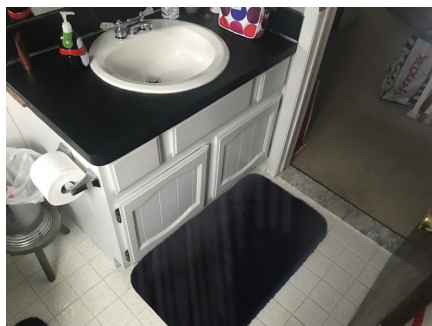
The selected case study did not present many threats for a dementia patient that required architectural changes. Other threats included high contrast rugs in comparison to the flooring and could prevent falls, or furniture that matched too closely in color to the wall and could be difficult to distinguish. These hazards could easily be prevented by changing some fabric, removing a rug, or painting a room. This thesis never intended to be an interior design project, so I began to look back on the research conducted on the design principles for dementia, and the previous research on memory and object in the home.

## PRODUCT DESIGN

By designing a set of three products that are built off of the previous research on memory and Dementia design principles, this thesis aims to improve the quality of life for individuals in beginning stages of Dementia. These products can be easily installed into the individuals' homes, and they allow the individual to cope with early issues of dementia while in their home, the place in which they are most comfortable. These products follow three categories: Re[collecting] Objects, Multi-Sensory Environments, and Gardening, all of which have a positive effect on dementia patients. Besides being easily installed, the idea behind these products is that they would be created and sold in a kit of parts, and could be purchased in a variety of sizes to accommodate the existing structure of a home. These products can also be seen in the sections to the right, along with the experience they create, and the benefits they will add to the home.



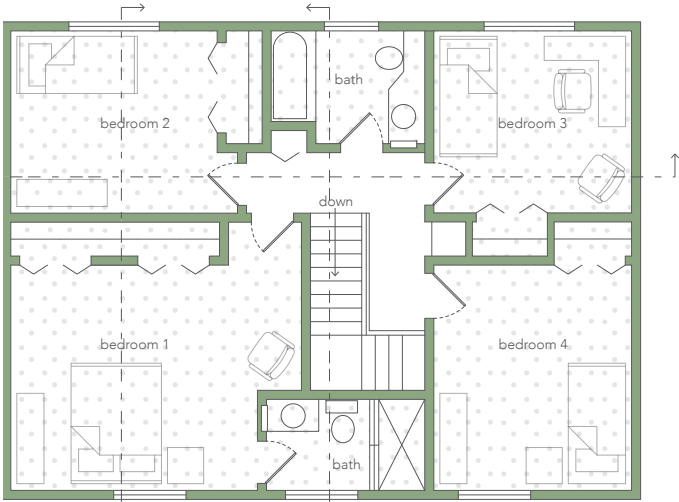
*Fig. 60: Potential Threat of Stairs in Home*



*Fig. 61: Potential Threat of Contrasting Materials*



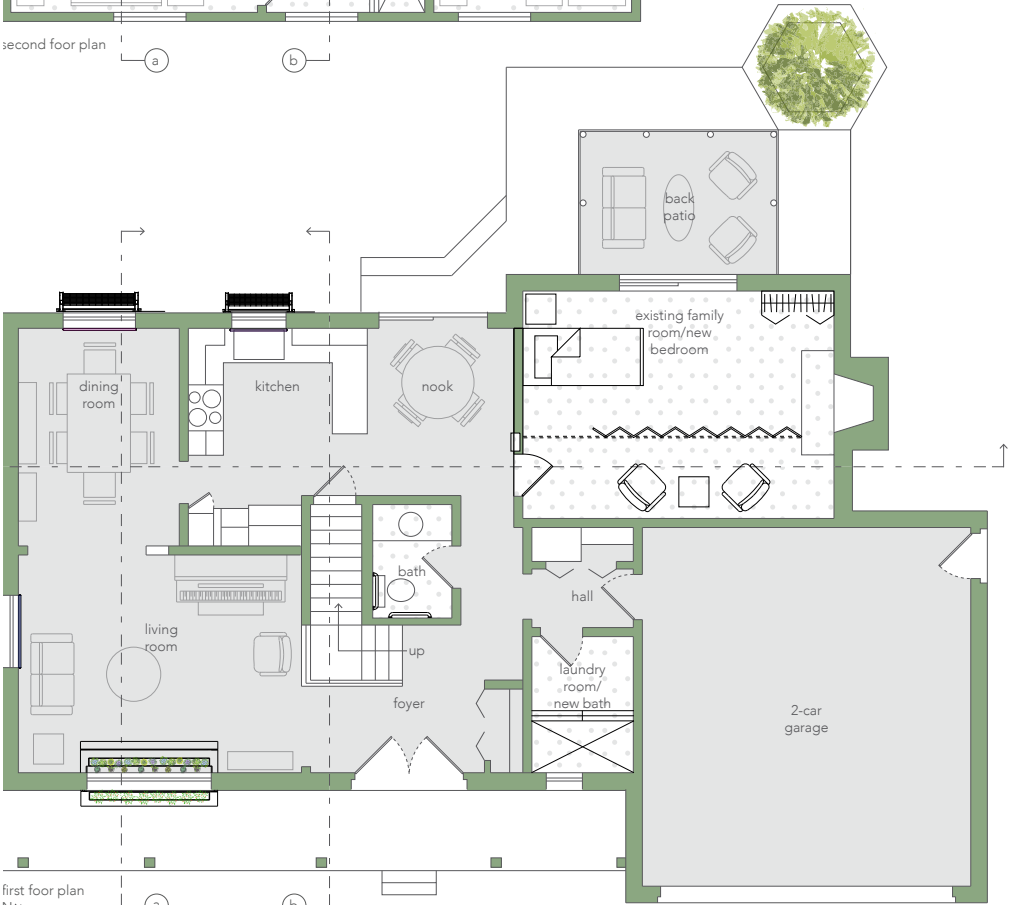
*Fig. 62: Potential Similarities in Color*



second floor plan

(a)

(b)



first floor plan

N

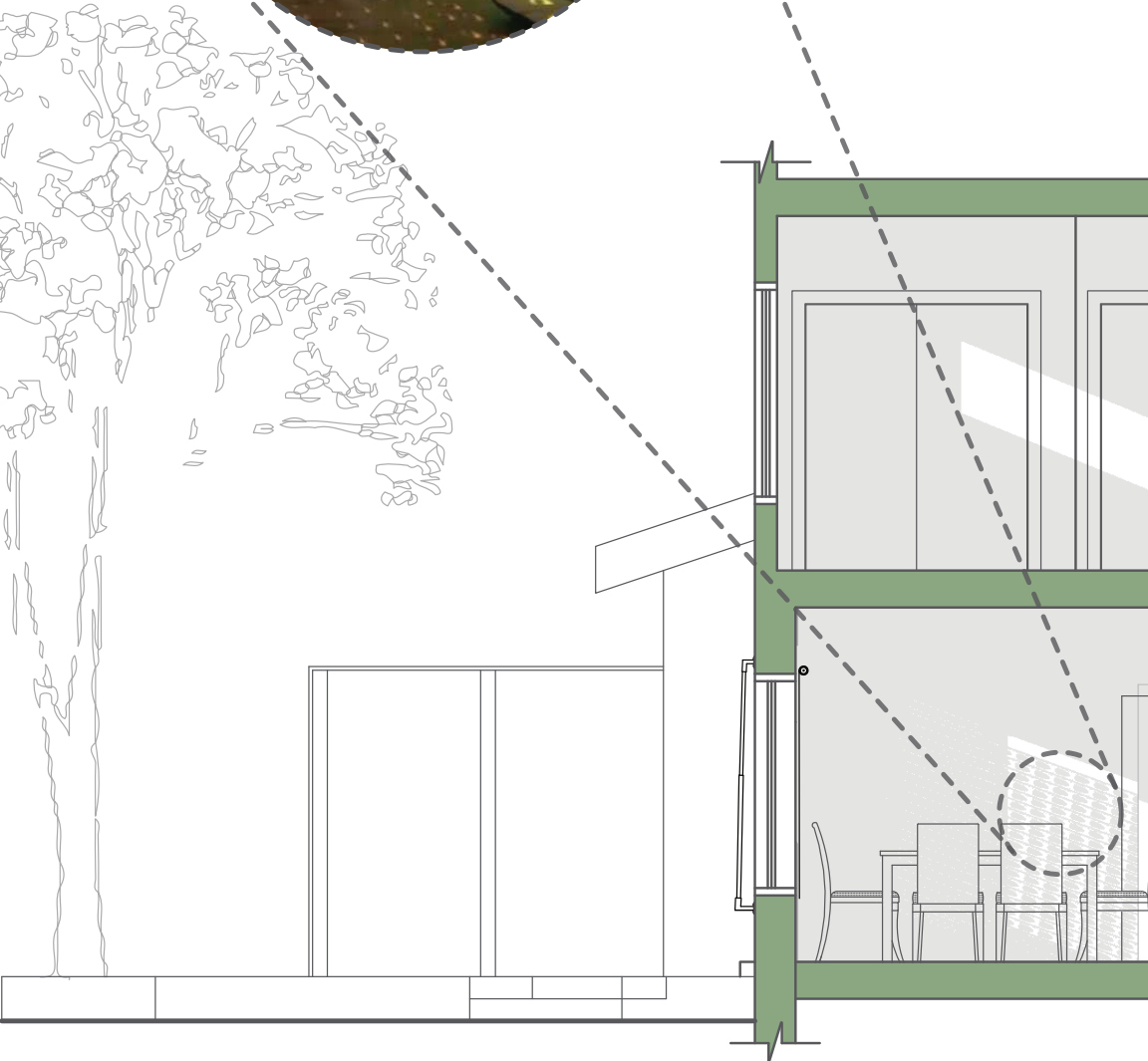
(a)

(b)

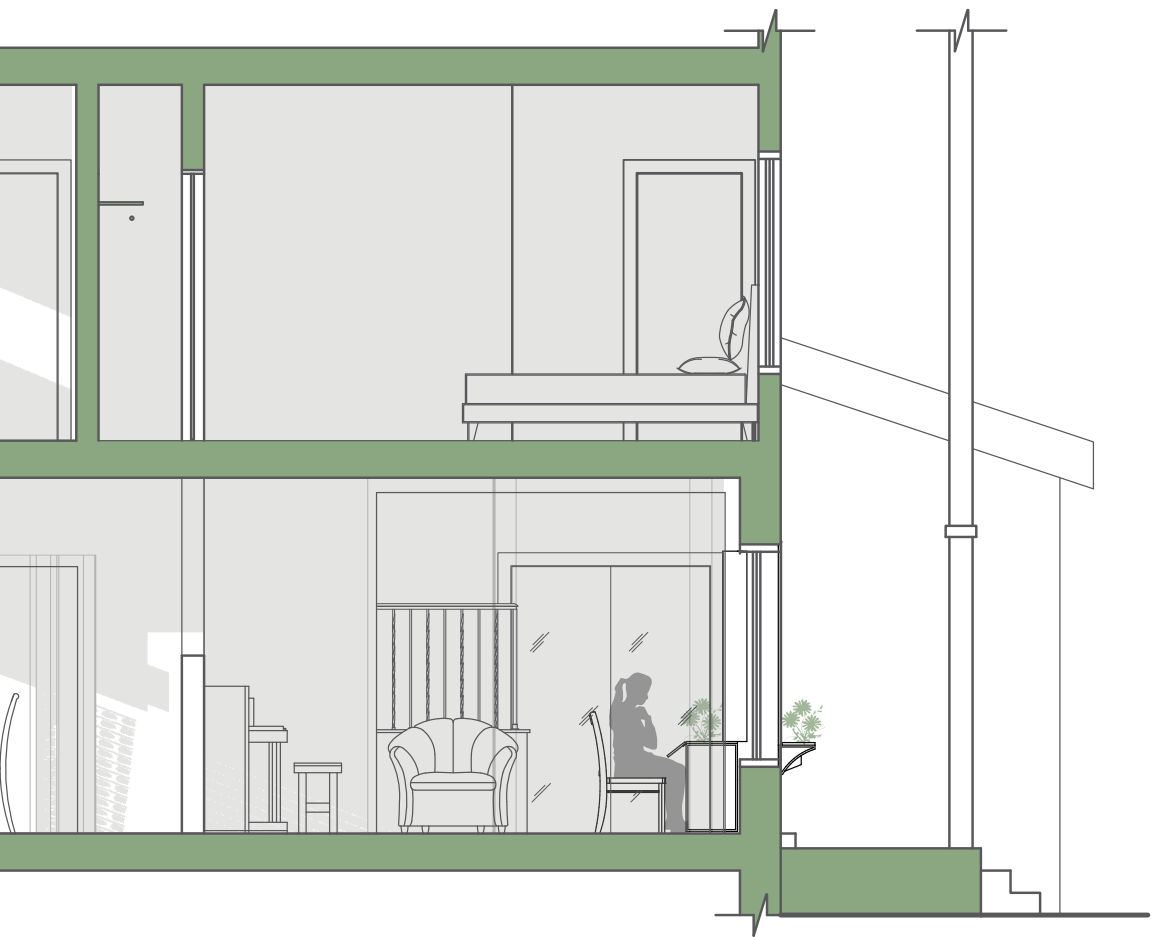
- Private/ Individual
- "Public"/ Group/Engaging



-Shadows created from new window installation, influenced from Snoezelen multi-sensory environments for Dementia.

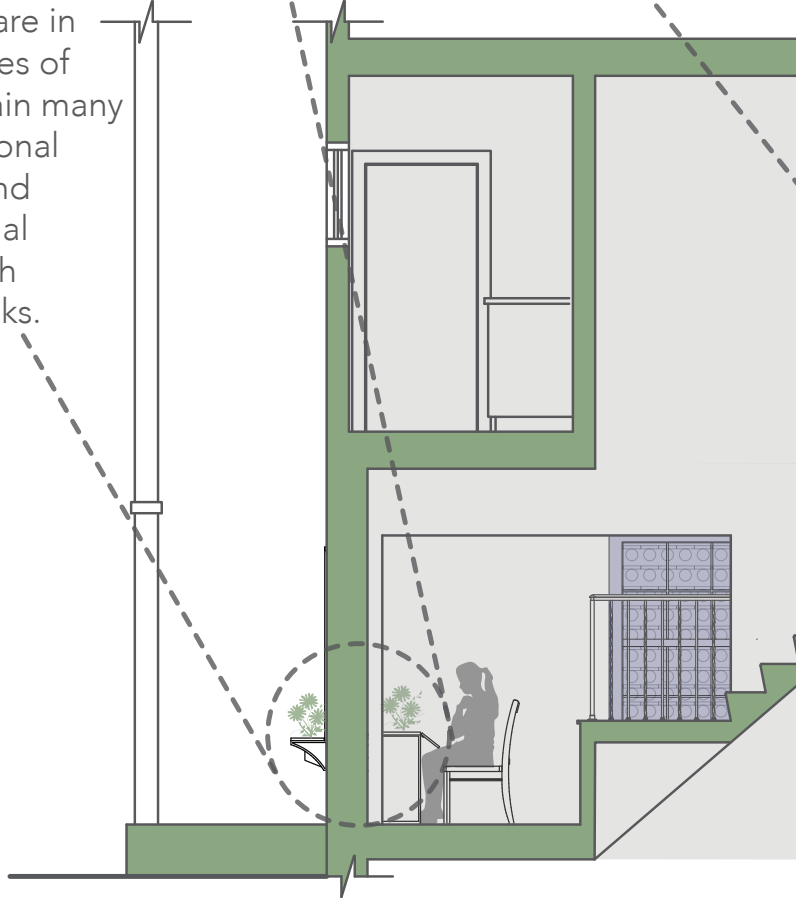


section a





-People who are in the early stages of dementia retain many of their functional capabilities and require minimal assistance with gardening tasks.



section b

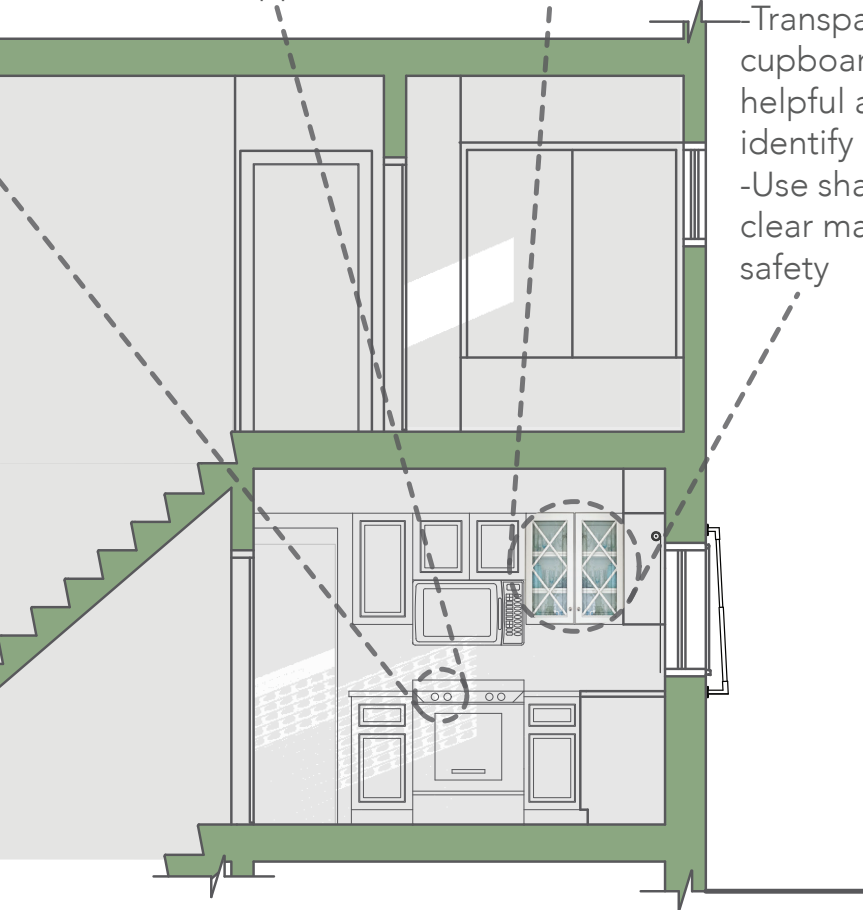




-Controls at the front of the stove stop people from having to reach over a heat source when using the appliance.



-Transparent cupboard doors helpful as a way to identify contents.  
-Use shatterproof clear materials for safety

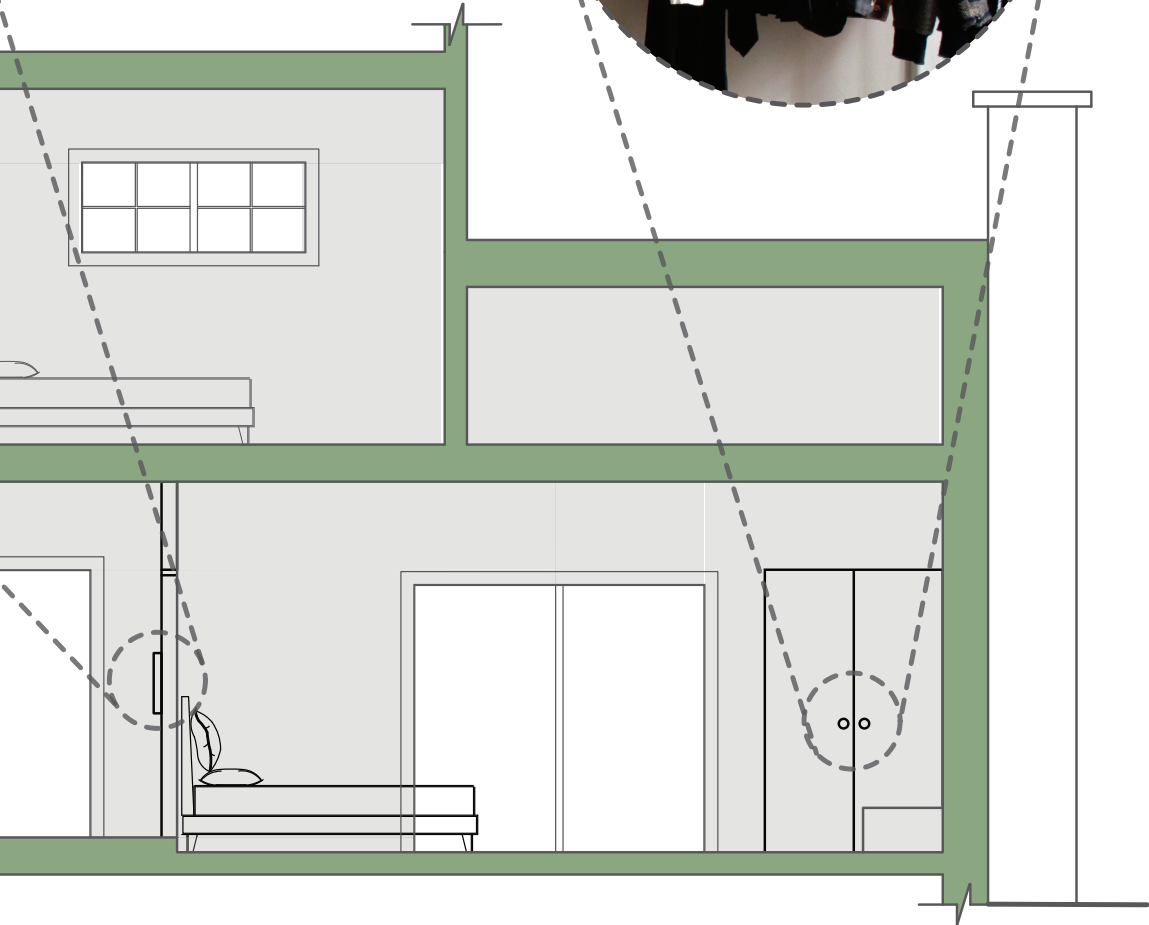


- Moveable memory box
- Showcase items that bring individual back to a moment in time that they hold dear.



section c

- Small closet changed weekly to remove confusion
- Remove extra clothing/clothing for other seasons





2. garden window



1. multi-sensory window treatment

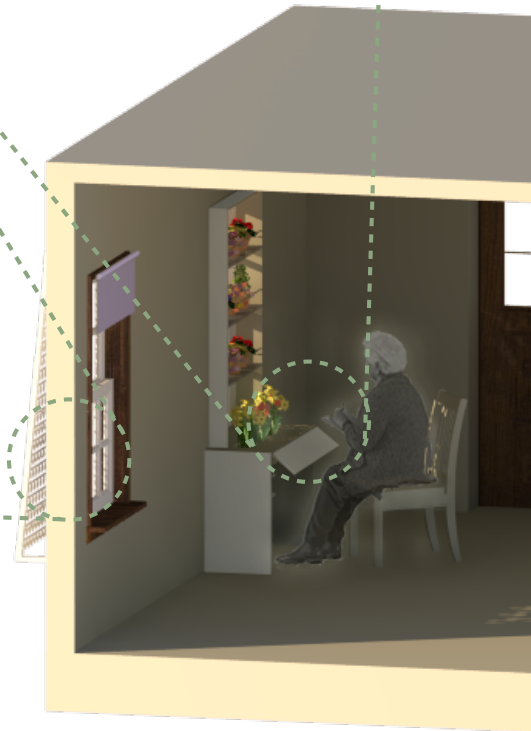
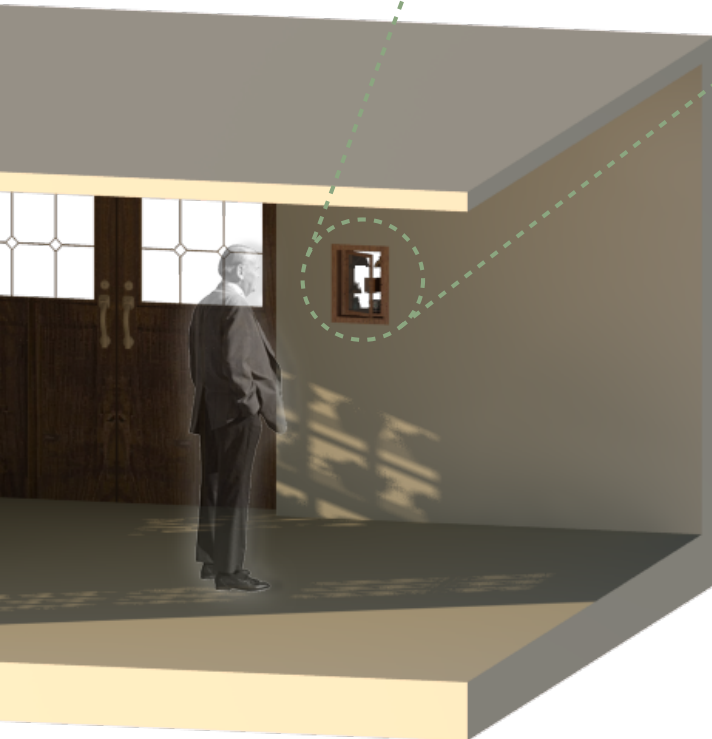


Fig. 63: Three Products Combined



3. portable  
memory box



## RE[COLLECTING] OBJECTS:

As researched earlier, individuals have a very strong connection to the objects that are kept inside their home, especially elderly individuals. These cherished objects hold very deep meanings to the owners, each being the vessel of very dear memories. These objects play such a strong role to people with dementia, as these objects can orient them in a less familiar space, or can even help them recollect who they are, and what they have been. As seen in Arden Courts, and other examples, memory boxes are typically placed at a patient's door to help them navigate and know which room they live in. This first product is a moveable memory box. This memory box can be placed inside the front door, where it is visible from the inside and the outside. This allows the individual to know which house theirs through personal objects they keep in the box. The memory box can then easily be removed from the wall and be placed elsewhere. An opening at the top allows for backgrounds to be added, making the objects more visible against a surface. The memory box also includes a series of grooves to add additional shelves or adjust the height of different shelves depending on the size of the objects. The memory box includes an easily operable door, so the objects can easily be moved, or replaced. The objects that people hold dear are irreplaceable and are one of a kind. There is no replicating these images, so by allowing the memory box to be relocated, the objects are not being recreated, and are staying true to the original memories they held.

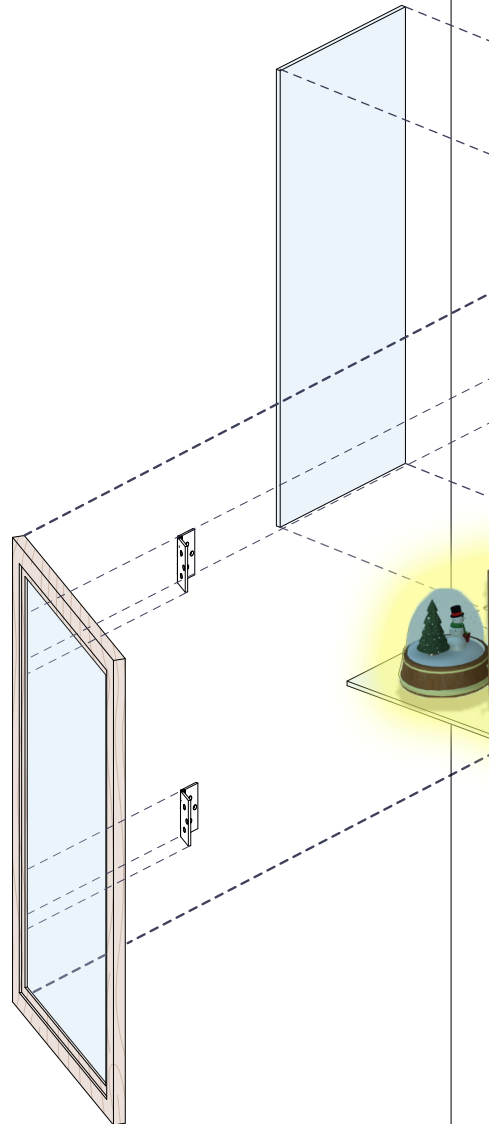
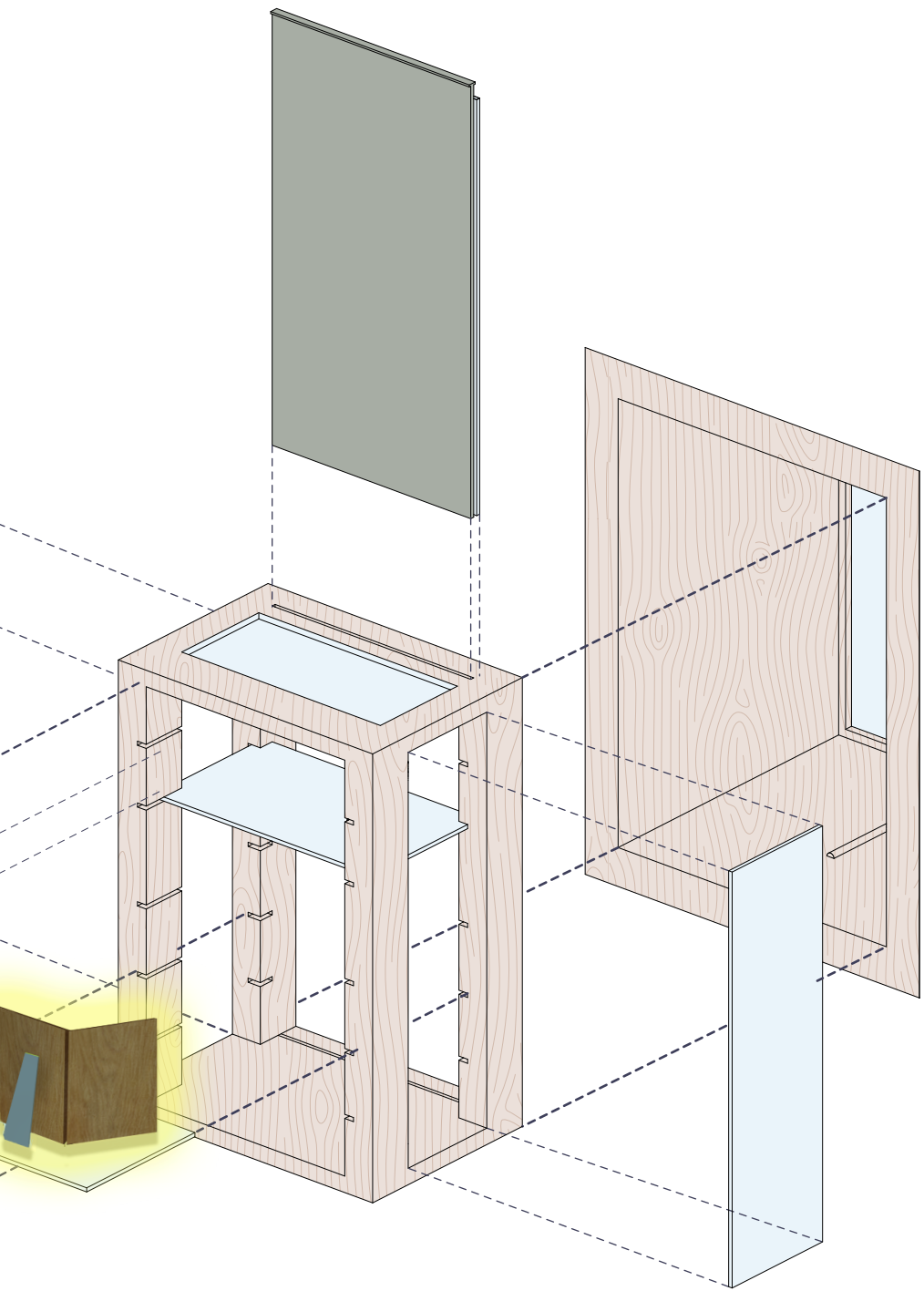


Fig. 64: Memory Box Exploded Axon



## MULTI-SENSORY ENVIRONMENTS:

Taking inspiration from the installation conducted earlier, and Snoezelen Multi-Sensory Environments, this second product utilizes the benefits of natural light, but creates calming patterns to help soothe the patient. Natural light is one of the best ways to light a space for dementia patients, and it is beneficial to their overall mood. The second product is a window treatment that can be installed to the exterior of a home and will respond to the natural sun and wind. The frame is made up of aluminum bars that are mounted to the exterior wall on the top and bottom. The frame is tapered, allowing for wind and sunlight to interact with the product. The aluminum bars have holes drilled into them, and rods or dowels are placed horizontally in the holes, creating a "ladder". Aluminum rods with circular discs attached are then placed on the dowel. Every circular disc is its own piece, reacting on its own to the wind. These pieces are designed to be easily installed, and can easily be moved around, to create different spacing and patterns. As the wind hits the discs, it creates a dancing pattern, and also creates a quiet and peaceful chime. The circular pattern allows the sunlight to create soft, moving patterns on the inside of the home. A roller shade can be placed on the interior side of the window, to lessen the amount of light that enters the space. Colored, transparent fabric can be placed on the roller shade to create sensory evoking imagery on the floor and walls of the home. This resembles the colorful bubble tubes that are used in Snoezelen Multi-Sensory rooms to help soothe dementia patients. The illusion created helps distract the patient and decreases agitation. The circular pattern was chosen because it did not include any harsh lines and resembled the shadows of foliage in the sun. This window treatment is designed to adjust to any size residential window, both horizontally and vertically.

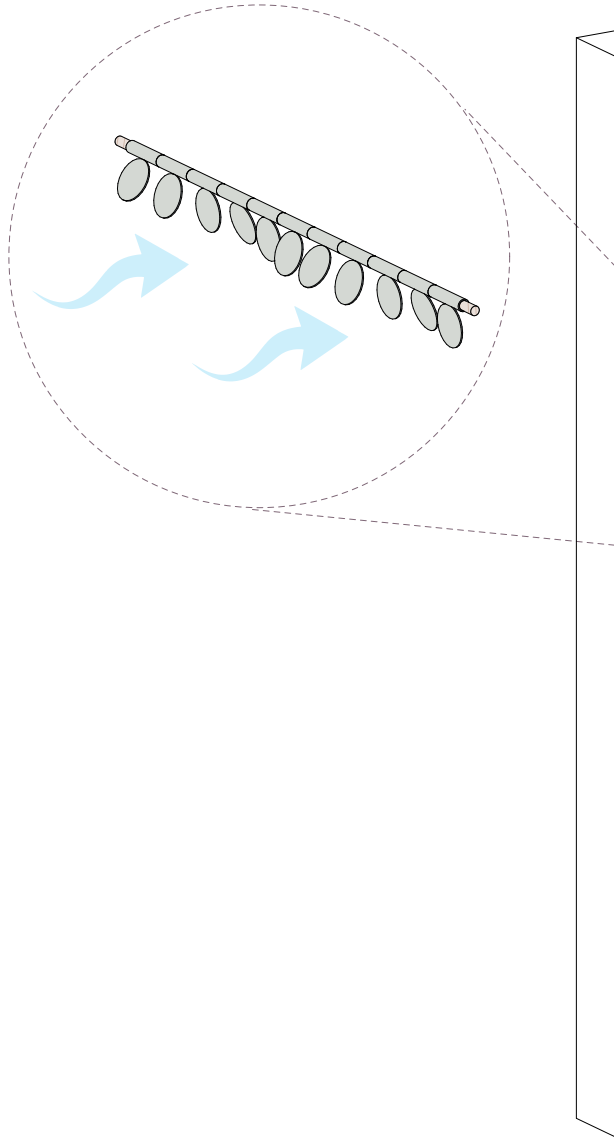
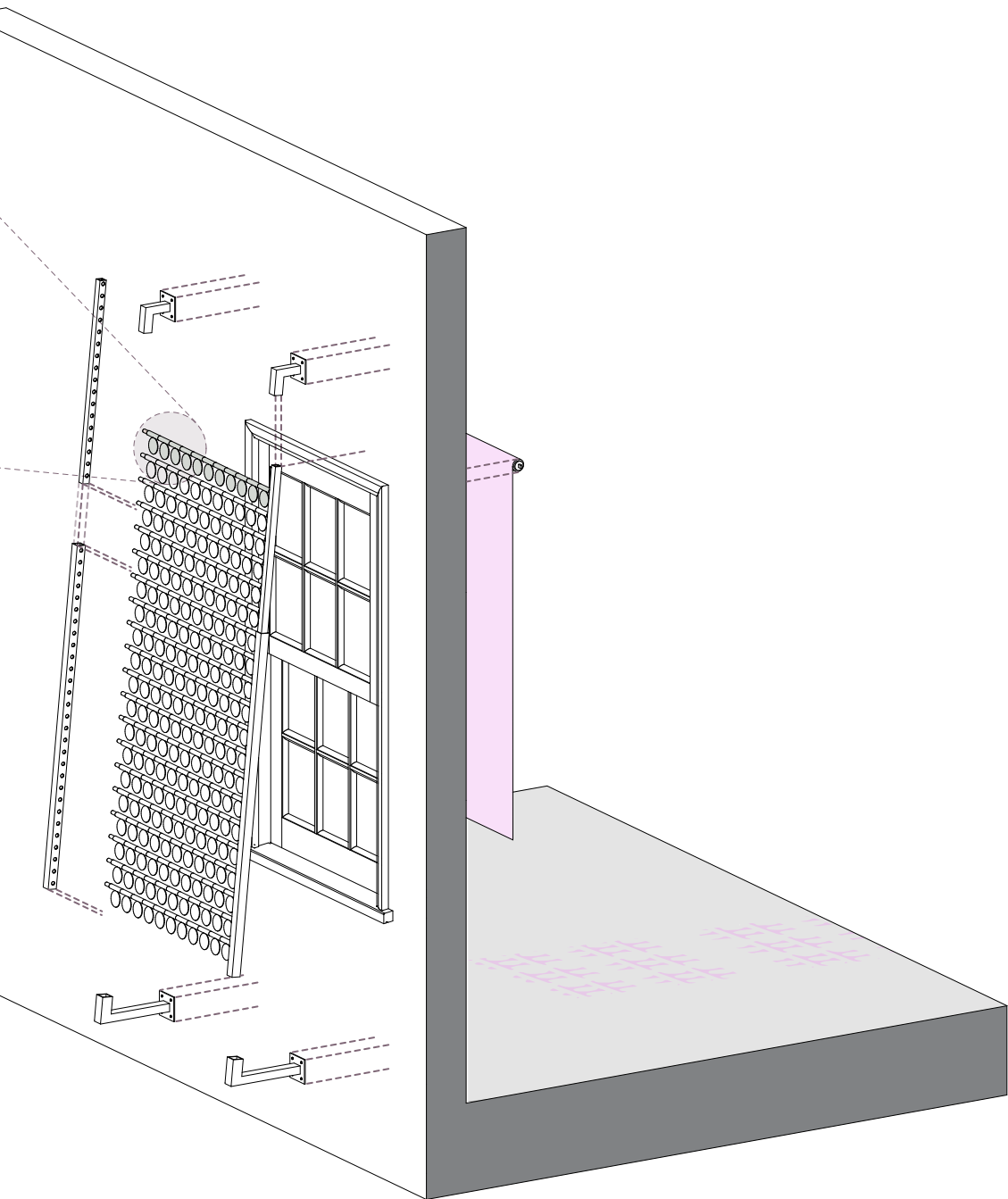


Fig. 65: Window Treatment Exploded Axon





## GARDENING WINDOW:

Being outside can drastically benefit the physical, cognitive, social, and psychological of a person with dementia, and in turn improves their well-being. Gardening is a very common activity for early stage dementia patients, as it helps them retain their existing functional capabilities, and they require minimal assistance. Gardening is a familiar task to many people and can help a patient regain confidence in a simple task. It is important for dementia patients to go outside and interact with the natural environment. Gardening outside encourages exercise, as well as reduces stress and agitation. If it is too cold outside, it is important to also have indoor plants or gardening areas. The third product is an interior and exterior garden window. The framework, and built-in garden, are easily installed into an existing window structure. This product also can be easily adjusted to fit any size existing window. The frame and gardening beds easily slide into the existing window frame and sill, from both the interior and exterior. The interior garden rests on two pieces of wood, with shelves beneath for storage such as a green watering can, and other gardening tools. There is a hinged desktop that extends from the garden bed, which can be used as a desktop. The exterior framework and gardening bed rest on two decorative brackets. There are shelves running horizontally above the interior garden shelf between the window frame to hold potted plants. These plants would be protected by a rod running horizontally as well, so there is no fear of the plants falling. Both the above and below shelves can be moved higher or lower, depending on the needed heights for plants and tools. Gardening can also be a great tool to encourage social interaction. Depending on the width of the window, multiple people could garden at the same time.

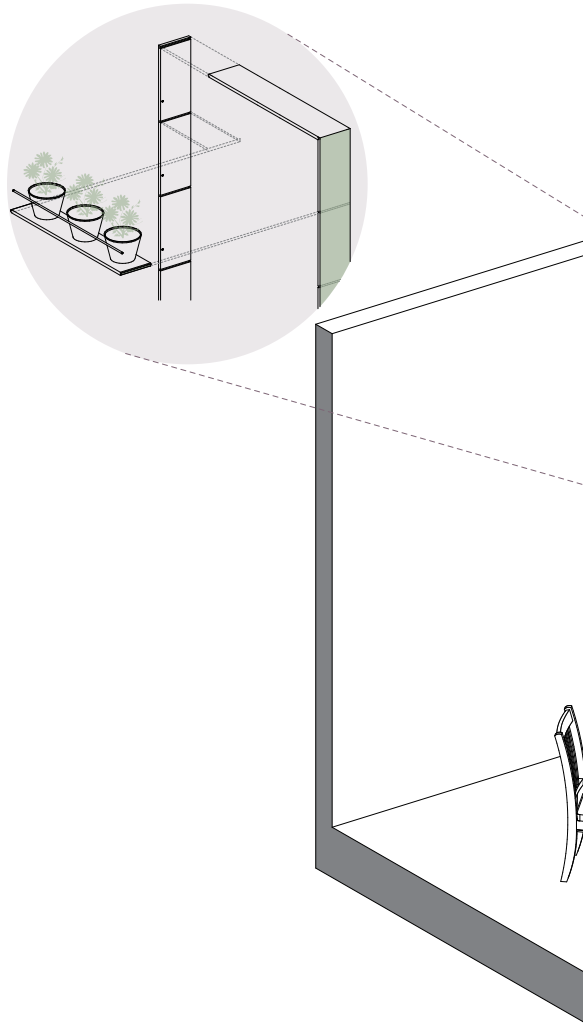
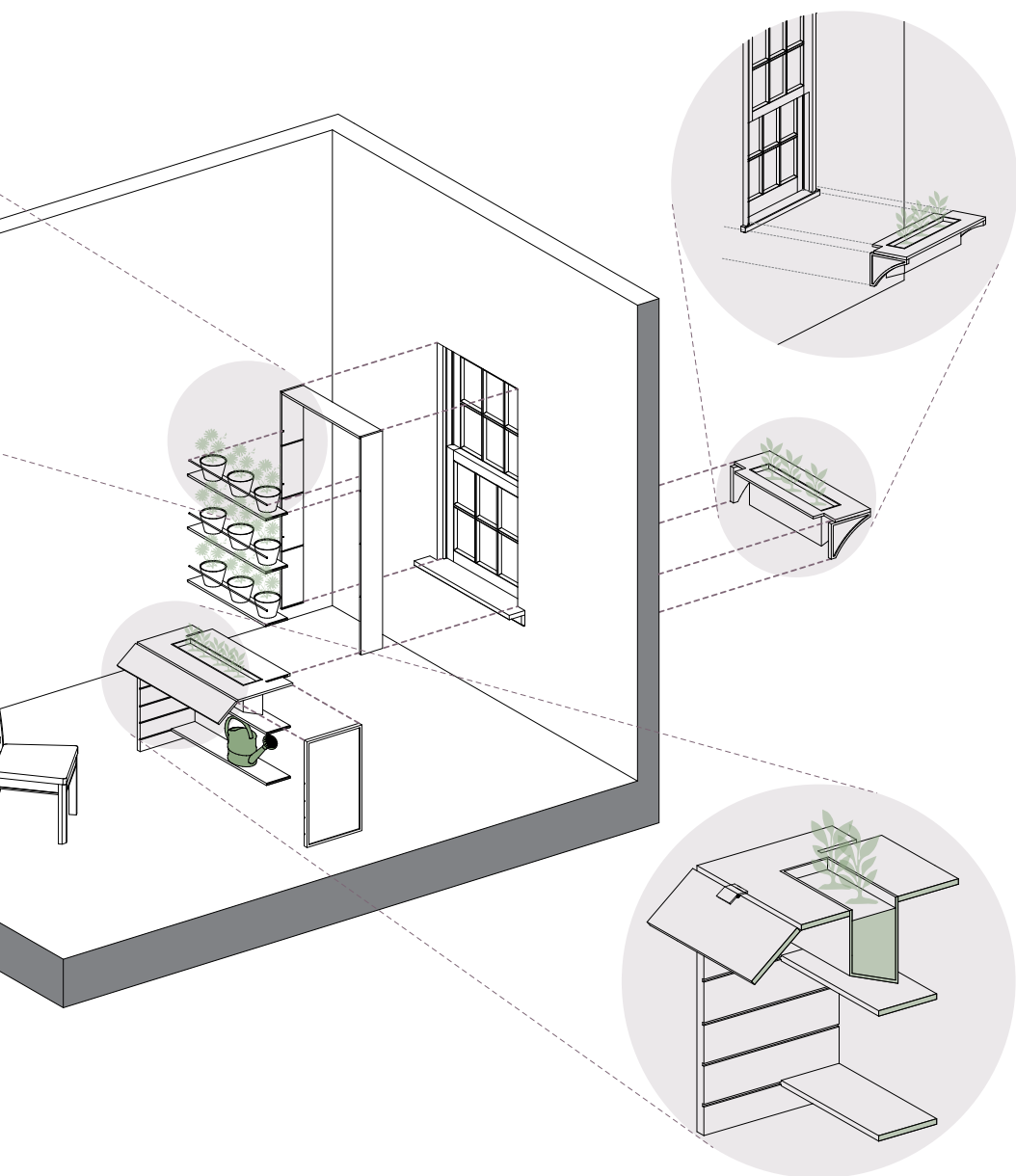


Fig. 65: Garden Window Exploded Axon



# Chapter 8

Final Reflection:

When I began this thesis process, I had no idea what I was interested in, what I wanted to spend two semesters studying, and I had never even studied Dementia. I began the process with two interests: memory and home. After going in every possible direction, I landed on early-stage dementia in the patient's home. Dedicating an entire semester to a topic I have never researched was extremely rewarding. Being able to understand and witness a syndrome I have never experienced, or had family experience, was really eye opening, personally, and as a designer. Though I cannot experience what dementia patients are experiencing, I have learned so much from not only previous researchers, but from caregivers and designers who work solely with memory care. I am leaving this thesis with so much respect for memory care professionals, and those who make it their mission to help these people enjoy their life to the highest ability. Though my thesis was pushing me away from designing a memory care facility, and I vocalized my sadness over the high cost, I believe that memory care facilities are doing everything they can to improve these patients lives, and I left Arden Courts with nothing but respect and excitement to continue my research. I hope that someday every individual that needs access to a memory care facility or specialized care can get the help they need.

The individuality of each and every dementia patient, and the need to carry this individuality throughout the design process really helped guide my thesis process. This process began with my interest in an individual's relationship to their home and has ended (for now) focusing on individual homes to make every dementia patient as comfortable and happy as possible.

Some key takeaways from the final presentation include how this can expand from an individual, suburban setting, into a more urban setting? Can the three final products be deployed in not only a house, but an apartment, or even a memory care facility? I would love to further my research and design explorations to further this discussion. Another comment that was made was how

can other senses be utilized to improve a dementia patient's quality of life? I began this thesis process studying how the five senses effect our memory, and how other senses besides visual can help individuals recollect. How can this be implemented into dementia care? Throughout my process, a lot of the underground ideas got lost in translation. Though they may have internally guided my thesis process, they got lost in the graphics. It is important to loop my final products to my initial research. A final comment that I took into consideration when writing and organizing this book was creating categories, or principles, for the three final products. Though my thought process when creating the three products was separating them into different design principles and categories, my final presentation did not express that.

As a reminder, there are approximately 50 million people worldwide living with dementia, and this number will continue to double every 20 years. In conclusion, it is imperative that designers begin to create environments that will help improve the cognition, behavior, well-being, function, social abilities, orientation and quality of life for not only dementia patients, but their family, friends, and caregivers. This is imperative because there is no current cure or successful treatment for dementia. Even making simple adjustments aesthetically that follow the studied design principles could make people with dementia more comfortable and safe in a space. This simple design change does not lessen the architectural experience for other individuals, so why are these not already implemented in everyday design? Architecture has the ability to increase the quality of life for those with dementia, so let's do it.



Thank You!

## Works Cited:

- Alzheimer's Association. 2015  
Alzheimer's Disease Facts and Figures.  
Alzheimer's & Dementia 2015;11(3)332+.
- Alzheimer's, A. (2016). 2016 Alzheimer's disease facts and figures. *Alzheimer's & Dementia: The Journal of the Alzheimer's Association*, 11(3), 332.
- Bachelard, Gaston, M. Jolas, and John R. Stilgoe. *The Poetics of Space*. N.p.: n.p., n.d. Print.
- Bastéa Eleni. *Memory and Architecture*. 1st ed., University of New Mexico Press, 2004.
- Bloomer, Kent C., and Charles W. Moore. *Body, Memory, and Architecture*. Yale University Press, 1979.
- Boym, Svetlana. *The Future of Nostalgia*. Basic Books, a Member of the Perseus Books Group, 2016.
- Bozzato, Paolo. (2017). Personal Memories and Imagery. A Study of Autobiographical Memory through Drawing. *Proceedings*. 1. 876. 10.3390/proceedings1090876.
- Brewer, W. F. (1986). What is autobiographical memory? In D. C. Rubin (Ed.), *Autobiographical memory* (pp. 25-49). New York, NY, US: Cambridge University Press.
- Calkins, M. (2001). The Physical and Social Environment of the Person with Alzheimer's Disease. *Aging & Mental Health*, 5(1), 74-78.
- Conway, M A, and H L Williams. "Autobiographical Memory." *Autobiographical Memory*, Academic Press, [www.sciencedirect.com/topics/neuroscience/autobiographical-memory](http://www.sciencedirect.com/topics/neuroscience/autobiographical-memory).
- "Definition and Overview." Centre for Excellence in Universal Design, [universaldesign.ie/what-is-universal-design/definition-and-overview/definition-and-overview.html](http://universaldesign.ie/what-is-universal-design/definition-and-overview/definition-and-overview.html).
- Department of Health & Human Services. "Designing for People with Dementia." State Government of Victoria, Department of Health & Human Services, 18 Feb. 2016, [www2.health.vic.gov.au/ageing-and-aged-care/dementia-friendly-environments/designing-for-dementia](http://www2.health.vic.gov.au/ageing-and-aged-care/dementia-friendly-environments/designing-for-dementia).
- E. Goffman, *Stigma: Notes on the Management of Spoiled Identity*, Prentice-Hall, Englewood Cliffs, NJ, USA, 1963.
- HCR\_ManorCare. "Arden Courts of Bingham Farms." Arden Courts, [www.arden-courts.com/locations/arden-courts-of-bingham-farms/](http://www.arden-courts.com/locations/arden-courts-of-bingham-farms/).
- Jo, Seungwoo. "Aldo Rossi: Architecture and Memory." *Journal of Asian Architecture and Building Engineering*, vol. 2, no. 1, May 2003, pp. 231-237., doi:10.3130/jaabe.2.231.
- Lacy, Joyce W, and Craig E L Stark. "The neuroscience of memory: implications for the courtroom." *Nature reviews. Neuroscience* vol. 14,9 (2013): 649-658. doi:10.1038/nrn3563
- Lost in Space: Architecture and Dementia* edited by Eckhard Feddersen, Insa Ludtke
- Marquardt, G., Bueter, K., & Motzek, T. (2014). Impact of the design of the built environment on people with dementia: An evidence-based review. *Health Environments Research & Design Journal*, 8(1), 120-160.



Marti, Patrizia & H Lund, H & Bacigalupo, Margherita & Giusti, Leonardo & Mennecozzi, C. (2007). A multi-sensory environment for the treatment of dementia affected subjects. *Gerontechnology*. 6. 33-41.

Mastin, Luke. "Types of Memory." Memory Recall/Retrieval - Memory Processes - The Human Memory, [www.human-memory.net/types.html](http://www.human-memory.net/types.html).

"Memory Loss vs. Dementia (Infographic)." How Much Does Denver Assisted Living Cost?, Senior Advisor, 19 Sept. 2017, [www.senioradvisor.com/blog/2015/11/memory-loss-vs-dementia-infographic/](http://www.senioradvisor.com/blog/2015/11/memory-loss-vs-dementia-infographic/).

Mercola, Joseph. "Why Sense of Smells Can Trigger Strong Memories." [Mercola.com](http://Mercola.com), [Mercola.com](http://Mercola.com), 6 Aug. 2016, [articles.mercola.com/sites/articles/archive/2015/08/06/smells-trigger-memories.aspx](http://articles.mercola.com/sites/articles/archive/2015/08/06/smells-trigger-memories.aspx)

Murphy, Jenna. "Memory: Recollection through Architecture." 2005.

"Normal Aging vs Dementia." Alzheimer Society of Canada, Alzheimer Society of Canada, 2018, [alzheimer.ca/en/Home/About-dementia/What-is-dementia/Normal-aging-vs-dementia](http://alzheimer.ca/en/Home/About-dementia/What-is-dementia/Normal-aging-vs-dementia).

Rowles, Graham D. Home and Identity in Late Life: International Perspectives. Springer, 2005.

"Sight, Perception and Hallucination in Dementia ." Alzheimer's Society , Alzheimer's Society, Mar. 2016, [www.alzheimers.org.uk/sites/default/files/pdf/sight\\_perception\\_and\\_hallucinations\\_in\\_dementia.pdf](http://www.alzheimers.org.uk/sites/default/files/pdf/sight_perception_and_hallucinations_in_dementia.pdf).

Social Care Institute for Excellence (SCIE), director. Dementia From the Inside. YouTube, YouTube, 5 June 2015, [www.youtube.com/watch?v=Erjz1WL8yQ](http://www.youtube.com/watch?v=Erjz1WL8yQ).

"The Moments - Alzheimer's and Dementia Memory Care in Lakeville Minnesota." The Moments - Alzheimer's and Dementia Memory Care in Lakeville Minnesota, [www.themoments.com/](http://www.themoments.com/).

Wada, M., Canham, S., Battersby, L., Sixsmith, J., Woolrych, R., Fang, M., & Sixsmith, A. (n.d.). Perceptions of home in long-term care settings: Before and after institutional relocation. *Ageing and Society*, 1-24. doi:10.1017/S0144686X18001721

UK, AlzheimersResearch, director. A Walk Through Dementia - Walking Home. YouTube, YouTube, 2 June 2016, [www.youtube.com/watch?v=R-Rcbj\\_qR4g](http://www.youtube.com/watch?v=R-Rcbj_qR4g).

Zimmerman, Kim Ann. "Episodic Memory: Definition and Examples." *Live Science*, 25 Feb. 2014, <https://www.livescience.com/43682-episodic-memory.html>

Zumthor, Peter. *Thinking Architecture*. Basel: Birkhäuser, 2010. Print.

## Appendix A: Grandma's House, Alyssa Monroe

*As I walk to the front door, I am reminded of plating red flowers in the bed of woodchips with my cousins, that always seem to be eaten by animals within a matter of weeks. I pass by the green watering can that hasn't moved in my 22 years, it has become a distinct feature of the façade.*

*As I walk through the red front door, I remember all of the times I would knock and run to hide, not expecting my grandma or grandpa to see me hiding behind a thin column. I have always been greeted at the front door, a kiss from my grandma, and a handshake from my grandpa. After the exchanged, we walk across the stained and beaten up wood floors, I don't recall ever walking the other direction when entering my grandparents' house.*

*The family room holds happy and sad memories. I am saddened by the first rocking chair my grandpa spent his last days and nights at home hooked up to his oxygen tank. I like to sit there and think of him now. I am nostalgic about the comfy carpet, always laying on that opposed to sitting on the furniture. The corner which now mainly has books was once filled with my dad and his sister's old toys that I could play with. The triangle turtle puzzle was always impossible - did we ever even finish it?*

*The back patio was where I ate all meals at family parties. The white wicker furniture never was comfortable. The deck wraps around a tree, the lifted boards show how much everything has aged.*

*As I enter the dining room, I wonder how on earth that glass table is still in one piece, there wasn't a party that went by where it didn't almost see it's last day. I am reminded of fall as I look at the placemats, my grandma having enough to have a different one on the table every day.*

*I remember spending one of my early birthdays cooking with my Aunt Maureen, trying to shoo off the dog from taking our food.*

*As I walk in to the dining room I see a puzzle, though this one unopened. There was always an incomplete puzzle sitting there, where you would place a piece as*

*you walked by. I remember my grandpa sitting at the head of the table.*

*The living room feels untouched. The old, dirty, gray carpet and ridiculous blue floral comfy couch are no longer. The room now feeling cold and too proper. The carpet feels as if no one has walked in here because they're too scared to leave a mark.*

## Appendix B: Interview with Mary Vargas.

*When did you purchase your home?*  
September 2018

*What were you looking for in your new home?*  
A home, really. We wanted a ranch and a home that would accommodate a baby grand piano.

*Why were you looking for a new home?*  
I got a new job and had to move. We had to move from Canton to Byron Center, Michigan.

*Was your last house your first house? How many houses have you lived in? Owned?*  
This is our fourth home.

*Was it hard to leave your old home? Why?*  
It was hard because I missed all of my friends, and we loved where we were located. I was tired of doing all of the cleaning. The old home was too much to keep up.

*Do you feel emotionally attached to your old home?*  
I don't think so. It was really hard to leave at first, but I'm okay now. I sometimes still have a hard time. I miss the size of the bathrooms, the openness of the house, and the size of the garage.  
There were so many wonderful family gatherings and family parties at that house. The house was really big and open, it was the perfect house for entertaining. We had a lot of people over there.

*What is your fondest memory of your old house?*  
As a whole, the parties that were held there. I really enjoyed having people over. I enjoyed just being with people and having fun. People would gather in the kitchen, it was the best kitchen.

*What was so special about your old home?*  
The people.

*Did your old home play a role in what you were looking for in a new home?*

I guess. It helped to decide what things we really needed to make us happy. We really didn't have much time to find a new house, so we didn't have the opportunity to find the perfect match.

*What did you dislike in your old house that you made sure was a part of your new home?*

We didn't want the size anymore... we wanted to size down. Honestly I didn't want to clean the house anymore.

*Do you feel emotionally attached to your new home?*

We've only been officially living there for 3 weeks. I don't feel emotionally attached, but it does look like me. I can see the old house in this house. I'm definitely more attached to the objects brought we brought with us. I don't feel like the quality of homes is what we came from. People her [Byron Center] use siding more than brick. Our old neighborhood was more brick. But it's nice because we wanted something new.

*What is your favorite part of your home?*

It takes next to no time to vacuum. I really like the family room.

*What resembles your old home in your new home?*

The colors on the outside and inside of the house.

*Did you decorate the interior of your home to match your old home interior?*

I started to... but I couldn't get everything to fit. People would ask me 'why are you trying to create the old home into the new? You're in a new place!' We repurposed furniture and reworked things so many times.

## Appendix C: Interview with Giovanni Lavigne.

*How many houses have you lived in?*

2 growing up, one in Indian Village and one in Grosse Pointe. Then I owned two houses in my early twenties on Detroit's east side. Aerie and I rented a place in Homestead, Florida, then we built a place in Miami. And then we moved to Ohio for a few years while her father was dying. Then we bought a house in Macomb Township. Then we bought a house in Birmingham, and then this one. The cool ones were Grosse Pointe and Miami. There were 8 people in the Grosse Pointe Park house. My four brothers, my sister, and my parents. There were five bedrooms.

*How would you describe the neighborhood in which you grew up?*

Grosse Pointe was great. Lots of sidewalks, you could walk anywhere. They plowed the sidewalks in the winter so it's easy to get around all year long. There's parks and waterfront parks all over the place. We rode our bikes all over the place. Trees! There were trees all over the place and every house was different. I noticed that at a young age. I just dug looking at all the different houses. They were all unique and they all caught my eye for some reason or another.

*What are the happiest memories from this home? Saddest?*

"Sunday dinners were great. Even when my older brothers would get married and move out, they'd come back. Every Sunday we'd always have aunts and uncles and cousins there on Sunday. My dad and my uncles would sit at that table from like 1 in the afternoon to 9 at night going through a couple courses of food, and nuts and stuff, never getting up from the table. We would just listen to the stories, and the kids were right around the corner tucked in the big U shaped booth. Mom's cooking was always the best"

*So did this impact what you would design in your homes?*

Yeah, I always try to make dining a well-designed space, well thought out. My mom was a homemaker, and I kind of think I was closer to her than anyone. I used to love doing dishes with her, and help her cook. Every single summer painted the kitchen another color. That was our creative outlet. I was always there to help paint. I would have a couple of weeks to myself with her to paint the kitchen. And then my brother Jimmy died while we lived there. I remember coming downstairs that Sunday morning and my parents had both aged twenty years overnight, my mom's hair had just turned grey overnight. The house just filled with people. I realized that, you know, a space like that can function for an event like that as well. A couple days of grieving. It was a comfortable place to go through that.

*Do you have any memories like that in any of the other houses you've lived in that you carry forward? Or is it a lot coming from Grosse Pointe?*

It's mostly Grosse Pointe. I lived in a townhouse until the 4th grade in Indian Village. I remember sharing a bedroom with 5 of my brothers. I remember the dining room. We had big meals there. The place had a courtyard that we shared with 10 other townhouses.

*Where did you visit when you were younger? Where were your favorite places to go or visit?*

I think the biggest impact was enjoying all the quality structures in Grosse Pointe. Grosse Pointe South is really nice. All our schools and libraries were like that. I really enjoyed all of the school buildings. I had some relatives that lived in Clinton Township and Harrison Township, and when we would go visit them, there were 3 different models, it was just so bland. There were new subs with no mature trees and it made me appreciate what I had. Other than Italy, I think just going to museums, like the DIA, or when we traveled to DC. I like government buildings."

*What influenced you to study architecture and become an architect?* I had a buddy that lived on Windmill Point Drive in a huge mansion. He had indoor bowling alley and all these huge

rooms. It kind of captured my imagination. So I came home and started designing floor plans. I went to a camper show with my dad at Cobo Hall. I saw how the motor homes were laid out. I started laying out motor homes and boats, and still doing houses. Only once in a while did I do elevations for the house or 3-dimension. It was mostly just floor plans.

*How many homes have you designed? What was your relationship to the client? Were you close?*

Probably close to 50. It gets pretty personal. Some people open up more than others. I used to give everyone a program with 100 questions. No one answered them and I could not figure it out. You're starting from scratch and I could make it fit you like a glove. How many linear feet do you need? How many drawers do you have? How many sets of dishes do you have? No one wants to think about it. No one wants to put the effort in so I just give it a shot. Go through a couple of things. Some people don't care. They just want you to do it."

*Did you notice that the clients were letting their memories influence the design of their home? Did this make the design process difficult?*

I never got into that, maybe I should've.

*Did your homes influence how you designed other homes? You designed the home you're living in currently... What is the story of your design? How did your old homes influence how you designed your current home?*

We bought the tear down, and the street is mostly populated by older, retired women. They knew I was designing, and they knew I was going to tear down. I had a house just like theirs. They're scared of lots of big houses coming into the neighborhood and changing the character of the neighborhood. So I said 'a community like this is always going to reinvest and rebuild to be the latest and greatest, it's going to cycle with the society and community. The typical family these days lives in a lot more than 1,200 sq. ft., so they're going to be a lot bigger than theirs. I have to accommodate 3 pianos, so my program gets a little blown up. So my house is going to be a lot bigger than theirs. It ends up being about 3-4 times bigger. I'll keep my

roof line as low as possible. I don't want to crowd over them. I limited my 2-story mass to 1/3 of the house, the middle 1/3. I can slope the roof down to one story on the side. I don't mind accommodating people, I try to accommodate the neighbors. It started with that, and then the next step was, the main idea was, lots of light and lots of privacy. That's how we got on the courtyard thing. The master bedrooms are in courtyards. The backyard is a big courtyard. The front rooms are. We were allowed to have lots of glass in the main living areas. When I go down the street and I can see what you're watching on tv, or I see you guys sitting around your dining room table, I feel like I'm intruding on you. I didn't want to do that to anyone. When you go past my house, you can't see anything. You can get a glimpse through the front door, but it's so slight if the curtains are open. The front bedroom is the only place where someone can sit in the front window and see people. Aerie's aunt stayed there. An older lady needs more of that activity. You don't need to turn lights on during the daytime unless you're in the powder room or the basement. If there are lights, they're LED. We try to be energy efficient. So that was the thing: being energy efficient, opening up to nature as much as I could, and opening up to privacy at the same time."

*What are your favorite spaces in your home? Why?*

I like the kitchen, family room because it's the hub of activity. I like my master bedroom because it's quiet. Those rooms are soundproofed because of the 8' Alaskan soundboard. Front porch. The kitchen and dining room are influenced by Bedford. My growing up house, we got as much as 12 around that table. That was on a regular basis. My table in Miami we were able to get about 20. This one we've had over 20. We pull out some of the club chairs and get about 20-22. I really enjoy a big table packed with people.

*What are the important objects in your house that you have brought from house to house. Are any objects really significant?*

Besides the pianos... you know, a couple small artworks that mean a lot to me, and a couple 120-year upholstery's we've got

framed. Other than that, I'm not, as much as I love buildings and their things, really to me they're spaces. It's what's in the thing that matters. I'm not much of a thing person. I love tables and I love boxes. I think that just relates to architecture. It's a container of things. But I'm not big on things really.

*Are there any events that always take place at your home? Any traditions?*

Not really. I wish we had more tradition like that. We always rotate holidays. Dinners at night cycle throughout the year. We probably end up having dinner together 4 nights a week. Other time it's just me and Aerie, or me and Palladio, or Palladio and Aerie.

*What are the happiest memories from this home? Saddest?*

I think my happiest is Leah putting on little house concerts. Palladio entertains a lot, I get a kick out of that. He always has 6-8 friends in his room using the deck, watching movies or playing music up there. All my happy stuff is centered around my kids. No sadness here. Well! Aerie's aunt died here. She was in a nursing home for her last year, and when she got bad we brought her here for her last couple of weeks. It was really cool. Aerie has 2 sisters in Columbus, and 1 in New Jersey and her mom's in Dayton. They all came up for the last 10 days. They had never, their dad died in a hospital and that's different, it's not as dignified as living in a home, they had basically a thin mattress on the floor in the middle of the family room. Everyone else had a little mat around her. Leah was there too. They would all sleep in a circle around her, it was really cool. At one moment everyone was holding the old lady's hand.

## Appendix D: Interview with Bryan Mortenson.

*When were you born? Where were you born? How many homes have you lived in?*

I've lived in 9 houses. We lived in all of the homes for roughly the same amount of time. I grew up in New Buffalo. We lived in 5 or 6 houses there, and then one in La Port, Indiana. My parents were really build a lot, sell a house, do it again. I was young enough to not know if they built them. As long as I had a cool bedroom. This house [about sketch] was our new Buffalo home. We called it the 3 car garage with a house attached. We lived there from 1994-1999. I graduated in 2000 and I know we moved into a new house, because our parents thought it was good for us to finish high school in the new house, so it would be like home to us. But are you kidding, this was like our third house. I lived there through college. The houses got progressively bigger, and then progressively smaller. Then they moved to a hobby farm house, which was so expensive and so much work for two people in their 60's. It was an all brick house, it had a bunch of skylights. This house was probably built in the early 90's. This was the last house they built. They built two big houses like this. The others were smaller renovations. This [new] house was a huge renovation project. My wife always wanted to do something like this, she picked out everything from paint to knobs and floor colors. Everything you see she picked out on her own, with lighting people or whatever. I saw how much stress these full houses were for my parents, so I never wanted to do it.

*How many people lived in the house you grew up in?*  
I'm technically an only child, but I grew up with 2-step brothers. But then my mom got divorced again. This house was 5.

*What did you love about your house growing up? What didn't you love?*

This was on a cul-de-sac. New Buffalo is a beach town and this neighborhood was almost all second homes. We had very few neighbors around. So, we could use the cul-de-sac, we had a basketball court out there,

we turned it into a baseball diamond, ride bikes, use rollerblades were cool back in the day at that point. It was a great place for kids to play, it was a few blocks away from Lake Michigan, so that was a lot of fun from that standpoint.

We had a loft, a third-floor loft. All three of our kid's bedrooms were side-by-side-by-side. They all had one unique aspect... I had a window that could see out to Lake Michigan, the one in the middle had a skylight, so that was kind of cool, then the third one had two big corner windows, so you could see across the street to a golf course and then outside of the bedroom door to the third bedroom was a big ladder that brought you up to the loft that was like the video game room. A skylight up there that was pretty cool. We actually have the sketches that Rob did of the new house framing hanging in the house.

*Are there any significant events you associate with your previous homes?*

Oddly enough, I would say this house is probably where my family was the happiest. We were still pretty young kids, my stepdad was pretty good with young kids, not so good with teenage kids. My mom was sort of the same way. This was where I saw them be their happiest together. After that it was a slow degradation of their relationship over 10 years or so.

*How were you introduced to CBI? (Architectural firm who designed the Mortenson's home)* Everything that he said we liked, it was so counter to the other two. They wouldn't even let you make the final decision. One mom said we'll work together on the design, but this is my design and my decision in the end. But we're not gonna do that, we're the one writing the check. We didn't know that we needed an architect to do a renovation when we bought the house. We thought we had a basic idea of what we wanted to change, get a general contractor, tell them and they'll do it. They recommended CBI, Chris Long and Steve Templeton... The builder referred us to CBI.

*Who did you primarily work with? How would you describe your relationship?*

Worked with Rob, Amanda, and a little bit of Brandon. Primarily Rob. Rob got to know us enough that if we went to dinner together there wouldn't be awkward pauses. It wasn't to the level of 'what are you guys doing this weekend, do you want to hang out?' Personal enough to have a good professional working relationship.

*What were the top 5 things you wanted in your new home?*

For me... I wanted to stay on or under budget, which was impossible. I wanted to have the house look, I was probably more concerned with how it looked from the outside than my wife was, the curb appeal was important to me. I wanted a media, man-cave kind of space. I was told the whole basement would be mine, but I ended up with about a third of that. This basketball court, we have a half-court basketball court in the backyard, that's an actual regulation, like measured to regulation half-court. That's something I always wanted because I loved playing basketball growing up. Our kids are sort-of tall, so I think they'll be playing basketball in their future. I actually was also more concerned with the appliances and the finishes being on par with the neighborhood. I didn't want to spend a bunch of money on the house and put lower-end appliances in it. I wanted from a resale standpoint to not have someone come in here and say 'oh my god... you didn't spend the last dollar to make everything nice enough'.

*What were your inspirations for the curb appeal of the home?*

We used to live downtown in Birmingham Place, a 10-story condo unit on Old Woodward. Before the kids came we were big walkers, so we would walk this neighborhood all the time. We both just liked looking at houses. Sometimes we would agree on 'I like the way this house looks' or 'I like this part of this house'. This house had zero curb appeal. It was like a jungle, you could hardly even see the house from the street. It was bright yellow with green shutters. But Rob's initial sketch was great and then we found there were some things he couldn't do because of how the house was constructed. I think we both liked

this sort of classic looking feel. We definitely didn't want a modern, trendy looking house. My wife grew up in a small town outside of Grand Rapids, Wyoming, MI. Very blue collar. All of the houses are the 2 story houses built in the 50's or 60's or whatever.

*What are your favorite spaces in your home?*

We spend 90% of our time in this corridor. 75% of that is in the living room down there. I think this view is really nice. Our bedroom is probably the nicest room in the house. The room I did get in the basement I have 3 TVs on the wall. We would entertain more if we didn't have the kids. It's hard to have people over when you're trying to put kids to bed really early.

*Did your family grow up entertaining?*

No, actually. Zero entertaining with my family other than maybe holiday stuff. My mom was a social worker, and she worked late almost every night. My step-dad was a CPA, so he was on the later side, especially during tax season. We would probably eat around 9 o'clock. When we had people over it was almost always friends. We would have a lot of friends over. But never once hosted a dinner party.

*Do you have any traditions at your home?*

I don't think so... the holidays is really it, I think. We bought the house prior to our daughter being born... but she was born before we moved into the house. 2 adults, a newborn, and 2 cats in a 700 sq. ft. condo. Our son was born in the house... but nothing else really.

*What influenced the decor and the interior of the home?*

100% my wife... that was actually our only "fights" ... I wanted levers on the door, and she wanted nothing but the egg-shaped things. We have levers on the exterior doors, but everywhere else in the house is an egg. She really wanted eggs, I really wanted levers, so we compromised and got eggs.

*Do you have any cherished objects?*

She built a display cabinet for her wedding dress, doesn't get much more personal than a wedding dress. We have a lot of things from the family: the china on display was from my grandmother. Some of the paintings are from the family, but we don't have a ton of stuff on display. Definitely the wedding dress.



## Appendix E: Interview with Erin Mortenson.

*When were you born? Where were you born?*

How many homes have you lived in?  
Wyoming, MI. That was the only house I lived in until college.

*How many people lived in the house you grew up in?*

It was my sister, brother, me, and my mom and dad. I was the oldest.

*What did you love about your house growing up? What didn't you love? How would you describe the neighborhood?*

Well I didn't choose it... so I don't know if I liked anything. Older feeling neighborhood that had windy streets. In order to get to my house, you had to drive a mile down this long, windy street even though it was in the middle of the city. It was called Huntington Woods because it was nothing but old woods there, and so even though it was a newer neighborhood when my parents moved in, it didn't feel like a plotted, planned, like Pulte home neighborhood. A lot of the houses still had big trees on them. The houses were a lot of different varieties, some of them are probably from the 60's and 70's. My parent's house was built in 1979. Or maybe 80, we moved there around January '81. It was a quieter neighborhood because we lived on a cul-de-sac. I didn't like that there was just one bathroom. I thought it was cheaply made, you could hear everyone snoring upstairs. I did like, I just in some ways it was like a cheap spec-house, you could shout from anywhere in the house and anyone you were shouting to could hear you. I had to share a bedroom for a little while, and then my dad put the illegal one in the basement.

*Are there any significant events you associate with your previous homes?*

It's kind of hard to pinpoint because I only lived in one home. All of my events are there. I can't say it's one event.

*What was your favorite place in that home?*

The living-room. Is that the one with the tv? No, the family room would be my favorite.

*Did your family have any traditions?*

My dad isn't a very social guy, so we didn't have very many, they didn't hardly have friends over. I had my friends over all the time growing up, we played a lot of basketball in my driveway. We had a pool in my backyard that I loved, we swam all the time. I don't know, we didn't really... it was a very structured house. My mom was a stay-at-home mom, we ate dinner every night at 6, we were done by 6:30, then do the dishes. We would all sit down together.

*Where would you go in your free time?*

My friend's houses, my two best friends. They both lived in apartments. It was just like a little working-class neighborhood. It wasn't anything nice or glamorous. But when you're growing up you don't know any different, it's what you're put into. It was a perfectly adequate house. I think I knew it was cheap because my parents always talked about it being a cheap house. It got the job done and compared to a lot of my friends' houses it was a lot bigger. It was about 1,200 sq. ft.

*Did you always want to design your own home? What inspired you to want to do that?*

I loved the idea of doing that forever. I liked other people's design more. I always liked, like in my dorm room I wanted things to look nice and match. It was clean and organized. I would say I was an artsy person. I liked art class and drawing and painting.

*How were you introduced to CBI? (Architectural firm who designed the Mortenson's home)*

Through Mojer-Dolan, he introduced them. We interviewed Rob and two other architects, and Rob seemed like he was the most, he was just kind of a geek. He walked in and was like 'Oh we could do this and we could do this!' You could tell he's just so into it and has such a passion for it. There was another architect who was really good, but I think he likes, it's Saroki, his homes are beautiful, but the homes are more expensive I'm guessing, and they don't feel as homey. We interviewed another guy, and he told us we didn't have the final say on design, and I thought but you're not living there, and he showed up drunk and a half hour late.

*Who did you primarily work with? How would you describe your relationship?*

Rob and Amanda. They were awesome. I think they got to know us pretty personally. Rob was so easy to work with, and you could tell he was an expert and very passionate.

*What were the top 5 things you wanted in your new home?*

We wanted it to be more functional. When we moved in here, every single door was different, all of the moldings were beat up. The layout was tight, and I wanted it to be, I wanted it to feel clean, and I didn't want it to feel like a beat up old house. I don't think Bryan or I ever imagined to be down to the studs, and removing the floors, but it's what happened. I thought we were adding a mud room on. None of this was open.

*Tell me about the design process. How involved were you?*

We told them some things we were not happy about, what we wanted, and Rob presented an idea that I like initially, but I wanted another bathroom in the back, he only had this one here. I wanted a mud room bathroom so people could not trek through the whole house. He originally had the guest room over the garage, and the master over there, but I was feeling jealous of the guest room. So those were the things, we weren't that involved with the layout originally, but he altered the few things I wanted changed. When we started doing interiors, I was involved in all of those things.

*Did you know what you wanted your home to look like? What inspired the design?*

I had inspiration photos from Houzz. I could show you a picture of every room from Houzz.

*What are your favorite spaces in your home?*

I like everything, really. I spend most of my time in that rocking chair over there with the kids. But that's a lie, I never sit down. I like our bedroom upstairs.

*Is anything from your family's home?*

Not from my parent's house, but I have stuff from my relatives. The pictures that hang in the bedroom, that's from an old bible that

was my Grandma's.

*Any furniture carried down? Or is it just collectibles and decorations?*

I didn't like any of my parent's furniture. They didn't buy anything that would last, and a lot of their furniture was from garage sales. Bryan's dad's mother's china is in that cabinet. His dad's old furniture is in the other room and that's to fill up the room until we can buy other furniture. I do like the idea, but I haven't found unique things that I want to be in the house. We used a designer to help decorate this dining room. I like these things, but they're meaningless to me. I take that back, those paintings, one of those is from Bryan's grandfather. And the other ones used to hang in my Grandma's house. The woman praying. A few others are my grandma's. I have my wedding dress. I liked that idea. Instead of keeping it in a closet, or keeping it pressed in a shadowbox. It looks so much better on a half-bodied mannequin.

*Do you have any traditions at your home?*

We've hosted, it's kind of hard because Bryan doesn't care about this stuff, but I love this stuff. I have hosted Thanksgiving a couple of times, and my sister and I spend a couple of days cooking and laughing and having everyone here for dinner. That weekend, Bryan leaves to go to a football game, but I spend the weekend putting up Christmas decorations with Sylvia. My friends come over and make cookies at some point.

*Most cherished thing in this house is?*

My most cherished thing..I don't know.. I have a lot of good memories just lying in bed with Sylvia at night reading books to her. In the chair upstairs when she was a baby. That's probably my most cherished, if I reflected in 10 years, if I left this house and came back in 10 years... that would probably be it. I would say those are my favorite memories... rocking her.

*Are you hoping to have any more traditions?*

I would love to be able to go to church and then come back and have dinner. Something simple, but that was something we always did on Sundays. We always had cream of wheat in the morning, and we would always fight

over who got to pour the cream of wheat into the boiling water. One of us would sit next to the stove, which seems so dangerous now, and pour the cream of wheat into the boiling water.

I always like the idea of, I love Christmas, and setting up the Christmas tree, and baking cookies, and having Christmas here, but I don't think that's something, that's something I'll do, but Bryan doesn't really participate. He's away. He doesn't care so, I love hosting big parties and dinners.

*About her house growing up:*

It was a happy house for the most part. I think there was turmoil when we were teenagers, especially with my dad. It was a happy household. My parents still live there. We still do Christmas there. I still enjoy going there. It's still decorated like it's right out of the 80's. Maybe they updated it a little bit. They still have, beautiful paneling in the family room, it's in good condition. But it's like the old wood paneling. They've taken down the country blue wallpaper that was everywhere in the house, and now most of the rooms are just white, or beige-creamy. They've replaced the carpet. We used to have plaid carpet in there (family room). There's no design. To them, they thought this was so overwhelming. I think they want to sell it in the next few years. I think I would be sadder to sell this house than our house, that's the only house I had growing up. And since moving here, it's definitely a challenge with new kids. It feels like home, but I don't feel as attached to this house. Bryan always talks about selling this house, I don't know how long we'll stay here. Bryan looks at houses every week. We bought this house in 2013, we started the demo in May of '14, and then we didn't move in until January 2016. I really like it, I just don't feel attached to it yet

*Do you think it's personalized?*

I definitely feel like it's personalized... I think because I don't know if we're going to move because Bryan always talks about moving. I think because, not that I've had bad memories here, it's just been a tough part of my life living here, I'm not associating this house with positive feelings all the time,

I think. I think we'd stay in the area. Hand's down want to design my house in a heartbeat with Rob and Amanda.

That kitchen in my parents' house is so small... can't even have two people in there. My parents for some reason have had pizza for Christmas dinner for God knows how long. My sister and I both love cooking, but my dad hates the mess and the fuss. He just, it gives him anxiety to watch people fussing for that long. We're not allowed to cook big dinners for Christmas. But we've compromised where my sister makes lasagna, I make salad and garlic bread, and we have something other than pizza. We can't have pizza for Christmas dinner! They're just funny. Well they live in Grand Rapids, and no I want to leave it there. My sister lives in Chicago and my brother lives in Grand Rapids. It's nice to go there. We've been doing Christmas Eve there. This is the first year we're going to do Christmas morning with Bryan and the kids. I want Sylvia to have good memories coming downstairs on Christmas and seeing all the presents under the tree. It's just fun to feel like you're a kid again for two days. I want to keep it there, no matter how small the house.

## Appendix F: Interview with Rob Clarke.

*What was your childhood like?*

Family is what you did when you were little. You didn't walk down the street to your neighbor's house because that wasn't realistic. You hung out with family.

*What was your most cherished object?*

It would've probably been something on the farm... the woods were something we played in. We had a farm pond. We played in the woods. That was our activity.

*What was the design process like with Bryan and Erin?*

It's a fairly typical relationship with most of my clients. I've gotten to the point in my career when it isn't uncommon for me to work with a younger client that has not had the family life experience that I have. That was definitely them. It was nice because I could introduce some things that were most likely going to be a part of their life that they hadn't experienced yet. I had a very good relationship with them. They trusted what I said and would generally go in that direction with anything I told them to do.

*Did the couple come in with any requests?*

They came in with a few requests like most clients do. The home is obviously a renovation. The biggest thing was the home did not have a master bedroom suite that was appropriate, or a garage that was appropriate. The entire house really needed to be brought up to current standard. The home had never really been brought up to a current standard, and it was getting time. They wanted to be able to make it a family home. We analyzed and investigated every inch of the house."

*What inspired the design for their house?*

The house itself inspired me for the design. The character of the home had something to work with. We expanded upon the style and the character of the existing home. We made it a little more formal than what it was initially.

*What were anything specific you had to design for and/or include?*

Her wedding dress. That was a fairly significant thing we had to design for.

She was starting her law practice out, she hadn't been in her own practice for a real long time, so we had to do an office in the house. So, in the basement there is an office that she could work out of if she had to. We had a bar area downstairs and an entertainment room for him for ball games. They are UofM grads, and that's a central part of a lot of what they do. There's an area down there that can handle that. We did set up the driveway, so he could do a basketball court there.

The guys always say it doesn't really matter. It does. They just have a different slant on it, so I have to listen to that. When they say something, I have to learn if it's impactful or if it's just conversation. The couples are different. Most of the time the guys don't care about the detail things and they care about the overall big picture issues. The comfort issues, they're actually more often than not, this sounds sexist, but they care very much that they're wife and family are comfortable in the house. Some guys, and they're mostly engineers in nature, or guys in creative business, they get really into the details. They get into the functional details more often than not. Occasionally I'll get somebody in a more creative business that gets more into the aesthetic details.

*What relationships, if any, do you see between your childhood life and your design process?*

There's a significant portion of my design process that relates to my life growing up. My dad was a vocational teacher. He taught automation shop, but we essentially had a woodshop on the farm. I grew up doing woodworking all my life. Because I did that, we grew up building houses, building barns, building structures. I grew up not knowing anything different. If someone needed a house, we went and built it. As a group, religiously, culturally, socially, we got together and you got 20-30 people together and just went and did it. That's how I grew up. I knew how to build.



