



***IF WE EVER GET LOST***

***WE MEET AT***

***THE SONIC LIBRARY***

Katja Chan-Mee Frederiksen  
Design for Social Innovation  
Thesis project  
School of Visual Arts  
Spring 2014

# TABLE OF CONTENT

## PAGE

5	Why this topic?
6	Research
8	Dementia
12	Raising the issue
14	Loss of memories
17	Music - A powerful tool
18	Process
20	Thesis: Sonic Library
28	Collection of vivid memories
30	Sonic memory #8
32	Prototypes
36	Subject A
38	Subject G
40	Subject I
44	How the Sonic Library works
46	Your personalized Sonic Library
48	Further testing
50	The sonic portential
52	Appendix

*"[...] when I become really not available in my illness I would love to hear my husband's voice if he wasn't there...or my best friend's voice or my children's voices who are young adults now...maybe they're saying: "Hi mom let's go get some lunch" or laughing at something...the sound of laughter...I love the sound of laughter...anybody's laughter...particularly funny laughter...I mean some people have hilarious laughs..."*

57 year old female

Diagnosed with dementia, possibly Alzheimer's

What she would remember when her illness worsens



# WHY THIS TOPIC?

Dementia is an umbrella term for a range of diseases that are connected to memory loss. Because of the deterioration of memory loss, a key issue for people with the diagnosis and their caregivers, is the loss of ways to communicate. This means that self-expression, with the person with dementia, is lost and eventually a person's identity changes.

This book will explore a way to help people with dementia maintain memories; help them and their caregivers communicate through sounds; and hopefully help all parties cope and relate to each other throughout the progression of dementia.

# RESEARCH

*'Alzheimer's is the most common diagnosis accounting for 75% of all cases of dementia. But other common forms of dementia include: Lewy body dementia, vascular dementia, frontotemporal dementia, progressive supranuclear palsy, corticobasal degeneration, normal pressure hydrocephalus and Creutzfeldt–Jakob disease.'*

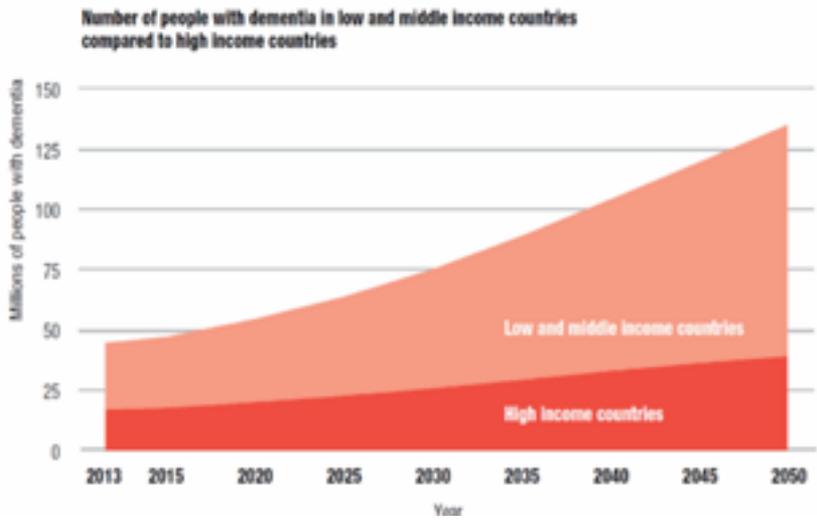
Depending on the type of dementia a person is diagnosed with, her or his abilities of communication is affected in one way or the other. Difficulties may include:

- Reduced vocabulary
- Difficulties finding words
- Problems with reasoning
- Repetition of thoughts
- Lack of coherence
- Losing track of topic
- Distractibility



# DEMENTIA

Dementia is on the rise and have been for a long period. Unfortunately it will continue so in the future since it is a diagnosis that is mainly related to aging. Since people around the world are generally living longer, the group of people with dementia and their caregivers will increase, which will impact families and health care systems.



**DEMENTIA ON A GLOBAL SCALE**

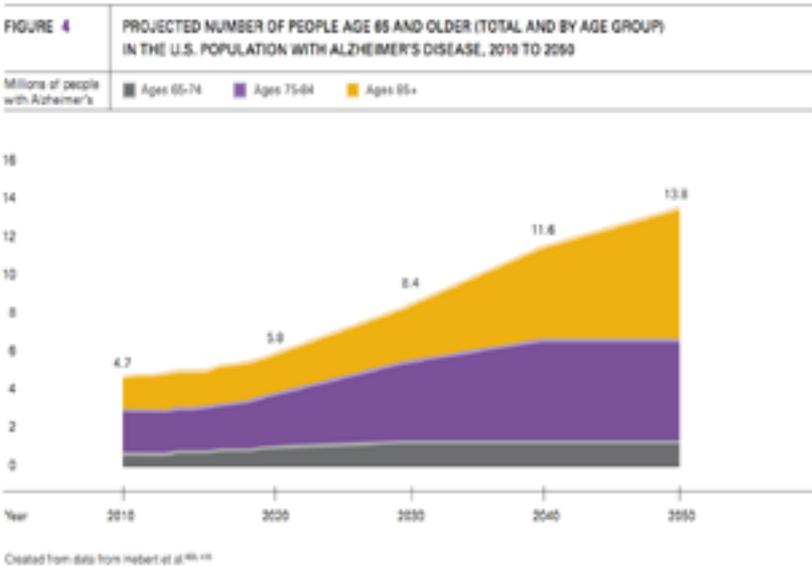
The following numbers are “only” for Alzheimer’s, which is the most common type of dementia. But since the numbers are for this diagnosis only, it means that even more people have a disease related to dementia. Over the next 26 years high income countries will have an increase of 111% in cases of Alzheimer’s. But in middle and low income countries this increase is projected to be as high as 207%, which is more than double the cases. In total this means an increase of 189% expanding from approximately 44 mil. to 130 mil. people.

Source: <http://www.alz.co.uk/research/statistics>

## UNITED STATES

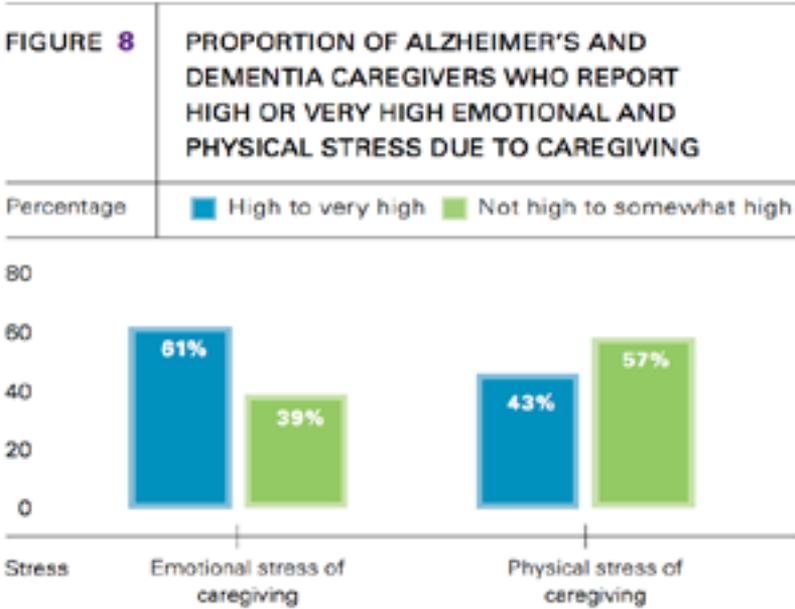
Today in the US there are approximately 11 percent (4.6 mil.) of people over 65 who are diagnosed with Alzheimer's. About 32% (1.6 mil.) of people aged over 85 are diagnosed with Alzheimer's.

In the US the increase will grow from approximately 5% of people over 65 to 13.8% in 2050. The group that will increase most is the group of people over 85 years of age, which will increase threefold.



## STRESS RELATED TO ALZHEIMER'S

Alzheimer's and other types of dementia have shown to demand an incredible effort of the caregivers. Stress related problems giving care for a person with dementia and Alzheimer's are huge and also higher than in most other diagnoses. It might come as a surprise for many that the emotional stress is higher than the physical stress and many caregivers end up having diseases themselves due to caregiving.



Created from data from the Alzheimer's Association.<sup>215</sup>

# RAISING THE ISSUE

There is a lot of stigma and isolation related to dementia, because of this we have not learned how to talk only about it in the way that HIV and cancer are e.g, but if we don't, we will not only see the disease itself grow, but also identities being lost, families breaking up and societies breaking their promise of taking care of each other.

This is how the British newspaper The Guardian puts it in the article '*Dementia: taking care*'

*"[...] the most pressing need is for better care for people living with dementia, and their families who do most of the caring. Caring for people with dementia is not rocket science: it's about co-ordination between families, doctors and social services. But it is costly (especially to the families who have to give up work) – more expensive than caring for cancer sufferers and people with heart disease put together. People with dementia are 30% more likely to be admitted to hospital for non-urgent reasons. [...] Get care right, change how dementia is perceived."*

In other words: We need to rethink the way we care for people with dementia and give them and their caregivers a range of possibilities to cope with it.

In the Netherlands they have created *Dementiaville*. A care facility that functions on the patients premises - not the other way around. It's a small community designed to make everyday life with dementia less problematic.

It is in this new way of approaching the diagnosis that my approach will follow. I want to help people with dementia and their families, friends and other caregivers communicate and remember their memories for as long as possible through the progression of the disease.

Hopefully this will help people with dementia to have an outlet for self-expression and holding on to their identity.

# LOSS OF MEMORIES

*"Most work on dementia now suggests that the mechanisms (proteins) involved in making those first synaptic changes are impaired in Alzheimer's. The information gets in, but there is no lasting trace in the nervous system. Initially, the AD person will still have access to old memories (thinks their child is still very young although they are now an adult, thinks they still live in a former house or town though they moved to a new place years ago, etc). Eventually access to old memories is also lost, though exactly how that happens is still unclear. Its important to note also that sensory systems decline in diseases like AD (Alzhemier's), so the information coming in isn't as clear, which also contributes to problems storing it. Together, these conditions lead to confusion and anxiety (as they would with anybody) and that doesn't help memory either."*

Donald Wilson,  
*Senior Research Scientist and Deputy Director of the Emotional Brain Institute Nathan Kline Institute for Psychiatric Research & Professor, Departments of Child & Adolescent Psychiatry of Neuroscience & Physiology*

**BUT  
MUSIC...**



Sources:

<https://musicandmemory.org/>

<http://www.centerlighthealthcare.org>

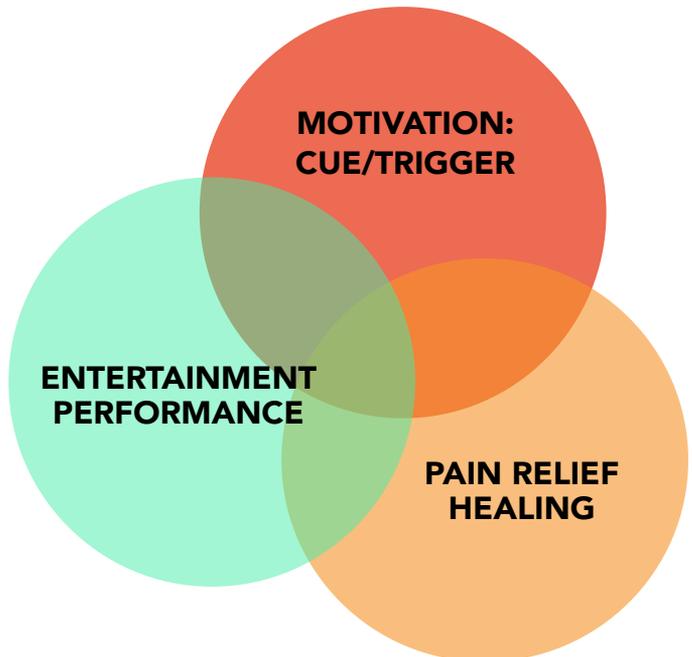
Picture from the movie 'Alive Inside' by Michael Rosatto-Bennett

# IS A POWERFUL TOOL

In the US the nonprofit organization Music and Memory has discovered how music can trigger memories and emotions with people with Alzheimer's

Also Center Light Health Care, an innovative care organization who uses Music and Art therapy as one of their treatments have founds that people with aphasia have learned to regain speech through the power of music.

How can we use that communicative tool to help people with dementia?



# PROCESS

HOW CAN PEOPLE WITH  
**DEMENTIA**  
AND THEIR CAREGIVERS  
**COMMUNICATE**  
THROUGH **MUSIC**?

I brainstormed within the three categories and came up with ideas for solutions to the problem by matching post-its from each category into a new clusters. From the new clusters I drew out the possible solution to the cluster and went from 50 ideas to 4 and chose 1, that I think adress one of the strategies for optimize communication for people with dementia:

**Reminiscence and provide memory cues**

( see table 1 appendix )



DEMENTIA

MUSIC

MEMORIES

COMPUTER

RECORD

Q

M



## IDEA:1

### *Singing cafe*

Building upon Music and Memory personalized playlist, I want to create a 'singing cafe' for residents at a nursing home and their family members. A place where you together can reminiscence about songs, music and memories and sing together. The challenge is how to make people sing?

Meeting place, networking and support system for families who come to visit and a way for new members to the nursing home to be welcomed. Building relationships and community with other residents and a place for meeting new people.

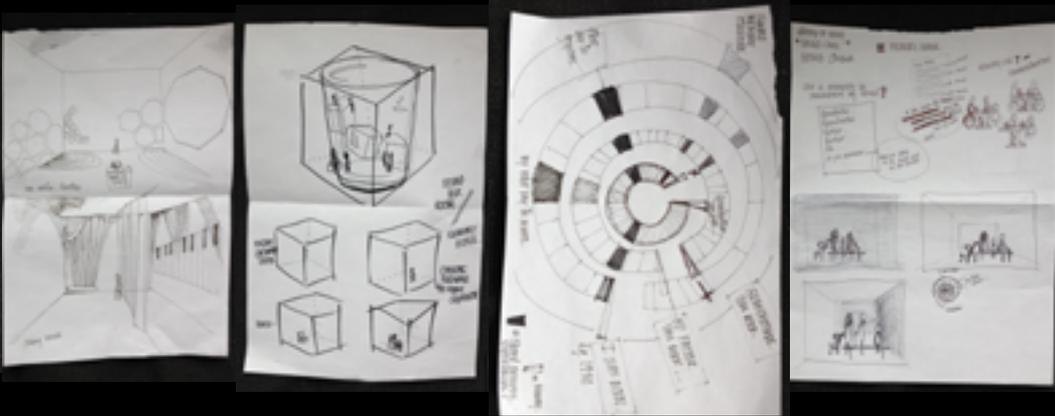
## IDEA: 2

### *The X-factor effect*

Young people want to sing, and express themselves through music; Is there a way to use that in a nursing home setting?

Invite young musicians, artists and poets to create their versions of resident's favorite songs. Perform these songs to the residents and make personalized songs.

Family members can tell about episodes, memories that they want to share with the resident and the songwriters, musicians can tweak and adapt lyrics to the chosen song.



### IDEA: 3

#### *Acoustic environments*

For people with impaired sight or hearing, feeling and touching might be the way to communicate. By feeling, touching or hitting the walls or floor you can sense/feel the vibrations through your body. Materials, textures and smells are really important since they can be a way to trigger memories.

Ice cube installation

Sensory boxes/rooms.

Drum rooms

Listen to your favorite sounds.

Make environments that incorporates these in nursing homes.

### IDEA: 4

#### *Memory Bank*

Have family members write down memories, as detailed as possible. Extracting all information about sounds that relates to that event, and make a little soundbite or sound play (maybe with voice over)

You can go to the 'sound cinema' and hear stories. Map out events, music concerts, historic events from generation to generation. What is something that overlaps and what could be shared memories ?

# THESIS : SONIC LIBRARY

# **WHEN MUSIC CAN TRIGGER MEMORIES - WHAT ABOUT SOUNDS ?**

*What if we could remember through sounds?*



# THE SONIC CONTEXT IS IMPORTANT FOR RECALLING



# MEMORIES

*"We know that the context in which memories are formed is very important to the recall of those memories. Thus, the idea of creating a sonic context which could evoke more specific detailed memories associated with that context is excellent. The brain is a very good pattern recognition device, and is good at filling in missing pieces of familiar patterns. Thus the more pieces you can provide (including sonic pieces) the more chances the whole pattern can be completed"*

Donald Wilson,  
Senior Research Scientist and Deputy Director of the Emotional Brain Institute Nathan Kline Institute for Psychiatric Research & Professor, Departments of Child & Adolescent Psychiatry of Neuroscience & Physiology

# COLLECTION OF VIVID MEMORIES

To create the Sonic Library I began collecting vivid memories from people in order to see what it is people remember.

Through a survey created in Survey Monkey I asked people if they would like to share a vivid memory with me, and if they could be as detailed as possible regarding locations, persons and actions. I collected 33 memories in total from the responses.

The memories were diverse, some of the memories were long, some were short, but common for all of them were that they captured a feeling. The sound of: acknowledgment, freedom, safety, comfort, peace, loss, childhood, love, but all told like a story.

But there were also the specific sounds related to the memory told; laughter, animals, cars, songs, birds and nature sounds.

I chose three memories and added the related sounds to each memory. This added up to 22 sounds which are what the current Sonic Library consists of.

1. A Day At Dad's Work
2. 'Money' the car game
3. Jazz at grandmother's house
4. About a friend - the circle of love
5. The longest night in my life
6. Riding fast on horseback
7. A slap in the face
8. Grandparent's summer house
9. 'Nyboders Prins'
10. Old dance music
11. Orchestre gatherings
12. 'Kong Frederiks honnørmarch'
13. Boy scout gatherings
14. Dancing Scene From 'Matador'
15. Christmas Day
16. Buying comics
17. Music from Vienna
18. The sound of acknowledgement
19. First real girlfriend
20. The car that farted
21. Christmas TV series
22. Playing with dolls
23. Dancing in the living room
24. Writing and conducting a musical
25. Creating folk songs
26. Principal calling me to play music
27. Daughters playing music to me
28. Time with my farther before he died
29. Mother's last breath
30. Floating on a pink sky
31. The first love
32. The sound of World War II
33. 'Dear John'



# SONIC MEMORY

## Nr. 8 'GRANDPARENT'S SUMMERHOUSE'

*'Breakfast at my grandparent's summer house. I always got a soft boiled egg and a roll with butter and italian sausage, which my Grandmother made for me. And a big glass of milk. The smell of coffee, my grandmother's perfume, my Grandfather's cigars and the trees in the garden. The radio played Giro 413 or some other easy listening music. We looked out over the garden, where we could occasionally see a squirrel'*

### **SOUND BREAKDOWN:**

- Birds chirping
- Laying the table
- Boiling water
- Pouring milk into a glass
- Coffee brewing
- Lighting a cigar
- Radio music
- Garden ambience



# PROTOTYPES

**TESTING THE SONIC LIBRARY //**  
**ANONOMOUS INTERVIEWS //**  
**QUALITATIVE DATA //**

## **SUBJECTS:**

- 0: Female, deceased grandparent (no audio)
- A: Female, over 35, father with dementia
- B: Female, 29, aunt with Alzheimer's
- C: Male, 30, deceased grandparent with dementia
- D: Female, 25, deceased grandparent with dementia
- E: Male, 40, deceased grandparents with dementia
- F: Female, mother with dementia
- G: Female, 70, deceased mother with dementia
- H: Male, 60, wife with dementia
- I: Female, 57, diagnosed with dementia, possibly Alzheimer's

In order to test the Sonic Library I conducted interviews with 10 subjects up until now. I took the Sonic Library consisting of 22 sounds and asked the subjects if any of those sounds resonated and made them think of their relatives.

Then I asked them to share those stories.

After sharing stories the subjects listened to the sonic memories and then we discussed the possibilities of the Sonic Library for both people with dementia and their family caregivers.

From these interviews it's clear that sounds as well as music are powerful tools in evoking memories and talking about our past experiences and is a useful tool in regards to reminiscence value.

Sounds can trigger a distinct and special time from our lives and can help us evoke and retrieve memories. But not all sounds resonate since we are different human beings with different life experiences, backgrounds and tastes.

One common thread between the subjects involved for these tests are that people are shows interest having recordings of their loved ones; laughter and also nature sounds. Those are two favorite sounds.

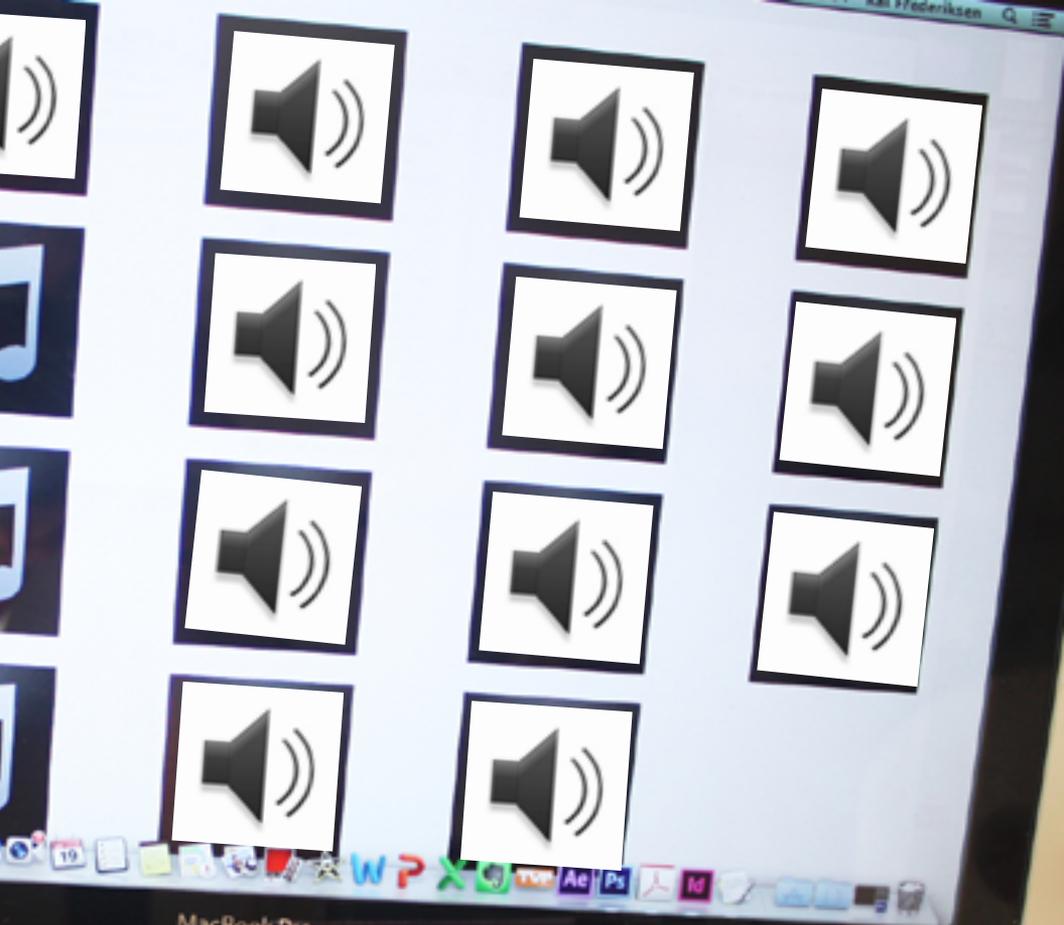
CLICK TO HEAR SOUNDS



## PROTOTYPE SONIC LIBRARY

22 sounds + 3 sonic memories (see appendix)

On the following pages are 3 examples of responses to the Sonic Library.



MacBook Pro





## THE SONIC LIBRARY

- ① Cow Moo
2. Chicken
3. Horse
4. Horse steps walking
5. Child laughing
6. Horse Gallop
- ⑦ Crunchy chewing -
8. Sigh
9. Laughter (cartoonish)
10. Fart
- ⑪ Sara Vaugh 'Lullaby of Birdland'
12. Steps over wooden floor
13. Open closet
14. Dressing up\_clothes
- ⑮ Birds chirping
- ⑯ Laying the table
- ⑰ Boiling water -
- ⑱ Pouring milk into glass
19. Coffee brewing
20. Lighter
21. Radio
22. Birdcrow

Add other sounds:

- 70 walking on snow. - crondy.
- 18 water fall.

## SUBJECT A:

Reaction to sound #1:

*"This actually makes me cry [...]. So Dad loves animals. Loves loves loves animals as I do and we have taken trips to see cows. And [...] after college [...] I didn't want a job and just thought I wanted to go across the country with my friends and Dad said: "Look you can do that. That sounds great but first I want you to work on a farm. For once in your life. So he made me work on a farm for a month with a really tough farmer. [...] There were two cows: a mama had a baby cow. [...] And so anyway they took the baby away from the mama right when she was born and I was so upset and I asked the farmer...I said: "[...] Why are you taking the baby away from the mom?" And the farmer said: "Because the cow's milk is too valuable for the baby." So that has led me to be an animal rights activist ever since then. [...] So [Dad] was a great source. And it's something I'll never forget being face to face with those dear animals."*

*Female, over 35, father with dementia*



# THE SONIC LIBRARY

1. Cow Moo
2. Chicken
- ~~3. Horse~~
- ~~4. Horse steps walking~~
5. Child laughing
6. Horse Gallop
7. Crunchy chewing
8. Sigh
9. Laughter (cartoonish)
10. Fart
11. Sara Vaugh 'Lullaby of Birdland'
12. Steps over wooden floor
13. Open closet
14. Dressing up\_clothes
- ~~15. Birds chirping~~
16. Laying the table
17. Boiling water
18. Pouring milk into glass
19. Coffee brewing
20. Lighter - play it again; isn't sure what I heard
21. Radio
22. Birdcrow Garden Ambience

NB: deep female laughter - not a nice laugh.  
 ↓  
 woman's laugh.

Subject: G

Age: 70.

Origin:

Relationship:

Storytelling  
Tell about the so

### PLAY 3 SONIC

Interested in:  
 Creating a sonic  
 Sharing a sonic r  
 How?

Technical possib  
 Computer  
 Radio  
 CD  
 Ipad-IPhone  
 Podcast  
 MP3

### LIBRARY: COULD THIS BE +

How could sonic memor

- Communicatio
- Self-expression
- Memory loss
- Fear of a chang
- Prevention of is
- Reminiscence v
- Moments of co

⇒ Lullaby of birdland  
 Sound of the waterfall - cotemplation.  
 Insect + birds  
 cicadas - bugs. very distinct symphony.  
 - Icecream truck

### FURTHER RESEARCH

- Would you be interested able/to involve you relative with dementia for a sessi

## **SUBJECT G:**

*Reaction to sound #11 and #17*

*“You know it sounded like very...like a lot of water but I related that to listening to rain with my mom lying side by side and we would be getting ready to go to bed and there would be a storm outside and we’d lie quietly listening to the rain...so that’s what that evoked in me...and a ‘Lullaby of Broadway’ [the song Lullaby of Birdland]...she loved to dance...she loved...uhm...she loved Broadway...she loved music...she loved the fact that I was on Broadway and she loved something we used to call between us “dancing feet”...we would be lying in bed or on the couch and something crooky like that song would come on and we be [singing]...with our feet...dancing feet is what we called it...so we...she had a lot of little things like that about her that I miss and I...that are evoked by sense memory like that...and I can just see my mother doing [singing] with her feet...I can just see it in my head you know...”*

*Female, 70, deceased mother with dementia*



## THE SONIC LIBRARY

1. Cow Moo
2. Chicken
3. Child laughing
4. Horse Gallop
5. Crunchy chewing
6. Sigh
7. Laughter (cartoonish)
8. Fart
9. Sara Vaugh 'Lullaby of Birdland'
10. Steps over wooden floor
11. Open closet
12. Dressing up\_clothes
13. Laying the table
14. Boiling water
15. Pouring milk into glass
16. Coffee brewing
17. Lighter
18. Radio
19. Garden ambience

Subject: \_\_\_\_\_

Age: 40

Origin: \_\_\_\_\_

Relationship: \_\_\_\_\_

STORYTELLING  
Tell about the

### PLAY 3 SOUND

How is it to  
Is is fun? co

Would you  
library to:

Listen to so  
memories?  
Create your

Waterfall  
Would you add other sounds:

- o ocean.
- o River
- o street sound - NY.
- o car alarm.
- o Icecream sound.

horses.

- o Christmas.
- o Salvation army.

pop corn

jiffy pop. low

Technical p  
Would you  
favorite sou  
CD  
Computer  
Radio  
iPad-iPhone  
Podcast

## **SUBJECT I :**

REACTION TO THE QUESTION:  
WHAT SOUNDS WOULD YOU ADD IN YOUR PERSONAL  
SONIC LIBRARY ?

*I: Popcorn...*

*[Both laughing]*

*KATJA: I need a story with that sound...*

*[...]*

*I: This is a story to be remembered... (see the following page)*

*Female, 57, diagnosed with dementia, possibly Alzheimer's*

In this version I narrowed the sonic library down to 19 sounds, since there were too many overlaps and similar sounds.

**TO OPEN**

Gently lift this tab & pull along dotted line



**SOLD AS SET**  
**BUTTER**  
Flavored Popcorn

CopAgria Foods  
Covaleys Foods, Inc.  
PO Box 3708, Dept. JP  
Omaha, NE 68103-0788 U.S.A.



**Nutrition Facts**

Serv. Size 2 Tbsp  
(34g) unpeppered  
(makes about 4 cups popped)  
Servings per pan: about 3.5  
Calories 140  
Fat Cal. 70

\*Percent Daily Values (DV) are based on a 1,200 calorie diet.

	Amount	% DV*
Total Fat	7g	11%
Sat. Fat	1.5g	8%
Trans Fat	3g	
Cholest.	0mg	0%
Sodium	220mg	9%
Vitamin A	0%	
Vitamin C	0%	
Calcium	0%	

	Amount/Serving	% DV*
Total Carb.	19g	8%
Fiber	3g	12%
Sugars	0g	
Protein	3g	

INGREDIENTS: POPPING CORN, PARTIALLY HYDROGENATED SOYBEAN OIL, LESS THAN 2% OF: SALT, HYDROGENATED COTTONSEED OIL, NATURAL FLAVOR, COLOR ADDED, FRESHNESS-PRESERVED BUTTER. CONTAINS MILK.

**CAUTION:** DO NOT ALLOW YOUNG CHILDREN TO PREPARE UNSUPERVISED. DO NOT POP ON CERAMIC RANGE, OR OVER CHARCOAL GRILL, OPEN GASPIRE, OR OTHER UNDEVEN HEAT.

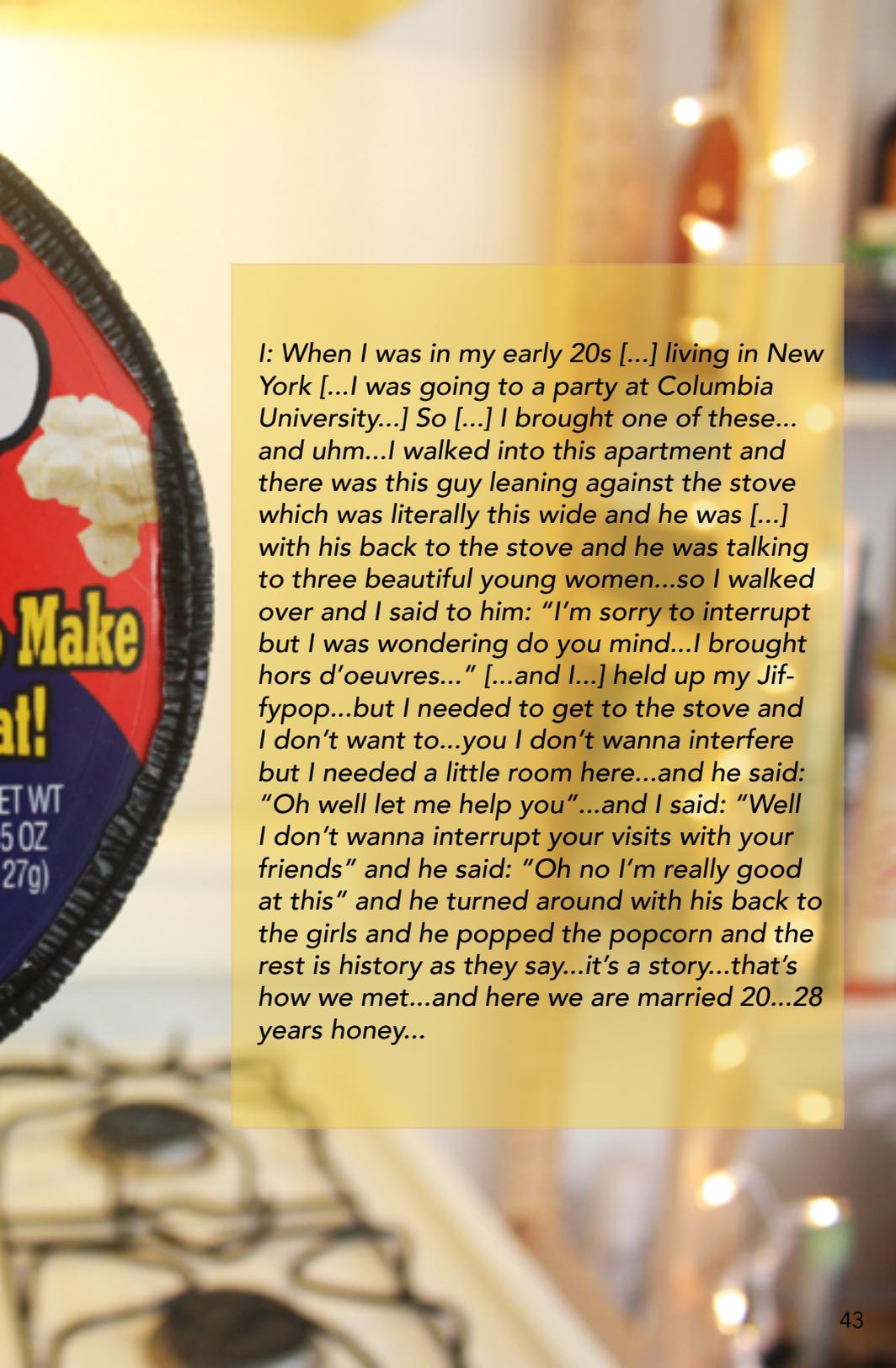
TO USE A CAMP STOVE, FOLLOW DIRECTIONS FOR GAS RANGE.

**IMPORTANT:** FOR SATISFACTORY POPPING RESULTS, CAREFULLY READ AND FOLLOW DIRECTIONS EXACTLY AS PRINTED ON BACK OF LID.

162 319 42 1250 20  
BY JUN

New  
Jiffy Pop Butter Popcorn, 4.5 oz., 3 pk  
X000H824RD

06/15/2014  
64144



*I: When I was in my early 20s [...] living in New York [...] I was going to a party at Columbia University...] So [...] I brought one of these... and uhm...I walked into this apartment and there was this guy leaning against the stove which was literally this wide and he was [...] with his back to the stove and he was talking to three beautiful young women...so I walked over and I said to him: "I'm sorry to interrupt but I was wondering do you mind...I brought hors d'oeuvres..." [...] held up my Jif-fypop...but I needed to get to the stove and I don't want to...you I don't wanna interfere but I needed a little room here...and he said: "Oh well let me help you" ...and I said: "Well I don't wanna interrupt your visits with your friends" and he said: "Oh no I'm really good at this" and he turned around with his back to the girls and he popped the popcorn and the rest is history as they say...it's a story...that's how we met...and here we are married 20...28 years honey...*

## **HOW THE SONIC LIBRARY WORKS**

### **E.G. 'JIFFY POP MEMORY'**

I have an audio recording of the female's story and is going to transform it into a sonic memory. Then I'm gonna make a CD that includes the Sonic Memory 'Jiffy Pop' and her's and her spouse's favorite sounds which will be their personalized sonic library.

The 'Jiffy Pop' sonic memory can be retrieved in the later stages of her dementia and hopefully this can help recreating a safe and comforting feeling when she listens to her favorite stories and sounds.

In this way the sonic library can help maintain the longevity of the memory, since children, friends and professional caregivers can listen to them as well and tell the story if she forgets one day.

# **SONIC LIBRARY**



# YOUR SONIC LIBRARY

## STAGES:

## EARLY - STAGE DEMENTIA

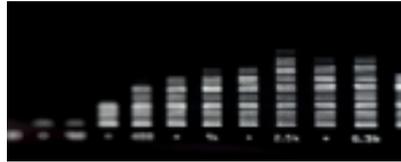
1 2

Normal forgetfulness

Difficulty concentrating

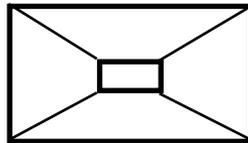
### SONIC MEMORY:

How many details?  
Length?



### SONIC DEPTH:

Amount of sounds  
in a sonic memory



### SOUNDS:

Your favorites



### VISUAL CUES:

SMELLS:

LATE - STAGE DEMENTIA

3

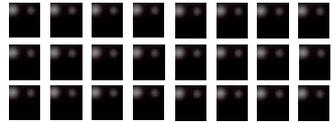
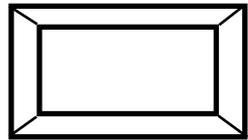
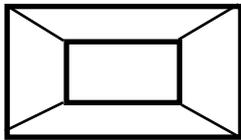
4

5

General memory decrease

Broad memory loss

Extreme memory loss



# FUTHER TESTING

## **EARLY STAGE DEMENTIA**

Person with dementia create her or his personalized sonic library. Containing favorite sounds, colors on CD. Family and friends can narrate too and record their memories about shared memory experiences. Follow the effect on the sonic library and see if it add value in later stages.

## **LATE STAGE DEMENTIA**

Family and friends can put together sounds or sonic memories into a personalized sonic library, that tells about shared memory experiences.

Based on people's reactions from my interviews and observations at care facilities I believe that the Sonic Library has the potential to help people with dementia, their relatives, friends and other caregivers communicate. For some of the participants sounds evoked: emotions, laughter, conversations, time to reminiscence and stories about their loved ones. Most importantly the key measurement of the Sonic Library I think is to ask people with dementia "what makes a good day for you?" and help them achieve this. Naturally the project calls for further testings and iterations and some of my suggestions to consider for next steps are:

## **THE SONIC LIBRARY**

- A larger library of categorized sounds: Different laughs, different oceans, different farm animals e.g
- Prototype: Computer interface
- Prototype: Physical 'device' to browse through sounds
- Physical space - an actual library
- A CD with personalized sounds and memories
- A game or activity

## **DESIGN OF THE SONIC MEMORIES**

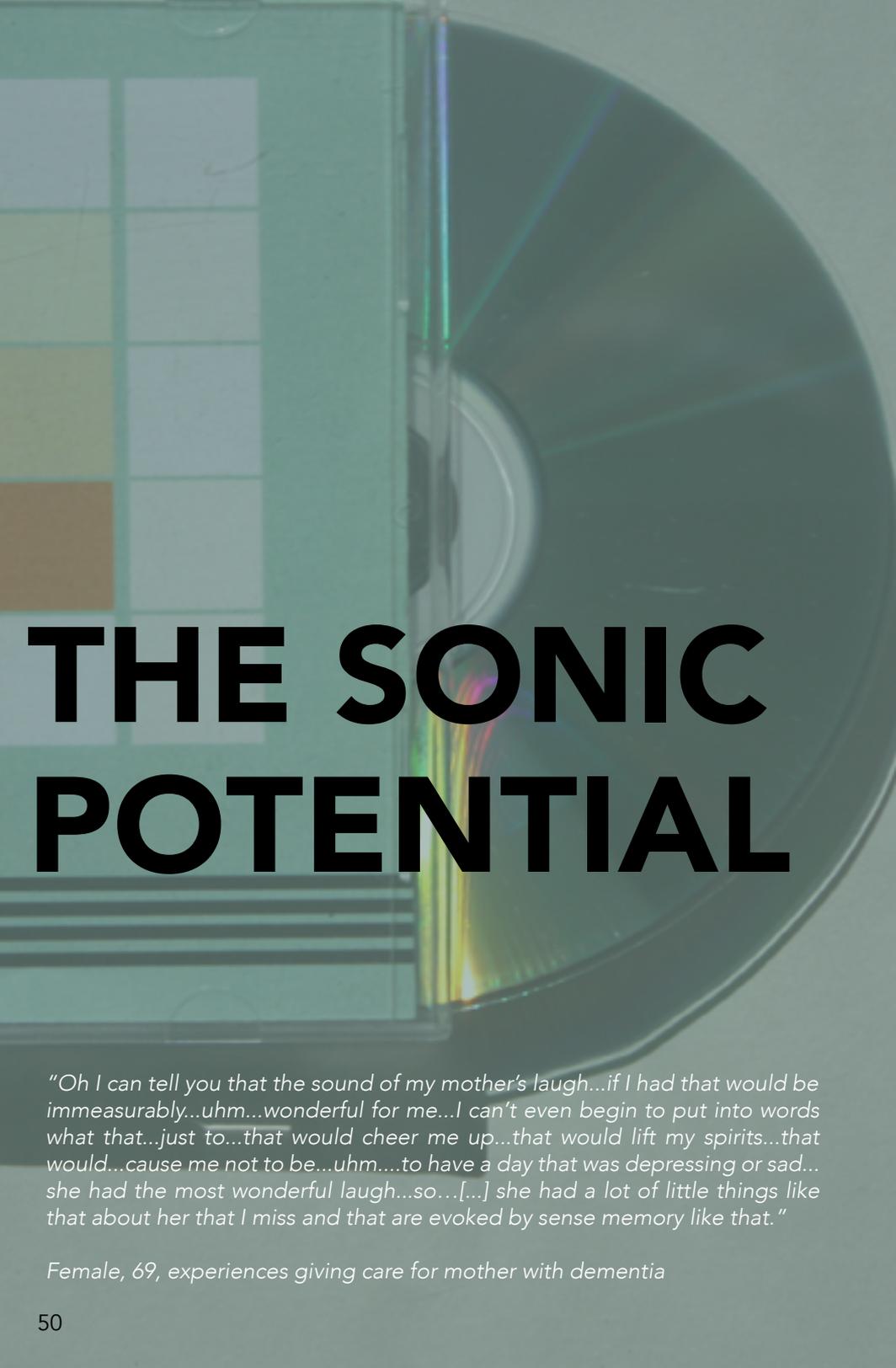
- Timeframe: How and who to create sonic memories?
- End-user: Create sonic memory themselves
- Sonic and other sensory cues: Visual cues and smells
- A standard intro for memories: "This is a story to remember..." or "This is a story..." e.g
- Sonic snapshots, collages or stories
- Voice recognition: Can you recognize your own voice?

## **INTERVIEWS**

- More subjects with dementia and their relatives or friends, who want to participate - both early and late stage
- Clearer agenda for the whole project:
- The measurements and criteria's of success
- More consisting and thorough set of questions for the interviews
- Extra person at the interview to keep track of time, technical devices e.g.
- Language processing: Real time or build into the interface

## **PARTNERS AND COLLABORATION**

- Sound designers
- Webdesigner
- Application developers
- Graphic designers
- Nurses who work with people dementia
- Scientists
- Caretakers
- Music therapists
- ...



# THE SONIC POTENTIAL

*"Oh I can tell you that the sound of my mother's laugh...if I had that would be immeasurably...uhm...wonderful for me...I can't even begin to put into words what that...just to...that would cheer me up...that would lift my spirits...that would...cause me not to be...uhm....to have a day that was depressing or sad... she had the most wonderful laugh...so...[...] she had a lot of little things like that about her that I miss and that are evoked by sense memory like that."*

*Female, 69, experiences giving care for mother with dementia*

By triggering memories, we can help maintain identity, enable self-expression and improve communication through reminiscence. The sonic library could be accessed from home by the person with dementia, family and friends and you can put together your own personalized sonic library.

Based on reactions from my interviews and observations at care facilities I believe that a Sonic Library has the potential to help people with dementia, their relatives, friends and other care givers to help them relate and connect to each other. Dementia is already affecting millions of people's and unfortunately this trend will only get worse in the future. This is an almost certain fact since dementia is mainly correlated with aging and since we're generally living longer, the amount of people living with dementia will increase.

Given the potential of sounds from my prototypes as a way of triggering memories and help us evoke distinct and solid memories of each other. I believe that the Sonic Library can provide people with dementia a space for expression, feelings and comfort knowing that you would always have access to a place where you can listen to all your favorite sounds and stories from the people you love. Also by sharing and saving memories across generations we can extend the longevity of memories and help maintain the identity of the person with dementia through reminiscence and use that as a communication tool to start conversations about our past, the present and the future.

# APPENDIX

Table 1

## Strategies to Optimize Communication with Persons with Dementia

<b>Effects of Dementia</b>	<b>Strategy</b>
Attention and concentration lapses	Conduct interview in place less distracting Redirect conversation
Decreased abstract reasoning	Restructure questions to concrete topics Use participant's wording
Difficulty word finding	Allow ample time to respond If participants seem uncomfortable, then offer reassurance and help them
Memory loss	Use reminiscence Provide cues
Repeating phrases	Validate meaning Redirect conversation
Fatigue or anxiety	Monitor for signs Offer to stop interview

Source

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3076620/#!>

### 3 SONIC MEMORIES

Click to listen



Riding fast on horseback



Jazz at my grandmother's



At my grandparent's  
summer house