DESIGNS FOR chance memories

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CHANCE MEMORIES: SUPPORTING INVOLUNTARY REMINISCENCE BY DESIGN
JULY 2014
“The dustbin lorry driving past, there was an intense smell of rubbish and heat. It took me straight back to the same smell, walking along a dusty dirt track on holiday in Spain.”

“The Welsh side of the bus stop reminded me of the school room where I had Welsh lessons. It was a modern building but always smelled of old wooden desks and old hardback books. A very pleasant smell to me, it smelled academic and studious.”

“The radio in the car playing Paradise City by Guns N’ Roses, memories of being in Glastonbury on Sunday evening listening to Slash.”

“Seeing shirts hanging in the wardrobe, reminded me I don’t have to go to work again until September! Happy, but a little apprehensive.”

“Following my son down the stairs, seeing him sliding downstairs on his bottom reminds me of when we used to slide down the stairs as children, sometimes in our sleeping bags for ages - especially when friends were sleeping over. Then we would go and watch ‘Why Don’t You’ - summer holidays again.”

“Looking out of the bedroom window, seeing birds on the roof, reminded me of an animated short film on the beginning of one of the boys’ favourite movies, making us laugh lots, my youngest wanting to watch it repeatedly.”

“I was opening the curtains and saw a book on the windowsill. It reminded me of my miscarriage. I was reading the book at the (general) time. I put it down part-way through as the main character then had a miscarriage. I keep meaning to pick it up again but haven’t yet. I used it last night to jam open the window... Mixed feelings.”

“The smell reminds me of being a small girl. I can remember the front room windows of my 1st home being covered in it for what seemed like days but was probably just 10 minutes!”

“Wow, intense very strong memory of 25 years ago from looking on Facebook and seeing a friend of a friend mentioning BAGA awards! Memories of gymnastics when I was 5. I can vividly see the photo of me on the upturned bench. I was wearing a long-sleeved black leotard with badges on, bobbed hair cut and a fringe. I can remember the smell and colour of the school hall!”

“Fig and mozzarella salad, honey and lemon dressing. Remembering the taste of the salad. The memory was triggered because I picked up a pear from the fruit bowl, which I bought at the same time as the salad ingredients last week.”
Designs for chance memories introduce proposals that promote new thinking around how design might support personal remembering.

People give huge importance to preserving their memories as a way of understanding who they are and what they are about. Current memory support systems, however, favour people self-prescribing time and space to collect, store and maintain explicit memory triggers (e.g. photographs, videos, memorabilia). Finding time to access such systems and their potential triggers to engage in reminiscence is a process requiring great effort, organisation and dedication.

Proposals presented in this book build on the view that it is not the supports that contain the memory but people to explore new systems that hint at memories rather than serving as repositories. This offers great scope for designers, as systems no longer have to be designed around personal memory evidence alleviating the need for people to contribute, update and retrieve personal content.

To achieve this, understanding around involuntary memory provides inspiration and is explored more and more as the proposals develop. The proposals build around current methods for capturing, archiving and accessing memory triggers, through to understanding how the nature of memory, specifically triggering unexpected memories, might introduce new spaces for memory support.

Overall, these proposals offer a new distinctive approach for supporting personal memories as an alternative to prescribing explicit, intense and pro-active memory recall instalments. They present ideas that are sympathetic to how people naturally remember and their need for spontaneous, lightweight memory recall.

The aim of these proposals is not to offer solutions to concerns around personal memories, but to stimulate thought and discussion of what might happen with such systems in place. The proposals reveal how people’s experiences of memories could be extended and altered beyond memory support systems and practices currently available.
RE-THINKING MEMORABILIA

ENHANCING AND EXTENDING THE POTENTIAL OF MEMORABILIA
The first proposals consider people’s definition of memorabilia and how they might be re-considered for all of the senses. The proposals introduce new artefacts and processes that aid remembering which enhance existing practices for visually impaired people, but are also inclusive and accessible to all.  

People’s classifications of ‘memorabilia’ vary, where artefacts may provide memory triggers associated with capturing understanding of the self, relationships to other people and past events. Most people collect visual triggers as evidence of memories, but could such evidence translate into the other senses of sound, touch, smell and taste? These proposals explore how access to personal memories might be improved by rethinking memorabilia for a broader range of senses than just sight.  

The two proposals, built as working prototypes and exhibited, encouraged visitors to the exhibition to engage with them. This engagement highlighted two aspects of remembering: voluntary and involuntary memory, where people pro-actively choose to engage in reminiscing and where memories come to mind unbidden and unexpectedly through no deliberate act of recall. The latter was the focus for developing more design proposals; proposals that specifically explore potential for offering designed support for chance memories.
Memory china

Memory china is a teapot that records conversations around the dinner table into its lid, and plays the conversations back into the body of the teapot. Inspiration for this proposal comes from the ritual of ‘getting out the best china’ for a special occasion, where it is those occasions that are memorable. Conversations around the dinner table encapsulate the meaning of ‘getting out the best china’ and allocating quality time to talk with family and friends.

Working with technical researchers at HP, and with help from Wedgewood supplying the tea set and individually sign-writing the teapot lids, Memory china is a fully working prototype. The teapot captures conversations when the lid is in record mode by means of solid-state audio devices fitted into the lid, and to listen to conversation the lid is turned 180 degrees into playback mode with conversations replayed through a speaker in the lid into the body of the teapot. The body of the teapot amplifies the sound with amplification varying depending on how much tea has been drunk. Each lid is labelled allowing the owner to identify the events captured.
Memory shelf

The Memory shelf recognises objects through their weight. A platform at one end weighs placed objects and allows people to add audio descriptions through a recording function. When the weight is triggered again in the future, the audio replays.

Designed as a working model, the shelf has recording and audio listening capability, and how these functions were used by visitors during the exhibition provides anecdotes for explaining the concept further. The impreciseness of identifying objects by weight often triggered the wrong memory but proved just as delightful as reliving the correct memory, if not more so. This unexpectedness of hearing the wrong memory became valuable in developing proposals for memory support that consider unexpected remembering. The interface of the shelf affords unexpected memory discovery: for pure memory indulgence people can simply apply pressure with their hand and scroll through all the weights and to hear their associated audio memories.
PLINTHS FOR REMEMBERING

EXPLORING UNSUPPORTED ASPECTS OF PERSONAL REMEMBERING
People’s memorabilia collections inhabit personal spaces where their placement has bearing on how they trigger future remembering. Some memorabilia may take pride of place on prominent display cabinets, others may be kept safely stored in the attic; each having a different effect of remembering around them. Memorabilia on display may be seen to cause affective reminiscing, whilst memorabilia hidden away may be rarely accessed though when it is, it is likely to trigger strong instances of unexpected remembering.

A series of plinths explore the role of memorabilia in triggering personal memories and how interactions with them might be enhanced to offer new ways of exploring our past. The plinths have different characteristics and address different issues around memorabilia to convey the proposals in specific settings. The proposals explore currently unsupported forms of reminiscing identified during interviews (from where the photograph on the previous page comes) and include supporting inherited objects, authenticating memories, collecting content to trigger memories and addressing the lack of available store space for memorabilia.

Plinths are used as they offer a vehicle to highlight user behaviour and are not integral to the proposals themselves. They offer benefits by keeping the content local and contained within each (and not with the object), so memorabilia can continue in its natural surroundings and state.

The proposals consider how people’s experiences of memories associated with objects can be extended and altered beyond systems and practices currently available, and to spark debate of what might happen if such systems were in place.
Patina plinth

Designed specifically for inherited objects, patina plinth retells associated memories in the form of pre-stored stories once the new owner has lived with them for the same time as the previous owner. This aging of the memory along with the object allows the object to mature, building a patina and establishing greater appreciation of the object’s past with the new owner.

The plinth stores content with a time-stamp in relation to the object’s age, with replay of content delivered over the same time span. The display offers a precise countdown to the next storytelling episode. As new memories are collected, they too are stored ready for the next new owner, creating a dynamic system constantly collecting and distributing content along each life an object has with its current owner.

The proposal supports concerns people have for passing on memories with objects when they change ownership, offering a way to understand the stories behind the marks, scratches and chips the object receives over its lifetime. The design takes away some of the secrecy around second-hand objects in not knowing their past and imagining their adventures, but it also encourages other forms of interaction: imagine lining up objects in order of the next story due and the anticipation around awaiting the next chronicle in an object’s unravelling history. Would you take the day off work if there were a story due, never to be repeated? And, if you had heard a story would you tell it again to make sure the next owner knew the object’s historical landmarks?
Inheritance bid plinth

This plinth encourages potential inheritors to bid for an object’s affections by leaving their requests and wishes to own the object in the future. On the surface this makes the will making process easier as the plinth replays the recordings for the owner to hear and decide, but critically, this concept questions current methods of distributing objects when owners die. The plinth is inspired by the way precious objects are described and left to people in wills, like, “My favourite hand-carved solid wood wardrobe, painstakingly bought back from India, goes to my beloved grandson who always admired it”, and stories from bereaved family members discussing who should inherit when validating claims through emotionally charged storytelling of what it means to them. Bidding to own an object once the owner has died is uneasy though responses from people this concept was discussed with show appreciation for a system that delivers a practical service during a distressing time.

Reading the will could become a theatrical event with objects handed over to whoever gave the best performance. Such a system could cause people to take on a greedy behaviour when visiting elderly relatives, or simply encourage them to visit more, offering a chance to leave a claim. Ultimately, it could ensure objects end up with appreciative new owners and alleviate potential conflict when possessions are distributed between family members. The system also questions the amount of time people spend together, where more time spent with the family and friends you intend to leave possessions to would naturally suggest who potential inheritors should be without the need for such a system. This proposal could be seen as a statement about the way families are now dispersed over vast geographical locations.
The Truth plinth hooks the storyteller up to a lie detector, giving the audience indication as to whether what they are hearing is true or not. People often exaggerate stories, so the plinth ensures truthfulness by the storyteller: if they lie they receive an electric shock. The outcome should ensure factual, not fictional, stories.

Critics may believe the truth plinth would make stories less compelling, as people often exaggerate storytelling to enliven or clarify explanation. Elements of exaggeration may be found in most stories told, where true authenticity becomes less important than the elaboration told around it, which ensure it is compelling to the audience. In this sense I question whether a truth plinth would make a story better or worse as people are smart enough to accept exaggeration by rationalising what is presented.
Conditioning plinth

The Conditioning plinth provides context and scene setting for the retelling of memories. The plinth records associated audio stories of objects from the owner, as well as recording the environmental conditions the story is told in.

To hear the story again, the plinth uses ‘object conditioning’ techniques to bring the object to the same state it was in when the original story was told. Sensors and displays placed around the outside of the plinth measure and indicate current conditions. In the example, “The new owner of this object didn’t have an outhouse like the one Granny use to keep it in, but they’ve found that under the sink offers the same cold, damp, dark conditions”, shows new owners encouraged to seek out new locations in replacement of environments no longer available.

Supporting environment and place as triggers to memories emphasizes understanding and appreciation of the original event.
GPS plinth

This plinth uses GPS to locate ‘birth-places’ of memories, retelling memorable stories when objects are in the exact location the memories were created.

Emphasizing the importance of ‘place’ in understanding and authenticating memories, GPS plinth asks similar questions to the previous plinths: if new owners have to build an understanding of the conditions around original memories, for example, time for the Patina plinth and environment for the Conditioning plinth, does it offer greater understanding and appreciation of the memories someone else has associated with an object?
Anniversary plinth

Anniversary plinth authenticates memories by printing out factual information on specific dates memorable to the object. The plinth offers prompts to an object’s history, for example, a picture of a child resulting in the plinth printing out a birthday wish on their birthday.

The content for Anniversary plinth may be collected by people sending messages to the plinth or by linking to other date-stored media, like calendars. On the plinth, there is no indication to when information is printed, but it happens in real-time on the dates associated with the stored content. This plinth generates information frequently compared to proposals like Patina plinth, as printed information may relate to dates repeated annually like birthdays or anniversaries.

This plinth could also be used as an output for messages sent between people: relationships between people who share memories of the object intensified by sending messages to each other through the plinth, like a message from Grandma asking the child to call her as they have not spoken for a while. In terms of reminiscing, the plinth provides a space to share memories and thoughts that is less confrontational than a conversation between people where a printout can be acted upon or ignored. At the very least the plinth may trigger a memory, but it may go further to initiate additional communication.
DESIGNS FOR SPONTANEITY

INTRODUCING SUPPORT FOR CHANCE MEMORIES
 Often, the approach for memory support systems is to support prescribed explicit, intense and proactive memory recall instalments. Focusing on making people more productive in keeping evidence of memories in pure un-tampered ways, is a process people are unable to do naturally, creating a form of ‘synthetic’ remembering. Instead, support could be designed around how people naturally encounter their memories: ad hoc and unexpectedly whilst going about everyday activities. The next series of proposals explore this new approach that is more akin to how people naturally remember and the value of spontaneous, lightweight memory recall.

So, why is unexpected remembering better? Current support favours offering a ‘dose’ of reminiscing value where people have to self-prescribe time to access precious captured and stored memory triggers. Where this precious time may be hard for people to find, these designs propose a different approach and present value in supporting the serendipitous and unexpected episodes of remembering that frequent daily life.

On average, people experience 20 - 30 episodes of involuntary remembering a day, so it is a form of remembering that should be considered and supported. Finding long-forgotten photos fallen down the back of the cupboard and rediscovered when moving furniture or relocating belongings, forces people to touch and handle possessions resulting in involuntary remembering. These processes offer guaranteed reminiscing but how can this emotional and memory-rich event be supported further by design? Is it possible to introduce systems that orchestrate and provide this unexpected link to our past?

The proposals that follow begin this discussion. Designing for spontaneity might offer encounters with memory triggers that go beyond planned memory recall episodes to offer new spaces for imagining and re-creating the past.
Attic periscope

The types of memory triggers and length of time since last accessing the memory are important in creating powerful unexpected remembering. Inspired by this, Attic periscope creates new access to the potential memory triggers hidden in the attic. The attic space has an almost guaranteed ability to trigger memories when accessed, where finding new ways to enter this space under different conditions may offer new ways to cue memories.

The periscope concept can offer fleeting glimpses of the attic’s contents when passing by, or more in depth discovery if time allows. It also offers different perspectives to memorabilia, restricted through the viewing angle and lens, and an inability to touch and move objects around for further examination.
Mantelpiece 101

This proposal considers the display of memorabilia in the home. Employing a voting system, Mantelpiece 101 allows members of the house to democratically decide on an object’s future. As family members have different roles regarding the display of memorabilia, this proposal encourages all family members to actively decide the fate of potential memory triggers. Placing an object on the mantelpiece signifies imminent eviction from the house as it begins its journey along a conveyor belt towards the bin, unless it is saved through placing it back with its display companions.

Using the most prominent display area of the home, the mantelpiece, the device changes the position of the items on this display, bringing memorabilia items back into the gaze of family members and potentially re-invigorating the object’s ability to trigger memories. Perhaps if the object triggers a memory, members of the household may choose to move the object off the mantelpiece, thus saving it.
Display rodent

The Display rodent rediscovers long-forgotten objects in the attic and offers public access to this usually private space. The proposal creates new displays out of the previously un-displayed with a ‘camera-on-wheels’ moving randomly around, transmitting ‘live’ images back to a central display screen.

Moving freely around the attic, bumping into objects, reversing and moving off into another direction, the display rodent occasionally pauses and occasionally changes camera angle. This results in many different images of the attic that change frequently and offer unusual perspectives shown on the display.

The system offers space for the social exchange of memories as visitors to the house, seeing the display, might began conversation around the images. People’s inquisitive nature might relish opportunity to explore and reminisce objects discovered in this usually private space.
**Ebay frame**

This proposal uses an external database of existing content to display audience-relevant images of objects currently selling on the Ebay website. Designed to provide background prompts to memories, Ebay frame can be extended to test era specific content, where the system makes assumptions on information relevant to key events in a person’s life, for example, school disco music, based on the age of the people in the room. The concept uses the Ebay website as it is a very good example of an existing database of categorised objects.

The website requires users to categorise and filter objects into groups, for example ‘retro toys’ and ‘1960’s clothing’, which works well with this proposal’s requirements. The images of objects currently for sale, matching the filter on the frame, are displayed in anticipation they may trigger memories from the people in the room.

Streaming this type of content to the frame attempts to provoke reaction; hung on a wall in a shared space, it offers background information that can be acted upon or ignored by people in the room. There are situations where seeing an image in the periphery triggers a memory, encouraging reminiscing with people in the room. Ebay frame proposes impersonal content, in this case photographs taken by strangers to sell their possessions, can be used to successfully trigger other people’s personal memories.
Periphery phone

The potential of subliminal and peripheral stimuli is investigated in the proposal Periphery phone. When people talk on the telephone, their eyes are free to ‘wander’ and take in additional information. In this state, images could be fed into the environment onto nearby displays to potentially influence conversation. Similar to how people doodle on a note pad whilst on the phone, this space is ripe for exploration whilst people are in this daydream state.

Other situations to consider are travelling on a train looking out of the window, watching a screen and seeing movement in the periphery, or waiting and visually exploring the surroundings. Many of these produce daydreaming states that could be explored further to encourage unexpected remembering.
Letter box scanner

Letter box scanner searches items posted through the home letter box for their place of origin. The origin is identified by the town or city on the postmark and is displayed on the back of the door, offering chance to remember specific post, the people and places directly associated, as well as those indirectly linked.

Occasionally, places could appear triggering memories totally unconnected to the contents of the post received, but form links to memorable people or events. The location of the display offers quick glimpses to place names, perhaps a glancing view on the way out of the house setting up remembering episodes on the start of a journey where travelling provides opportunity for day-dreaming and imagining.
Room camera

Room camera leaves traces and suggestions of the past in the domestic setting. A camera attached to a ceiling light, takes time-lapse images of the room from above where overview pictures show object outlines that fade over time, the fading showing movement and the presence of both people and objects in the space. The abstract representation and fading provides opportunity to remember objects and people, encouraging reflection over what has happened in the space in the recent past. The concept could be extended to offer the display in a remote setting, giving a ‘window’ into domestic activity and reminders of the past.

The power of suggestion provides unexpected spaces for people to consider, access and reflect upon their memories. Using suggestion methods to hint at possible scenarios and situations, people can be encouraged to fill in missing gaps of information with their own understanding of the information presented. Designing a system based on suggestion and under-representation to trigger personal memories successfully counteracts the need to know detailed accounts of people’s memories. Instead, designed support can nod towards a memory, spurring people on to fill in missing information.
False memory frame

A digital photo frame in the home, accessible to all family members and visitors, displays composite pictures created from the family’s digital photo collection. The compiled images use elements from one photo composed against parts from another, producing a feeling of familiarity as well as questioning the mis-information presented.

Whilst a digital photo frame that changes photos frequently and randomly already promotes unexpected remembering, extending this to suggest ‘wrong’ memories through composite pictures enhances this. People may recognise a photo as belonging to them but may have to interrogate their memories to fully understand the composition. As a result, these photos require more effort to understand associated memories, where the act of doing so and proving the image wrong, forces people to spend more time reminiscing.

This concept could be extended to link meaningful dates, people or places to the composite picture displayed. Related images could be taken from other online databases creating a collage of visual prompts, some from personal memory archives interspersed with public data. Consider a personal photograph from a city break forming a composite picture with an image from a news report on the same place, and the memories this may trigger. Or other people’s photographs from places visited displayed on the frame on significant anniversaries. There are many ways ‘false’ images presented through this display could extend aspects of involuntary remembering.
Unexpected display

The Unexpected display uses existing display areas of the home to randomly highlight objects. In one design, sections of a display shelf move vertically to ‘pedestal’ objects higher than their display companions, encouraging people to take notice.

In another, a display cabinet with frosted glass reveals new perspectives to the objects stored within as small areas of the glass clear. Random in where and how much of the glass clears, new and sometimes incomplete views of objects are revealed requiring people to decipher what they are seeing, refreshing contact and potentially triggering memories in the process.

Both offer new ways of displaying and consuming personal memorabilia, where changing the display encourages owners to engage and interact with their objects once again rather than blending into the background and becoming forgotten.
TALES OF THE UNEXPECTED

PRESENTING MEMORY CUES UNEXPECTEDLY
13:02
Walking past the stairs... strong smell reminding me of hospital stay when I was very young to have my teeth taken out.

23:06
Drifting off to sleep... remember buying an Ocarina (musical instrument) at a craft fair, somewhere in Bristol, when I was 10 years old. I remember the pattern on it.

8:43
Queue of traffic in Caerleon... rusty gate reminding me of treasure hunts run by the Squash club, driving around the countryside on Sundays.

11:48
Dress in exhibition... LED's lit up, remembering poppers on a Barbie dress when an elderly friend used to make them for me (I was about 6 years old).
There are examples of involuntary memories in everyday situations, as the photos from the experiment on the previous pages highlight. The next proposals explore ideas inspired by this experiment, such as strong, intense remembering coming from memories laying dormant and untouched for many years, and the value of new iterations and representations of memory triggers causing people to notice the novel and remember the past.

These proposals show how experiencing information associated to memories differently and unexpectedly can encourage reminiscing, where its success in triggering a memory depends on the subtlety of re-delivering information so it is not considered intrusive and unwelcomed.

These chance meetings with personal memory triggers begin to explore the potential of introducing hints to our memories through re-considering how information might be presented. The proposals begin to explore these situations and conditions that offer links to unexpectedly exploring our past.
Memorabilia post

This is a service proposal for storing memorabilia. Possessions are sent to a storage facility when they are no longer needed, but perhaps still trigger memories; similar to storing toys in the attic no longer played with but still having sentimental attachment. The service stores these possessions for many years then randomly and infrequently returns them to their owners through the post. Receiving items this way would trigger long-forgotten memories unexpectedly and involuntarily.

With the loss of attic space in homes, this proposal goes some way to replace the euphoric feeling of discovering an object long lost and forgotten. Though the concept triggers memories in a similar way to exploring the attic, I argue the possibility of not knowing you own it, for example, a parent storing childhood toys with the service, might make the experience even more special. Childhood memorabilia could be returned once the child reaches an appreciative age, joyously remembering playing with it when they were younger. With keeping less memorabilia at home, this proposal questions how people’s interaction with objects and subsequent triggering of memories is affected. By having fewer physical objects to trigger memories does future reminiscing occur less, or do the fewer objects keep cue more meaningful memories?

Though receiving these objects through the post would be the ideal scenario there could be limitations to its feasibility. A more plausible concept could feature images of these objects sent to personal screens and devices at controlled times, or hints towards them referenced in media adverts, for example. Whichever method, this proposal shows value in the history around memorabilia.
Spending maps

The Spending maps service re-issues bank statements in a new way: presenting data of where people have spent their money as a map of places visited rather than a list of numerical transactions.

Visualising this information as a map encourages people to re-acquaint themselves with their past through their monetary transactions, by remembering the places they visited and perhaps the people they met. People could find this type of data useful, particularly if maps were issued many years later, making them explorative and purposeful for reminiscing as opposed to the current format of a monthly list of transactions.
Media parasite

This device encourages chance encounters with memory cues; moments such as hearing memorable music on the radio. Media parasite infiltrates media channels close-by, feeding personally relevant information into public spaces. Always carried, perhaps as a key ring, the Media parasite transmits known information about the wearer to nearby public media devices. Publicly available data that has personal resonance, like songs from personal music collections, childhood toys or photos of places visited, could occasionally and randomly appear on nearby devices. Imagine hearing the music video of a song listened to frequently on holiday now playing on the televisions in a shop.

With this system, designers would need to consider the fine balance between a system that delivers welcomed memory triggers to one that creates an oppressively haunted environment if it happened all the time. The characteristics of intense involuntary memories are that they are the least remembered memories. If systems like Media parasite were developed, designers of interventions need to consider and be sympathetic to this. New memory support systems need mechanisms to control conditions, like frequency, so they support characteristics of involuntary memory alongside goals of enhancing instances of unexpected remembering.
Flashbulb ring

The Flashbulb ring builds connections between stressful situations and triggering memories through association. Flashbulb ring’s design links an image of an object shown on the display of a ring to, in this case, a stressful situation. Galvanic skin response sensors on the palm of the hand recognises stressful situations from the wearer, and triggers the display an object on the ring. When this object, or a hint towards it, is seen again in the future, memories associated to the original encoding might be recalled.

This concept considers how visual triggers could be created and linked to personal memories by designed systems. Through considering designed association of memory triggers to particular events, by recognising stressful experiences and feeding triggers through at encoding, offers many possibilities. Systems creating the trigger to the memory offer huge control to future memory recall. This process may be applied to other situations, where a system recognises emotional or stressful experiences through sensors and presents a sensory ‘trigger’ for encoding, storing this for future recall.
The Souvenir mantelpiece considers traits for maintaining access to memories: collecting souvenirs and creating display areas for them at home. However, display areas often become stagnant with memorabilia disappearing into the background and becoming an unnoticed part of the decor. Considering ways to enhance these areas, Souvenir mantelpiece proposes an ever-changing display of souvenirs, aimed at encouraging unexpected reminiscing.

The proposal consists of a digital ‘mantelpiece’ in the living room displaying images of souvenirs. The display is controlled by the location of a GPS device, with the device’s current location sending images of associated souvenirs to the display. Imagine relatives or friends away from home carrying this device sending souvenirs of their travels to the mantelpiece, like sending a postcard home. Similarly, the homeowner could permanently carry the device as a key ring, where it automatically collects mementoes of travels and feeds the display with souvenirs of the places visited each time the device returns home.

Designing the display around the form of the mantelpiece takes advantage of existing interactions with this space; people use the mantelpiece to thoughtfully display objects in the focal point of the room. This suggests designing for this space may influence and prompt people’s actions and conversations in a place they typically go to reflect, relax and socialise with others.
RE-APPROPRIATING APPROACH

USING IMPERSONAL INFORMATION FOR PERSONAL REMEMBERING
16:20
The smell of the swimming pool, I remember working at one years ago as a lifeguard, very long shifts, hot with wet feet! Staff training where we used a spinal board. Big Rob, the inflatable monster, swimming the length of the pool underwater.
Sharon, Harlech... Happy memories, missing people.

18:15
Seeing the advert on TV, it looked just like ‘Twister’, the movie. It was a very similar scene and tone, even the colour of the shots. Reminded me how rubbish the movie was, but I still seem to have watched it far too many times!
The final proposals build on understanding that personal memories can be, and are often, triggered by information and content that is neither created nor intended for the individual. The proposals introduce spaces that use the nature and characteristics of involuntary memories to consider designing completely new ways of collecting, delivering and consuming evidence of personal memories.

Unexpected remembering often occurs away from interaction with personal content, whilst going about daily activities and coming into contact with hints to personal memory triggers met randomly. These proposals support this by focusing on re-appropriating existing information and databases of impersonal content into new spaces for discovering and creating moments of unexpected remembering.

Each proposal uses content from a database readily available to illustrate how re-appropriating existing information stores might evolve. They present examples of conditions and situations ripe for triggering personal remembering, showing how current offerings might be extended and identifying where potential support might lie.
Holiday window

This proposal considers the value others people’s evidence of experience has on our own remembering. The holiday window uses a digital photo frame to display other people’s holiday photos from online social media databases. The frame has an interface that allows users to determine the accuracy and relevance of the photos to places they have visited. This allows people ability to choose the places they have visited for more predictable reminiscing; otherwise a ‘wanderlust’ option offers explorations of new vistas.

This window to other people’s holiday photos supports the value of other people’s evidence of memories in triggering our own, in this instance through having been to the same place or offering opportunity to reflect on our own holidays and similar experiences.
Car boot coffee table

The table displays items currently for sale on online second-hand selling sites. The table has a display beneath a glass top that haphazardly displays items on the screen, similar to table-tops at car boot sales. When used as a coffee table, having the display beneath ensures it becomes obscured at times offering limited views that warrant physical interaction for further discovery.

The items appear on the table when listed on an online selling site (such as Ebay, Freecycle or Oxfam), and disappear when they are sold. This produces a frequently changing, evolving and chaotic display of many layers. Similar to a car boot sale, the objects on display offer occasional triggers to memories, where living with the display over time is likely to offer many unexpected discoveries of forgotten memories.
**Geo talk**

This proposal uses the social media statuses people post about locations visited as a collection of reflective prompts, offered when visiting the same place. The device automatically collects comments tagged to a location when passing through and displays them on a map interface, showing places visited through comments left by others.

The comments offer background prompts to the day’s travels that may prompt remembering, building a history of the places visited for future access. They might take the form of descriptions about landmarks, personal achievements or reflective thoughts and feelings that are less location-specific, offering new perspectives on the places visited; undiscovered aspects and new understanding of the place may prompt additional reflection from being there.
Twitter boxes

Twitter boxes take tweets posted to Twitter accounts and display them individually in boxes, where people’s interactions with these boxes determine the tweets received. Adjusting the aerial on each box changes the tweets from people known when the aerial is down, to strangers nearby as the aerial is extended and the box searches for local conversations. With boxes brought closer together, search filters look for related tweets and those with similar subject discussions, allowing comparative reflection and understanding around topical themes.

Giving this type of content a physical space in a domestic setting encourages people to reflect upon the information differently, and offering simple interfaces to filter this content makes new connections and spaces for exploring and imagining.
Trending shelf

This shelf takes the physical properties of memorabilia objects as access points to additional information stored in online databases. Memorabilia objects are often kept as physical markers to personal memories but when on permanent display, over time they may lose their ability to cue memories as they become almost unnoticed.

The trending shelf takes objects placed on the shelf and gives them a refreshed display, by searching for and displaying recent digital content based on key words associated with each object. This content may come from current news stories, comments from recent visitors or similarly related information. Displayed on the front of the shelf in a ticker tape-like display feed, other people's discussions and news around the object's current significance might prompt and refresh our own associated memories.
Facebook frames

Facebook frames offer a collection of ‘windows’ into acquaintances’ social media accounts. Having these displays framed and hanging on the wall provide new ways of interacting and reflecting upon other people’s information. Walking past a frame currently displaying a photograph of a distant relative at graduation may interrupt and influence current activity, perhaps more so than seeing the same photo in its intended online social media interface when time is purposely allocated to accessing such information.

Frames on the wall provide background prompts to personal remembering that in their static, unconnected form becomes unnoticed over time as they blend into the decor. Facebook frames are different, offering constantly changing displays similar to the qualities of digital photo frames, ensuring they are noticed with many opportunities for unexpectedly cueing personal remembering.
Cafe talk

Cafe tables in different locations might be used to feed information about each other’s conversation to encourage reflection and potentially influence conversation. With a microphone and display, each table could mutually share their spoken conversation, abstracted as related images. These images might be created by the system collecting keywords from conversations and converting them into an online image search, with the resulting images sent to the display on the other table, and vice versa.

This concept explores the influence of other people’s conversations on our own personal remembering and how this could be extended to influence conversations in other spaces. Could such a system encourage more episodes of unexpected remembering or would they be too far removed from current context? The idea could extend to offer multiple choices of tables to link to, where people might explore tables for topic inspiration. As a result, tables might be used less as background prompts and more as conversation starters.
Flickr world map

The Flickr world map proposal illustrates how an existing database of information that uses keyword filters to search for information can be re-appropriated to trigger personal memories. The proposal consists of a large map of the world on the wall with repositionable display frames. Using the frames, people are encouraged to create a collage of discovered photos from around the world by moving the frames over the map. As places are chosen the system recognises the frame’s location and collects photos from the Flickr website tagged to that place.

With different styles of frames, the system offers additional search filters to location, such as photos tagged as family, wedding, anniversary, university, school, holiday etc. Using the system people are likely to choose places and filters with personal resonance; places they studied, family holidays, architectural landmarks. Though the images displayed belong to other people, it is possible to imagine the users own personal memories being triggered from seeing such photos.
Life event radio

The Life event radio generates music stations based on the owner’s life events. Music frequently relates to life events and the radio offers an interface for exploring this: tuning in to stages of the listener’s life through making connections with playlists tagged by other people as era or life event specific.

Understanding around a person having reached a life stage might need to be sourced to ensure music relevance, otherwise the system might make assumptions from knowing a person’s date of birth. With less known about the listener, the system could take clues from people generally reaching certain life events at a particular age; if a person finishes school at 16 or 18, they are likely to have memories associated with chart music at that time.

The radio could offer other music stations for specific events, for example weddings, with playlist selections determined by popular wedding music choices. Matching this with many people marrying in their 20’s could determine the era chosen in relation to their date of birth. The music station may offer comforting nostalgia like listening to some mainstream radio programmes, or unexpected long-forgotten discoveries when re-tuning the radio past the ‘revising for high-school exams’ era.
**Souvenir key ring**

The Souvenir key ring generates a ‘personal’ photo album of memorable places by collecting other people’s online photos of the same location. Visited places are recorded by the key ring with each location generating an image search for photos other people often take there, and automatically creates a souvenir photo album for future access. To ensure the photo collection has relevance to future reminiscing, photos of places frequented often may lose significance and re-capture over the less familiar as the system develops understanding about the wearer. This may also influence accessing photos in the future and could be done through purposefully accessing the album or in more unexpected ways.

Wearers might be offered reminders to their past through glimpses to photos projected into the environment, similar to Wallace’s project (Wallace & Press, 2004). Specific locations encourage people to create ‘universal’ memory cues which could be used by others for their own personal remembering, for example, the obligatory photo of the Eiffel tower when visiting Paris. How and where these cues are collected and delivered might be explored through many different design iterations; these could have relevance to current location or stored for unexpected memory prompts in the future. Collecting other people’s evidence of visiting places we’ve been offer many opportunities to exploit in cuing our own associated memories.
Calendar memories

This proposal uses a digital display to show ‘generic’ images of events related to calendar entries. People often cue personal memories when seeing generic images, like a photograph of a beach or the view from the top of a mountain, where they make personal associations and references to them. These are a form of universal memory that is developed further through this concept. The entries made on the calendar form the prompt for the system to generate the image.

Having a near future event might cue the display of associated generic images and potentially trigger remembering when passing by, or the system could make more random offerings by looking to past events. An entry from the previous year may cue related images, triggering serendipitous remembering of the past. There are many ways of developing such a system to support unexpected remembering and open up ways to explore our past.
Topic trivia presents people with information that they may interpret and reflect upon based on their past experiences and memories. The concept fleetingly suggests cues to topics to muse over when people are most reflective, when embarking on travel. Topic trivia is a small display located at eye level on the inside of the front door. Intended to influence a person’s thoughts on their way out of the house, the device appears to randomly display a few words to spur on reflection.

Travelling, whether by car, walking or on the train, people’s minds are more receptive to reflection and imagining, and often experience moments of involuntary remembering. Presenting topics at the start of this phase may influence this and encourage increased unexpected remembering, where the Topic trivia display does not necessarily enforce reflection, but offers chance to explore these suggested spaces.
Imagination filters

Imagination filters apply a filter overlay to a ‘known’ photograph, changing its appearance to offer a new perspectives and further investigation. These obscured images might appear randomly on mobile device screen savers, where they don’t necessarily require people to act upon seeing them but may cue remembering.

The content might come from the vast photo collections people store digitally, or relevant content not personally owned (friends ‘public’ photos, location-relevant photos), where offering distorted views and new perspectives offers new access. The filters could range from pinhole cameras and frosted glass views offering small peep-holes to the image, to extreme close-ups of detail or fuzziness that become clearer over time.

With any of these there are different levels of interaction. Recognition through minute detail or a blurred composition may immediately trigger spontaneous reminiscing or unconsciously set-up remembering for the near future. People may also choose to interact directly with the image, clearing the filter and accessing the entire image for deeper understanding, otherwise it might simply go unnoticed and have little impact at all.
Bus shelter window

The Bus shelter window uses a camera to create a video feed to a display in the bus shelter, where having the camera elevated high above offers a new perspective. The window offers two views from the camera: the current live feed displayed against a delayed feed from the past. The delayed view randomly changes from day to day; some days it will be yesterday's capture, other times last years, but seeing this alongside current capture offers space to reflect and imagine.

Comparisons of differences and changes between the two images might be made alongside further reflection and reminiscing around what people were doing at the time. Were they waiting there last year too, where the delayed feed might offer glimpses to their past; either visually or through their imagination. The bus shelter offers an ideal space for such a device as the nature of being there and waiting encourages reflection. Providing prompts may spur on unexpected remembering where, in this example, the unknown delay of the feed offers different levels of engagement with each visit.
Play park boxes

Located in a children’s playground, Play park boxes contain deconstructed elements of children’s nursery rhymes and stories for children to discover. Each box contains related images, sounds or smells designed to encourage children to imagine and remember; triggering memories of the story, or other personal memories, from the boxes content. The age-appropriateness of the content could be determined by adjusting the height of the box. On weighted pulleys, bringing the box closer to the ground fills the box with toddler-related content; in contrast, lifting the box up high provides content more appropriate for older children and adults.

Boxes currently containing links to Hansel and Gretel might show images of candy canes and dolly mixture sweets, alongside the smell of gingerbread and the sound of crackling fire. Children might make the direct link to the story from interacting with all boxes, or remember other memories: making gingerbread at Christmas or eating sweets at the cinema last week. Designed for children to explore their memories, these boxes make links and create connections, but also offer new spaces to imagine and influence current play.
Word generator

Word generator consists of a collection of boxes, each offering pre-defined one-word search options to your acquaintances online account activity. Using a keyword to generate searches, the boxes display random matches from a friend’s status, providing new spaces to imagine and reflect upon past experiences and understanding, and moments for forming new associations. Other applications might see a separate box for each acquaintance, with updates whittled down to a single-word display of recent online presence.

Providing a window into the general activity or mood of a group of people could encourage reflection on current activity through vague references and past understanding. These boxes might provide reassurance that your community is content, or concern over an unexpected clue that needs further investigation. They might also offer occasional and unexpected prompts to the past when words resonate personally and the box becomes momentarily disassociated with the creator. Words, whether associated directly with their source or taken out of context, can often offer hints and cues to memories. These boxes begin to explore ways of collecting and presenting words to encourage imagining around their source and current display, offering spaces to explore and make connections.
This book has introduced a new approach in offering designed support for personal memories. In looking at how people access their memories, the research has identified a valuable but very challenging aspect of memory, involuntary memory, which is largely unsupported. These proposals establish the approaches for populating this space, showing how chance memories can be supported and enhanced through design.

The proposals are presented as groups, mapping the spaces identified during design ethnography studies. The areas illustrate the themes around unexpected remembering, intended as inspiration for further exploration, and while they are not intended to prescribe specific memory recall events, they do begin to offer spaces for people to imagine and re-create their past.

This book offers creative approaches for dealing with involuntary memory and new ways of designing for personal memories as a result. Overall, the approach for treating evidence of people’s memories as a resource offers valuable insight for how to do this beyond current systems of support. The proposals presented generate debate on how designers might explore this approach and offer support for chance memories in the future.

At the establishment of this new design space the next steps are to explore the possibilities. Designs for chance memories have the potential to offer enhanced experiences of our memories and new spaces for imagining. Done sympathetically, these unexpected glimpses into our past might be received like gifts; momentarily taking us by surprise, but positively welcomed, emotionally powerful and important for personal reminiscing and well-being.