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Recycled memories:
Can flashbacks be triggered through experience design?

A flashback brings forward a past experience in a sudden and involuntary manner, so we experience a cut through time and space. A flashback is an involuntary look back to our personal history and may bring forward a memory long forgotten or a feeling for a place and time, disconnected from our conscious memory. Our memory is dependent on our understanding and interpretation of an experience, making it a deeply personal and interpretive phenomenon. Is it possible to create a trigger for flashbacks through experience design? Would it be possible to make people recycle their past experiences? Would it be possible to have a positive and memorable flashback?

A flashback is triggered by a sensory experience, such as smell, sight or sound, which connects us to a memory of an event, person, place or even atmosphere. The sensory experience is perceived and processed through
several different sensory organs. Haptic sensors in our skin can determine materials and, in some aspects, the three-dimensional structure of objects. Sight perceives and interprets visual stimuli, through which movies, photographs and an appearance of a place could trigger flashbacks. Ears sense the audio stimuli, through which a song, a certain genre of music or a voice could act as a trigger. Taste buds can make sense of only four flavours but our olfactory perception (sense of smell) adds to our sense of taste. Although our noses are not compatible with those of other mammals, we still have the ability to smell all kinds of odours, which can trigger flashbacks whatever their source and whether they are good or bad.

These are the senses that we immediately think of when we talked about perception. The human body can sense other things that are not directly related to these senses. We can for instance sense acceleration and where our point of balance is. We can also feel the passing of time through the so-called “Chronoception” and can sense temperature on our skin as well as pain. We have all these senses and they can all be used as a trigger for a flashback. Through all these different modes of sensing, could one compose some sort a symphony of flashbacks?

This essay examines the nature of flashbacks and explores the possibility to trigger flashbacks in a group of people. In order to find ways of triggering flashbacks, we must have a basic understanding of memory and how it functions. We must have a clear understanding and definition of flashbacks and the difference between a flashback, déjà vu and reminiscing. To pursue that it felt necessary to look at theories around the subject but as
well to seek flashbacks from people through conduction interviews and performing introverted investigations.

1. Déjà vu and flashbacks

_Déjà vu_ is French for “already seen” and is defined as a feeling of having experienced or seen something before. Déjà vu tricks the sensory input in the way that we sense situations as old and new simultaneously. Two theories attempt to explain the phenomenon that is déjà vu. The first theory claims that a déjà vu is caused by an experience of similar emotions towards a situation, which we interpret as the situation itself being repeated. The recurrence of old emotions translates as the sensory perception of the surroundings. The other theory claims that a déjà vu is in fact a re-experience of the situation in a sense. We have experienced similar situations before, which we cannot remember. The reason we cannot recollect the previous experience is because we have suppressed the memory, perhaps because of a connection to unwanted feelings. That is why we feel like the experience is both new and old at the same time. (Porsteinnsson)

Déjà vu is a similar experience as having a flashback as it is an involuntary and uncontrollable transportation to a familiar feeling or event. A
déjà vu may feel as a re-experience of an event but it is more believable that the déjà vu is derived from experiencing similar emotions towards the current experience as to a past one. A déjà vu is not a recollection of a past experience but rather a surreal feeling of an event reoccurring. A flashback differs from a déjà vu in the sense that it is not a feeling of events repeating themselves but a sudden recollection of actual past events. A flashback may be powerful and transport the rememberer to a past time and place but it does not collide with the experience of the current moment as a déjà vu does. A flashback brings us back to an event, person, place or atmosphere in an involuntary manner, but still we can define between the memory and the present moment.

2. Flashbacks in cognitive psychology

The psychologists Peter Graf and Daniel L. Schacter coined the terms *implicit* and *explicit memory* to refer to two ways to recollect our personal information. Explicit memory refers to the conscious collection of prior experiences with stimuli, such as reminiscing with the use of photographs, objects or words. Implicit memory is when prior experiences are recalled with stimuli on a sub-conscious level, such as flashbacks. (Grunwald 183)

In cognitive psychology flashbacks are strongly connected to traumatic experiences and are described as involuntary, emotion-laden images experienced by individuals with post-traumatic stress disorder (PTSD). Research on flashbacks connected to trauma in cognitive psychology has given a deeper understanding of the phenomenon. (Eysenck og Keane 244)
French psychologist, philosopher and psychotherapist Pierre Janet argues that during an actual trauma, individuals try to detach them from the experience and pushing them back. This is an attempt to change the encoding of the experience, which could change how the brain documents the experience. These memories are not easily accessible but, as Janet argues, a traumatic experience is recollected purely through sensory form. So the memory is associated with, or in a sense, triggered by a sensory input in a way that the victim relives the traumatic memory when certain sensory triggers are pushed. (Tulving & Craik 386)

Research on flashbacks in cognitive psychology has shown a strong connection between feelings and experiences of flashbacks. Flashbacks are a mood-state dependent memory, which refers to the recalling of occasions that have an emotional tone comparable to our current mood. If we are feeling sad and nervous, we are more likely to recall stressful memories and while we are feeling good we attend to think about pleasant memories. Although flashbacks are strongly connected to traumatic experiences in cognitive psychology, the more usual experience of flashbacks is in everyday surrounding and brings to the surface mundane memories. It is the flashback of a positive, mundane memory that I tend to examine and experiment with.
3. Flashbacks as recycled memories

An early attempt to trigger flashbacks was made by a Canadian neurosurgeon named Wilder Penfield in the 1930s. Penfield was performing an operation on a patient. During an operation on a patient, Penfield accidentally stimulated the patient’s brain with an electronic current. The current caused the patient to have a flashback of a younger him running home. This lead Penfield to believe that our memories are in our brain in sequences, like videotapes. In that sense we are carrying our past with us at all time. Penfield repeated the surgery over a thousand times but he only got similar result in around 10% of the experiments. In 1970s it was concluded that Penfields flashbacks were not memories at all but were instead orchestrated observation from their journey to the operating room.(Rosenfield 197-203)

A deeper understanding of flashbacks was gained in the 1970s, showed that in order for people to have a flashback the surface of the brain had to affect the limbic system, the part of the brain believed to be connected to emotions. This shows the reason that a flashback could not be forced through an electric shock to the brain. The stimuli must travel through the senses to be able to trigger a flashback. An attempt to trigger a flashback must therefore utilize the senses we have rather than try to trick the brain into creating a sensory experience.
4. The Proust phenomenon

Flashbacks are often referred to as the Proust phenomenon, as French writer Marcel Proust described a flashback beautifully in his book À la recherche du temps perdu (In Search of Lost Time; earlier translated as Remembrance of Things Past). When drinking tea and having a madeleine, the protagonist finds a connection to a past experience and in his third bite, a flashback occurs:

No sooner had the warm liquid mixed with the crumbs touched my palate than a shudder ran through me and I stopped, intent upon the extraordinary thing that was happening to me. An exquisite pleasure had invaded my senses, something isolated, detached, with no suggestion of its origin. And at once the vicissitudes of life had become indifferent to me, its disasters innocuous, its brevity illusory – this new sensation having had on me the effect which love has of filling me with a precious essence; or rather this essence was not in me it was me. ... Whence did it come? What did it mean? How could I seize and apprehend it? ... And suddenly the memory revealed itself. The taste was that of the little piece of madeleine which on Sunday mornings at Combray (because on those mornings I did not go out before mass), when I went to say good morning to her in her bedroom, my aunt Léonie used to give me, dipping it first in her own cup of tea or tisane. The sight of the little madeleine had recalled nothing to my mind before I tasted it. And all from my cup of tea.
By following his feeling of remembrance, which leads to a flashback Proust is literally searching for lost time. He is looking for the feeling of past experiences. You could say he was travelling through time and space just by mixing a cookie and tea. (Lehrer 75)

5. The Proust phenomenon and senses.

In the book *Why life speeds up as you get older* Douwe Draaisma writes about a study that was done in the United States of America by the Psychological Laboratory at Colgate University. In 1935, 254 questionnaires were sent to distinguished persons about the connection between the senses and memories. Quite an interdisciplinary group, formed by lawyers, scientists and writers to name a few professions. The results were that smell was more efficient than other sense in causing re-experiences of memories. (Draaisma 33)

The study was published along with the memories told by the participants. Their recollection is an example of the blurred boundaries between remembering and storytelling. Their memories are stories in the sense that they are interpreted and retold by every person. Memories are often fabricated remixes of input that we have experienced during our lifetime. By remembering, we make up parts that are missing, fill in the gaps and even twist the truth.

Dr. Walter E. Bundy describes a very vivid memory:
The smell of fresh sawdust invariably takes me back to the sawmill where my father worked when I was a small boy. The sight of sawdust does not call up these boyhood memories but the odour of fresh sawdust never fails to reconstruct a series of pictures so graphic that for the moment I live the scene again. If I try to reconstruct these memories of the sawmill by conscious mental effort, I can locate this object and that, this person and that, in the scene, but the memory thus reconstructed lacks life and is hazy. But the odour of fresh sawdust, especially when the odour reveals its presence, before I have seen the sawdust, calls up the whole picture as real as life itself.

We have a lot of beautiful memories like this one in the results of the study, most of them tell the same story. Odour causes people to travel in time, space as well as mood. So it manages to get the memories and the mood associated with that memory. One of the stories has a beautifully extravagant connection. The story is that one of the participants in the survey was reading a book and all of a sudden felt totally alone; the sense of loneliness immersed her. The explanations are incredible to say the least. She found out that most of her books during childhood were printed in England and book printed in there have different odour to them then the American ones. Apparently she has been very lonely during her childhood and the smell of the book she was reading transported her to the feeling of loneliness.

Some of the respondents mentioned a shift of odours in connection to some people and therefore memories. For example one member of the survey
talked about that the smell of wool has always been closely connected to his
dear uncle Lem, who had a woollen jacket. Uncle Lem died when the
remembering person was still a young boy. When he grew up he had a friend
that also wore a wool jacket so the woollen smell transferred onto him.

Another twist in the story was that this friend started to have his own odour in
the form of tobacco. So the smell of wool started to connect again with Uncle
Lem. So in some sense the memories tries to associated the smell with the
earliest memories it can recall. What could be the possible explanation for
this? One guess could be that is a part of the primal instinct that the primal
humans had as an alarming system. An odour that we are in contact with
quite regularly doesn't have the same effect as the smell that experience less
frequently. It could be that we have so many connections with that smell that
the brain cancels all of those memories out.

Douwe Draaisma draws the conclusion that odour can recall memories
in two kind of ways. With Proust's example, he has to use two phases. You
come across a smell and feel a sudden change of mood or some tingling
feeling that this is something out the ordinary and starts to fish for memories
that could be the cause of the sudden mood change. If you succeed you have
now the connection between the smell and the memory. The other one is
much quicker and basically hits you like a rock. There is no mood change to
let you this going to happen it will come at you involuntarily. In that scenario
smell is the main culprit. It seems that these kinds of moments are rarely
experienced through the means of other sense. The sight of something is
just not enough. You have to smell it. (Draaisma 36)
Experiments that have been trying to reproduce the Proust phenomena have had mixed fortunes. David Rubin created an experiment with the intention of exploring the Proust phenomenon with the main focus point on whether there were different reactions to seeing a word and then smelling that same thing, for example seeing the word apple and smelling an actual apple. Participants were instructed to mark on a scale how vivid these memories were and furthermore how pleasant or unpleasant they were. To say the least the experiment was quite disappointing in terms of searching for the Proust phenomenon. The study showed however that people connected with memories through smell. Memories they had not thought about for a long time or even ever. (Draaisma 37)

The main problem must be that the connection between memories and smell are extremely personal. The smell of newly cut grass could ignite a powerful memory in one person and not do anything for another. It is also a valid point that the experiment works a little bit like an assembly line. You get a lot of smells and you can’t really gather your thoughts. You are not given the time. So for everyone trying to examine the Proust effect you will have to give your subjects time to gather their thoughts and create trains of thoughts.

After the age of twenty we start to lose our ability to distinguish smells, it fades rather drastically. Therefore it is interesting that smell can trigger early memories in people of age. Some claim that this is exactly the reason that we remember old memories better than younger. The reason people manage to keep those old associations fresh because they are no longer interrupted with new perceptions. Another explanation connected to this one
is that our environment changes as well. Our food culture, things that we are in less contact with and so on. It must be connected to age as well. We are not likely to eat baby food and come in contact with things that sometime were in food fashion. Therefore when we finally encounter these smells we have a connection that goes straight to that memory that we had. (Draaisma 39)

Putting experiments on flashbacks into a laboratory will probably never work. Of course it’s always possible that people experience and remember something that they would not usually do but the pure Proust phenomenon will always be lost. The raw power of the involuntary memory gets lost in a scenario that is so much fabricated, the potion is loses its magic. The image keeps going away into the deep realms of the being. While you are fishing for one particular memory you also come across other ones that reacted to that memory.

The “Proust phenomenon” stands for the ability of the olfactory sense to bring back memories that are considered older. Often it is presented as a quick, almost instantaneous action. Then you have the controversy that the protagonist is in search for lost time does in fact try the madeleine a couple of times before getting the flashback. He’s lured in by a feeling, a feeling that is very subtle and hard to describe so tries again and after the third try he opens up the memory and it becomes real and immersive. It also is clear that when we eat something, a madeleine for example, we are not tasting them but we are in fact smelling them. Our taste palettes only distinguish between four kinds of senses sweet, sour, bitter and salt. Every other sensory experience is in fact our nose aiding the taste buds. (Draaisma 33)
It would be ridiculous to say that this was not thought of until Proust. Charles Dickens said “that a mere whiff of the type of paste used to fasten labels to bottles would bring back with unbearable force all the anguish of his earliest years, when bankruptcy had driven his father to abandon him in the hellish warehouse where they made these bottles.” (Draaisma 33)

6. **Triggering senses**

Two experiments were conducted in triggering senses, one in United Kingdom 1966 and later in the United States of America in the 1970s. In both experiments people were asked to smell the odour methyl salicylate or in layman terms “wintergreen” and the affect on the participants were noted. The participants in the British survey thought that the smell of wintergreen was an unpleasant smell but on the other hand in America it was regarded as pleasant. The reason for this difference was first and foremost historical. In Britain during World War II wintergreen was the smell of an analgesic medicine but was almost exclusively a smell of candy in the States. (Wolfe, Kluender og Levi 336)

This shows that former experience has a huge impact on what you consider a good smell. That could also be said about our other senses. When we are sensing something the mind seems to constantly judge the perception through our other memories that we have connected to this sensation. But we don’t have constant flashbacks. It could be that some memories are stronger than others or maybe the relationship between the perception and the memory are strong. Speaking from my own point of view it
does not really add up. My strongest flashbacks are from really mundane things. I have often a flashback myself washing my hands at my grandmothers’ house with a bar a soap with a picture of Winnie the Pooh on it. I get this flashback when I smell a certain smell. I have no idea what kind of odour it is but when I smell it brings me instantly to being six years old washing my hands. Nothing about this flashback is really memorable. I have washed my hand often and I often stayed at my grandmothers’ place. The odour of the soap is pretty usual, nothing mind-blowing; so what trigger these?

Smell has become known for being the best cue for a memory. Compared to studies odour is a really good trigger for memory and in fact no worse or better than sight, sound or touch, or even written text. Odours are though distinctive in one important way: their emotionality. Participants in a survey on experiencing a recollection by Rachel Sarah Herz, expert on psychology of smell, mentioned more emotions associated with olfactory triggers (the perception of smell) than they did with other sensory inputs. They said the emotions were more intense and those memories cued by odour where more emotions in them than memories brought back by other senses. People thought they were more immersed in the memory and said they were teleported to the original time and place. It was not the case with other sensory perceptions. One could think that since odours trigger stronger flashbacks that the flashback itself would be more accurate if they would be triggered by some other sensory. That is not the case. People seem to assume that since there is more emotion involved and you “feel” it more. (Wolfe, Kluender og Levi 336-337)
Smell and therefore taste are the only senses that are connected directly to the hippocampus, the main centre of the brains long-term memory. The rest of our senses, haptic, visual and hearing, go first through the thalamus, which is the fountainhead of language and therefore your gate to consciousness. Smell has an uncensored, direct way to our brain and memories, creating a much stronger connection between smell, feelings and recollection. The other senses are not as accustomed to bringing us our memories. (Lehrer 80) The difference between those senses is quite clear if we still talk about the madeleine incident. It was not seeing the shell shaped cookie with the cup of tea that brought the memories but I was the combination of those two senses that triggered the feeling of memory travel.

7. Our narratives.

The narratives of the world are numberless. Narrative is first and foremost a prodigious variety of genres, they distributed amongst different substances- although any material were fit to receive man´s stories.

Moreover, under the almost infinite diversity of forms, narrative is present in every age, in every place, in every society; it begins with the very history of mankind and there nowhere is nor has been a people without narrative. All classes, all human groups, have their narrative.

“Narrative is international, trans historical, transcultural: it is simply there, like life itself. (Barthes 79)
When we talk about triggering involuntary memories, we are looking for ways to “revisit the past in all its felt presence” (Ender 23). Whether it is possible to orchestrate an involuntary memory or even a mnemonic experience. The laboratory research approaches this question by, like Proust, start with a physiological and mechanical conception but they fail to got the next step, that Proust manages to go, that is to embrace a model that intertwines emotion, imagination and narrative.(Ender 23) Author Evelyn Enders claims that there is a shift of perspectives in the studies of memory. A more humanistic approach is replacing the focus on the physical aspect, what happens in the brain. Research increasingly explore human experiences, one of the defining aspect that humans have over other animals.(23) The study of the fruit fly and the sea slug will only bring us that far. We can identify that mammals have emotion and some have even imagination but we have no evidence that they can structure a narrative.

When we think about memory, we immediately associate it with a databank. When we identify things, learn how to ride a bike, remember someone’s name and birthday and park of a car, we rely on our memory database. This does not describe what Proust brought to the table. Enders writes it best when she describe the following:

Proustian memory is a scene, a story, an experience; it is intensely personal, embedded in our biography and history; it carves out a sensory, sensual, imagistic moment of a unique kind. Beyond the paradigm shift in the study of memory that Proust´s works invoke,
three remains, then, a fundamental and very simple fact: Proustian memory is a different – exceptionally complex specifically human, highly subjective, and hard to study empirically. The analysis that I propose here reflects this double awareness that Proust’s new definition of personal memory calls for a new way of approaching the study of memory itself and that it calls, particularly, for a crossing between disciplines, inviting a dialogue between scientific and literary studies. (Ender 24)

Enders only mentions literary and scientific studies but of course more disciplines should get involved, as this thesis is trying to do. Bring experience design into the mix. After all, experiences become memories and could not then memories not also become experiences? So if Enders would know how Experience design works, as a discipline that strives to involve itself with different disciplines, she would probably mention it as well.

The most beautiful and therefore the best involuntary memories are those who have been long forgotten and suddenly appear because of a whiff of a scent or hearing certain tones. The memories that have been hidden in away and ignite a chain reaction by resurfacing. An involuntary memory can trigger a memory that you have not thought about for a long time come to mind. It keep on chaining as we remember events, persons, atmospheres and emotions.
8. Introverted.

The involuntary memory is deeply internal and occurs in the most intimate nook of the mind and body. Enders likens our involuntary memories to “a place where a man or a woman is an island unto himself or herself and confronts images of a past that are at once so unique, so personal, and so rich that no artificial medium could hope to represent them.” (Ender 25) Enders is perfectly right as nothing can recreate those experiences but at the same time that is not what we are trying to achieve in this process. What we are trying to do is to catch the opportunity that involuntary memories can be triggered not necessarily to recreate them as human don’t seem to possess the technology to do that. The opportunity lies in triggering the senses and therefore using the most powerful media known to man, the human mind.

As has been discussed in this essay, laboratory search has often failed so it would be logical to say that involuntary memories gives the researcher quite the challenge. It seems that they are “on fortuitous encounters with sensory cues, these memories cannot be produced at will; they are triggered, each time, by different circumstances.”(Ender 27) Enders thinks that this project is an uphill battle, that fortuitous encounters cannot be designed. She´s partially right as involuntary memories are quite an unpredictable thing so it can be hard to control them, and maybe impossible. The project from this thesis is though trying a different path. By documenting the involuntary memories of others and trying to mediate them to other people is a different route that seems not to have been treaded.
The purpose is not trying to force the experiences, hence the memories on the viewer but rather to start a chain reaction of memories. Chaining is a powerful tool that connects so many different aspects of our brain. The project is an experiment, an introverted investigation. By mediating an involuntary memory of a rememberer to a viewer, we are creating a fortuitous encounter and by chance it could possibly trigger a sensory stimuli that manages to dig up a forgotten memory and hopefully a level of empathy. One of the biggest findings during the process of interviewing people, was how “real” people become when they talked about their memories. You create a better understanding of them as persons, where they are coming from. It all fits together; persons and their action make sense.

Proust explains how voluntary memory fails and involuntary memory does not:

Voluntary memory, which is above all the memory of our intelligence and our eyes, will give us merely untruthful aspects from the past; but when ever a scent, a taste re-encountered in completely different circumstances unwittingly reawakens the past, we feel how different this past is from what we seem to remember, and from what was depicted by our voluntary memory with false colors as by an incompetent painter. (Ender 28)

The retrieval of an involuntary memory has almost the same bodily sensation as having an epiphany, “an initial mood of quiescence, the sensory trigger, the
sudden and renewed sense of identity that accompanies the recollection, and finally the gradual unfolding of a memory that grows incrementally, through associations, into an intricate, reticular structure of images.” (Bls 29.) If only one guest would get that tingling feeling of an involuntary memory, I would consider my project on some level a success. Of course everybody should be able to experience this tingling sensation but as we know, that is most definitely impossible. People are simply put, thankfully, very different and have memories of their own.

Proust also managed to anticipate, that was later discovered in researches, that memory cannot be an exercise but rather a activating performance. By saying that Proust is pointing out that memory is more than a file cabinet filled with memories that you can search through at our own will, which was the old notation of what memory was.


When dealing with a phenomenon as common as flashback it feels appropriate that the writer himself participates and shares his experiences of said phenomenon.

I'm so fortunate to know the exact date of my first memory and furthermore I have video footage of myself just minutes after that same memory. The trigger for this memory is basically the saying of a certain word, “Þegiðu” that would translate to “shut up”. The word that my uncle said to me during the ceremony of my parents weeding. I remember that I was quite shocked. I was only mentioning something that I found curious and churches
are still a very curious place for me. I feel how small I am. My feet can't even reach the back of the bench in front of me. That is to my knowledge my first memory and it’s has a trigger. It was not such a long ago since I started to remember this memory, maybe ten years but since then I did not have any notions of this particular memory.

Another memory that is connected to the earlier one is when my kindergarten teacher tells me that if I will not shut my mouth she will put my head in the toilet and flush. This memory is highly connected to smell of kindergartens. The smell of sand, bad food, some strong cleaning liquid and children. The stench that is in every kindergarten that I have visited. In the memory I feel highly disappointed in my teacher and I know that she should not behave like that, it's unprofessional in the eyes of a four year old and still is.

It's interesting that I have many memories of someone telling me to shut up. I wonder if I deserved it. I have a memory that sometimes unravels when I'm washing my hands with soap. I had (and maybe I still have) a pretty hot temper and so does my mother. It's probably from the Normandy sailor that my great-great-grandmother nursed back to health. I was always arguing with my mother (maybe I still do) and one of these fights reached some kind of high point and my mother threatens me that if I will not shut up she would wash my mouth with soap. Common saying in Iceland but few actually do it. I remember that feeling that I had two choices, admitting defeat and apologising or keep on and hopefully call my mothers bluff. The devil inside me was the victor and I chose the latter option. I was wrong, she was not bluffing. I
remember being dragged to the bathroom and seeing the soap going inside my mouth but I have no recollection of how the soap tasted.

When I have a very cold, good and deserved beer I often have an involuntary memory of when I had a beer for the first time straight after a football match. It was after a game that the cinema elite in Iceland played against some English pub team. I have no clue how this happened. During this years I was very quick and was therefore put on the left wing and I played inside forward. At one point I got a through pass and had to sprint to get to it. When I managed to get to it I still had some distance to the goal so I started jogging towards the goal. When I start to think about shooting I'm tackled from behind and to keep my balance I put my foot down in an awkward angle and have to be substituted. Near the end of the game I feel comfortable to start playing again and managed to run my socks off. After the game we head to a pub in downtown Reykjavik and there I have just a regular beer but it is so cold, refreshing and well deserved. Sitting on a table next to the window and where the DJ plays during the night.

One visual cue I have is when I watch the hall of my grandparents' house. I'm pretty sure it's a false memory. More a represented feeling than a dream. I'm around four years old, it's my sisters baptism. Everyone is in the living room, expect for me. I'm in the hall looking at them. I feel unimportant, alone. While everyone is gather around my sister. The living room is really bright, with big windows. Designed in a classic Scandinavian style by my grandfather. I am most certain that this is a false memory because of the
facts that I know about my sister baptism. It was held in a church and the
celebrations afterwards where not held at my grandparents place.

Bodily triggers are also connected to a visual aspect. When I make a
snowball I often think about my best snowball. I was roughly ten years old. I
am outside of my beloved grammar school Vesturbæjarskóli. The weather is
quite still, no wind, which is not that common in this location as it is quite close
to the ocean. There is new fallen snow, it's a bit wet, and perfect to make a
snowball. My classmates are playing football. For some reason I´m not
playing which is unusual because that was one of the only things I did during
recess. Anyhow I´m behind one of the goals and I'm making this perfect
snowball. It's hard but at the same time fluffy so it should not hurt when
someone would be hit with it. I see one of my classmates playing as a
goalkeeper on the other side of the field. I decide to throw it, I don't have
anything to lose expect this great snowball. For the sake of curiosity I throw
the ball. It's a supreme throw, it lands straight on the top of his head, perfect.
He turns around and does not see anyone, he's really confused and spins
around looking for the culprit. No one is remotely close enough to be
considering one. It was beautiful.

During the interviews I did for this paper the discussions about
memories where always fluid and not at all awkward. It's incredible how
sharing of memories makes us more human or at least it seems that it's easier
to empathize with people when they tell about their memories. It's in this
sharing phase that we also want to share your memories. It seems like no
one wants to hear other people’s dreams but everyone is interested in hearing their memories. It's a situation that's most interesting.

10. Interviews

With the knowledge from those theories and experiments that have been presented in this essay it felt important to get more personal experiences through interviews. It felt logical to contact people that work with storytelling and use it in different disciplines. It seemed probable that persons that consider themselves storytellers would be able to communicate their memories better. Sometimes it feels though that it is a short crossing from being a storyteller to being a rememberer. It was also a little experiment to see if there was such a great difference between those two. People interviewed were a comedian, artist, writer, designer, director, actor, politician, dancer, mathematician and doctor. The intention here is to share the most relevant points that came from the discussions with these people. Sometime incredibly interesting discussions emerged from just talking about memories. I felt that underlying was that notion that everybody can talk about their memories and in some way or another have a strong need to share memories.
One of the interviews was with the comedian Ari Eldjárn. He had a beautiful story about how our memories can be dysfunctional but creative at the same time. Sometimes the best stories are born when we intertwine facts with fiction and in this case Ari had mixed two experiences together. The story that goes when Ari was graduating from college and becoming a student his family threw him a party. It’s a festive opportunity and people like to celebrate life events like those in Iceland. Friends and family are invited including a friend of the family Mr. David Oddsson who at that time was the prime minister. It could be said that it was on the height of his political career. He was loathed and loved very passionately. Ari’s mom asks David to do the honour of applauding the fresh student by leading the hoorah shouts. As is custom in Iceland the hurray cheers are four and should have a certain rising to them. The next cheer should be louder than the previous one. In Ari’s memory David Oddsson cheers lower and lower instead of making the cheers louder. In Ari’s opinion this was some kind of showing of power. Him being able to let the crowd go lower and lower instead of up. Ari has told this story on many occasions and sincerely believed that happened. It was not until recently that he saw a video of the festivities that he saw that nothing out of the ordinary had happened. Mr. Oddsson had followed etiquettes and shouted hooray louder and louder. Ari then relished that he had mixed a scene in comedy show about Mr. Oddsson where they actor that portrayed him was shouting hoorays lower and lower when the parliament was starting after summer vacation.
This is a perfect example how sometimes we become story makers without knowing it. Ari made up a much better story without knowing it. This is interesting for the sake of false memories, that you truly believed that this happened. He had told this story on many occasions because it’s a great story but nonetheless Ari’s mind making up a story.

Ari’s best example of an involuntary memory was when he was eleven years old and had just moved to Svarfaðardalur, is a large valley in northeast of Iceland. He took with him a cassette that contained the album War by U2, which was recorded from the vinyl. The recording was not perfect since in one of the song had a scratch so the line “but I” was repeated several times. He had dry lips so he used a blue Blistex lip balm with minty smell.

He recently smelt that minty odor and was thrown back in time to 1993 when he was walking to Húsabakkaskóla (the local school). He remembered how the cassette looked like, the scratch on the record and the emotions connected to the period, just by smelling.

This a typical story of an involuntary memory triggered by an odor. As is know, the aspect of involuntary memory by an odor. We have almost the timetraveling aspect as Ari is swept away to his former self. Ari was one of the persons that were interviewed that was able to share the most triggered memories. He had many more but its right to leave it at these two.
It was clear in Ari’s sense that he was highly responsive to involuntary memory triggers and as would be expected to smell was the main trigger. What was also noticeable was how much he talked about the emotion he re-experienced during these involuntary memories.

That leads us to our next interviewer, Hallgrímur Helgason, painter and a writer. He had an emotion laden involuntary memory triggered by the sensation of place. When he was around twenty and studying fine art in Munchen. He felt isolated, did not talk German so well so he did not have the means to communicate with the locals and as often when you are taking your first step in some discipline you feel insecure in our journey for yourself. Hallgrímur managed to deal with his problems but many years later when he arrived back to Munchen he felt the same feeling of no belonging, being alone. He could not explain it further, what the trigger was exactly, the smell or other but it was the city of Munchen that managed to stir up those feeling. That we can re-experience feelings so vividly is really an amazing thing. With our technology we have no change of imaging to recreate these experiences.

The last memory we are going to discuss is from Katrín Ólína Pétursdóttir, designer and soon to be writer, Her memory is triggered by a sound, more specially the song *Yesterday Once More* performed by the Carpenters. When she hears the song she is remained of a night when she is laying in bed and her mother is nursing her. She is reminded of the smell of the medicine she was sipping on. It’s around midnight and there fore way
past her bedtime. The song is coming quietly from the radio and she is reminded of the 70’s colors in the kitchen.

It’s intriguing to have such a nostalgic song as a memory trigger.

When I was young
I'd listen to the radio
Waiting' for my favorite songs
When they played I'd sing along
It made me smile.

Those were such happy times
and not so long ago
how I wondered where they'd gone
But they're back again
Just like a long lost friend
all the songs I loved so well.

(The Carpenters)

The singer longs for the days of old. One could maybe wonder if this song is a little too appropriate for a memory, so much that it could be a false memory.

After talking about memories discussions often led to interesting discussions about philosophy connected to memory. The writer Einar Már Guðmundsson was particularly philosophical. The discussions with him where extremely fruitful. His notion of storytelling was that it was an attempt to keep an hold of an atmosphere of that certain time, to understand the
atmosphere in the events during that period, in that notion that it will always be the same and the human being does not really change that much. In that sense when we recollect our memories we not only telling others of our past experiences, we are also offering an explanation of our world. Through memories we understand our being and through recollecting we are telling others and ourselves how the world works. Two persons can experience the same event but have totally different recollection of that event, as it is your own personal history.

11. Conclusion

In the beginning the question was: "Can flashbacks be triggered through experience design?" The answer to that is simply, yes and no. We have seen that research in laboratories most often come short in their quest to do exactly that. Their lack of embracing a model that intertwines emotion, imagination and narrative seems to be the main cause of their failures. Flashback is too connected to the personal history and the interpretations of the participant to be effective in the laboratory. As Enders says, it seems that involuntary memories are “on fortuitous encounters with sensory cues, these memories cannot be produced at will; they are triggered, each time, by different circumstances.”(27)

It is also worth remembering that when the flashback is brought fourth, it diminishes and changes slightly so repeated recalling of a certain flashback would in the end destroy it. The very nature of flashbacks is that they are connected to uncommon things in the environment of the rememberer and are
are therefore special. This is the very nature which makes it so tempting to pursue further. The things that make it impossible are the most intriguing things. The researcher must though know that it will be an uphill battle.

As seen and heard in the conducted interviews there are many common themes that trigger flashbacks, such as smell and childhood moments are often mentioned. We have this arsenal of weapons but they seem to fall short. We have to realize that for these common aspects to work, we need to work around the fact that involuntary memories are exactly that, involuntary, and cannot so easily be triggered.

The final project could though be in Oliver Sacks words: “a powerful mnemonic stimulus of certain words, sounds, scenes and especially smells” (Sacks 151) The project would not necessarily create flashbacks in the participant but rather create an understanding of the importance of our and other’s memories. They are the tools that makes us think ahead, simply because we can fathom a future because we remember our past. If we don’t remember, we live in a vacuum of time. There is nothing in front of us because there is nothing behind us.

By experiencing someone’s involuntary memory you could have a flashback yourself although it’s highly unlikely. What is more likely is that by encountering someone else’s flashback, you could remember something from your own past and start a chaining process that could lead you to a forgotten memory.
Using a monument of someone else’s involuntary memory could trigger a voluntary memory of your own. When searching for a possibility of recycling memories, we are not talking about simply repeating them. When things are recycled they seldomly come in the same form as they were manufactured in. A change takes place and in the same way a certain metamorphosis takes place when recycling memories, from a flashback to a voluntary memory. Seeing someone’s past through a recollection of an involuntary memory may bring out your own memories, whether the memories are similar or completely different. By encountering someone’s flashback, you may connect with your own experiences and interpretations, as well as gaining empathy for the person whose memory, or at least story, you have encountered.
12. Appendix

What happened during the exhibition period? As was predicted the theories that were discussed in the thesis seem to hold inspection. People experienced flashbacks from the triggers portrayed to them though it should be noted that not everyone was that lucky. As has been discussed we do not have the same experiences nor history as other people and for that we should be thankful. For a long time, my thoughts were to exhibit a certain kind of toolbox that could mediate involuntary memories of others. The box would function as a mediator of a memory that could trigger conversations and recollections.

Since the form of the final project would be through an exhibition I decided to modify the idea so it could be more interactive and immersive. I opted for creating cabinets hidden inside of a wall. By opening into a white wall and find a colorful space with a sensory stimuli’s, the visitor is opening a door into a secret immersive world of memories. The cabinets remind of cabinets of curiosities, places for wonders and of the secret place where our forgotten memories reside.

I chose two memories from my interviews to mediate through the final project. I chose them because they complemented each other in that sense that they had different sensory triggers.
Ari is telling us about having a flashback triggered by the smell of a Blistex, a lip balm. The smell transported him 10 years back in time to the small town of Svarfaðardalur, where he lived as a teenager, and brought up the memory of his favorite record of that period, War by U2.

His cabinet is the blue/grey one as I feel that color manages to represent the color of the sky in Iceland during these months of twilights.

Katrina’s cabinet is orange as her memories described vividly the 60’s like colors in the kitchen. Her trigger is the music of the Carpenters leading up to the smell of medicine. Both were presented at the exhibition.
The function of the cabinet is that you squeeze the black pump and by doing so a smell comes out of the other tube. Since both of the memories I chose are connected to music I installed a little music player in the wooden box. By doing so I create a soundscape that is both fragile and vague. I feel that is a good metaphor for remembering. You feel that it’s so close but at the same time it’s quite distant.

Representing a memory as a cabinet inside a wall could be representative of giving a little glimpse inside the mind of the rememberer. The wall could be a representation of an individual and by opening up a cabinet inside that wall you are gaining a peak inside of that person’s life.

Several exchanges of memories took place during the time of the exhibition.

What was exhibited were triggers of two memories that I had gathered during my interviews in Iceland.
Before the exhibition opened I thought of what could ignite the sharing of memories. I wanted to use different approaches to observe the space that the piece was in.

During the expedition opening I dressed up, put on a bow tie and sported a blazer. I was playing the role of the creator and in that way I was representing authority. People in Konstfack seem to have a complicated relationship with people in blazers and a bowtie. It is most probably from the notion that business people should wear suits and the creative personal should wear something more informal.

At the opening, I was in a way representing authority and therefore I felt I could approach people more easily. At the same time I was playing a role for the viewer as well as playing a role for myself. I was the catalyst for approaching people. I started to ask questions about their memories and their flashbacks after they had examined the degree work. The result was all in all in the mould that they would most often share a flashback with me even though it was not me that had shared a memory with them.

One shared memory was quite memorable. A Pilipino lady was so touched by the piece because she had a really vivid flashback herself when she had a whiff of the Blistex smell. It had in fact the same smell as an ointment that her mother would put on her chest when she was a young girl. She was really touched and wanted to have her picture taken by the piece for her mother. This was definitely the most extravagant case. Many other cases where that the did not have associations with the smells that were being presented but on
the other hand they often shared a flashback with different kinds of sensory, more than often it was connect to a olfactory stimuli.

Another day I was much more passive, I just sat on my chair in the space and did not question people unless the approached me. I was pleasantly surprised how many folks decided to talk to me although I did not play the role of the instigator. I managed to have a couple of intriguing discussions with people about the project, their flashbacks and memory in general.

I did as well take a part in the space as a viewer in the sense that I walked into the space just after someone and pretended to have nothing to do with the piece. I managed to eavesdrop on other people's reactions and discussions about the project. Through my limited Swedish I could understand that people often talked about their own memories.

The project did not aim to trigger flashbacks in the same sense as previous experiments have tried to do. The aim was to document and mediate involuntary memories of others in order to awaken a personal connection and recollection. The purpose was not trying to force the experiences, or the memories on the viewer but rather to start a chain reaction of
memories. By mediating an involuntary memory of a rememberer to a viewer, a fortuitous encounter is created and by chance it could act as a trigger that manages to dig up a forgotten memory and hopefully a level of empathy. One of the biggest findings during the process of interviewing people was how “real” people become when they talked about their memories. You create a better understanding of them as persons, where they are coming from. It all fits together; persons and their action make sense. During the short display period I learned several things. First of which is that experiencing someone else's trigger for involuntary memory can lead to a recollection and even a flashback. I had several interactions with people that talked about their memories and associations that they had with the sensory stimuli presented. Of course not all can connect to these stimuli but that was expected as we all have different experiences. I was surprised how strongly people connected to the smells and sounds to their own history. I feel a big part of the project was to spark conversations between the visitors about their memories and therefore creating a better understanding of them selves and one another, creating empathy. According to my experience the project succeeded in engaging visitors in discussions about their memories and experiences. By presenting involuntary memories we trigger reactions from the visitor whether it is some thoughts, discussions or memories of their own, thus making them recycled memories.
Bibliography


Eldjárn, Ari. Personal interview. 4 March. 2013.


Guðmundsson, Einar Már. Personal interview. 8 March. 2013.

Helgason, Hallgrímur. Personal interview. 4 March. 2013.


<http://visindavefur.hi.is/svar.php?id=3947>