Deletion and digital memory: user study of mobile application “Delete by Haiku”

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Abstract
This study aims to analyse the interconnection between human memory and digital media technology, and its relation to forgetting and deletion. The main focus area is related to short messages (SMS) as a form of digital memory and mobile application *Delete by Haiku* that assists the user in creating poetry out of stored messages. The reception analysis approach was chosen and individual in-depth interview method was combined with focus group interview. The collected data regarding human memory and media indicates similarities between theoretical claims and respondents’ views; memory could be perceived as a narrative, storytelling, fading away. Informants’ relation to memorabilia and their deleting practices are very dependent on the personal and professional characteristics. Besides, deleting practices could be related to organization of a physical space. *Delete by Haiku* app could be seen as an invitation to engage into playful process of creation through deletion, however mostly for the people attached to memorabilia.

Keywords: deletion, human memory, memorabilia, forgetting, smartphones, SMS, digital memory, haiku poetry generation, deletion through creation.
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1. INTRODUCTION

“A longing for memories, for capturing, storing, retrieving and ordering them; this is what digital memory culture is all about”.

Human memory has a tendency to fade away over time and we cannot control the processes of remembering and forgetting. Nowadays we are surrounded by technology that does not forget anything and it might seem that we are in charge what to delete and what to keep forever. In the era of new media and digitalization we rely on technology on a daily basis. In post-industrial societies a large part of daily communication is mediated through the technology, therefore it leaves traces and is stored somewhere. Losing a phone or other technological device refers to lose of data, memories and experiences. As a result, we save and back up most of our textual and visual data and keep developing bigger and bigger digital archives. The issue that I want to point out is whether we control our digital memories and what is the purpose of recording and storing.

Recently one of the friends said, “mobile phones are like babies”: we keep them close to our bodies, protect from any damage, and carry them wherever we go. Mobile phones could be better described as palm-held personal computers, devices containing all functions and past technologies. One of the quite new features of phones is the touch screen that results in near-invisible user-interface relation. “This interface is easy to take for granted because it is physically transparent and creates the feeling of a near-seamless interplay between body and the machine” (Gane and Beer 2008: 60). Furthermore, mobile phones could be perceived as “toy objects”, which empower its users to reach out to the people on the other side of the world with just a simple action of pressing a button (Kopomaa 2005: 152). Current mobile phones provide access to social media and entertainment facilities, enables constant and simultaneous sharing, and following one’s interests and friends.

1.1 Background: Delete by Haiku application and project

1 Garde-Hansen, Hoskins and Reading 2009: 5
Delete by Haiku is an interactive art project consisting of a mobile application and art installation. The group of researchers (artist, designer and programmer) at The Mobile Life VINN Excellence Centre has developed the project exploring aesthetic experiences through the processes of creation and deletion within the field of Human-Computer Interaction. Delete by Haiku mobile application compresses users’ archives of SMS messages into short and expressive haiku² poem. In short, this application feeds off the user’s accumulated SMS messages and assists the user in creating poetry out of past messages. The user can take advantage of different modalities for selecting groups of messages (by time, by topic, by thread, individually, or any combination of these), and progressively ‘deleting’, or perhaps rather ‘compressing’ them into a short haiku poem³. “Our goal was to be creative with data, which at least from the users’ perspective, could constitute a mere chunk of hoarded ‘waste’” (Simbelis et al., forthcoming 2014).

Also, I would like to mention that the reason I chose this topic and specific user study was the opportunity to explore, analyse and be part of this project at The Mobile Life Centre. The possibility to be insider and follow the development, face the problems and potential of mobile technology added valuable knowledge and insights to this thesis. At the same time, the pressure of manoeuvring between two research fields (Media and Communication; Human-Computer Interaction) was felt. Moreover, the user study and selection of informants might be easier conducting analysis of the established mobile application.

1.2 Aim and research questions

The main focus area of this project is related to short messages (SMS) traffic over time in the ways that reflect the lived experience. This thesis is analysing SMS as a form of mediated memory and its transformation into haiku poetry.

The aim of this thesis is to explore the interconnection between memory and digital

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media technology, and its relation to forgetting and deletion. It can be divided into the following research areas and questions:

1. How do the studied individuals perceive memory?
   • What are participants’ relations to memories and ‘memorabilia’ (records of past memories)?

2. What are participants’ notions of their personal archives (what is stored; if and how it is accessed and shared; how it is managed)?
   • What are informants’ relations to different content (such as: pictures, emails, SMS, documents, video, audio)?

3. What are their deleting practices?
   • How is the choice between deletion and saving made?

4. What is the relevance of SMS writing to the informants in the era of digitalization?
   • Do the studied individuals treat SMS as part of memorabilia?

5. What are the users’ experiences about Delete by Haiku and its relation to their memories?

Empirical part of this thesis will be based on audience reception analysis about users’ experiences and understanding of memories in the process of SMS deletion and creation of a new content. It is worth noting that application Delete by Haiku contains completely opposite processes – creation and deletion – one creates and builds, another – destroys. Therefore, the aim of the empirical study is to engage users into evocative experiences and grasp their perceptions about creation through deletion.

2. THEORETICAL FRAMEWORK AND CONCEPTS

2.1 What is memory?

2.1.1 Memory as remembering and forgetting

At first glance the concept of memory seems self evident and experienced on a daily basis. However, deeper insight provides us with quite abstract ideas. What we have
experienced is actually the act of remembering but not the memory as such. Pierre Nora notices that, “[w]hat we call memory is in fact the gigantic and breathtaking storehouse of a material stock of what it would be impossible for us to remember, an unlimited repertoire of what might need to be recalled” (cited in Hoskins 2001: 344).

Even modern neurology has been relying upon the fundamental assumption that memories exist in our brains as some kind of permanent storage. Therefore, memory is related to attempt to reproduce the original event or experience (Hoskins 2001). According to Viktor Mayer-Schönberger, what we call “human memory” is information stored in a long-term memory. Even though information in a short-term memory can be easily retrieved, it fades very quickly—in a matter of seconds, eliminating most of the information. Remembering could be understood as a two-step process since it involves referring information to long-term storage and recalling that information (2009: 20).

One could trace a long history of mutual relationship between media and memory. Since prehistoric times human beings tried to expand and improve their ability to remember, share, store and retell their knowledge and experience. As Andrew Hoskins argues, digital memory serves “…first, to compensate our own flawed capacity to remember and second, to share these moments from times passed with others – and millions of prurient viewers” (2001: 336). However, films or photos are not “memory”; they are mediated building blocks molded during the process of remembering (Mayer-Schönberger 2009: 24), “the raw material of history” (Le Goff cited in Hoskins 2001: 344). We can perhaps talk about and analyse only “memorabilia”⁴ – a record (providing permanent evidence or information) of and about past events.

2.1.2 Memory in the era of digitalization

According to some theories digitalization is changing the conception of memory, recollection and remembering (Hoskins 2001; Garde-Hansen 2011; Van Dijk 2005; Beer 2013). “Keeping track, recording, retrieving, stockpiling, archiving, backing-up and saving are deferring one of our greatest fears of this century: information loss”

⁴ www.thefreedictionary.com
According to Joanne Garde-Hansen, humanity’s need to remember and the limitations of memory drives human beings to extend the capacity of their memory through the forms and practices of media (2011). Therefore, the media could be perceived as the extensions of memory. Computers, smartphones, cameras are structured into everyday life and extend human memory’s capacity and performance.

According to Jose Van Dijk, digital technologies tend to change the “…nature of our memory: they may introduce tentativeness as a stage in the memory process; they may prompt a multimodal sense of remembering and reconnect memories of the self to reflections of others or to reported events in the world at large” (2005: 313).

A very important notion worth mentioning is that, digital media enabled us to “…move from a ‘read-only’ memory (produced by media institutions) to a ‘read-write’ memory (produced by millions of creative citizens) as ‘amateur culture’ that is produced ‘for love, not for money’ as a democratised cultural memory” (Garde-Hansen 2011: 54). Further elaboration on the democratised cultural memory could lead to the shifting notion of archive, which is not so clear and definite anymore in terms of sizes, space, establishment, author and control. Mike Featherstone argues that archiving now “may not just be the activity of the solitary researcher wandering through the scholarly or official archives, but the activity of individuals in everyday life who seek to preserve documents, photographs, diaries and recordings to develop their own archives as memory devices” (cited in Beer 2013: 48). Moreover, the line between private and public data became rather blurred and a quite big part of our personal archive is available publicly. Therefore it is worth rethinking the archive in the light of changes brought about by digital communications and storage media. Online technologies have opened new possibilities for the remote storage of images, sounds, texts that are accessible to the masses.

According to Mayer-Schönberger, nowadays we have impressive technologies to help us communicate with each other. However, despite having the tools to communicate, memories are lost if one cannot share them (2009). Technologies of self are thus in and of themselves social and cultural tools; they are means of reflection and self-representation as well as communication (Mayer-Schönberger 2009: 39).

As Mayer-Schönberger states, mediated memories refer to acts of memory and to
memory products. By selecting, recording, rerecording, and sharing assorted items of mediated culture, people build up their personal collections as an evolving project of self-formation (2009: 24).

Commonly biological memory is divided into long-term and short-term. However, we all have experienced how nondurable and sometimes brief our long-term memory is. However, in the era of digitalization we have possibility to bypass the shortages of human memory. “With such an abundance of cheap storage, it is simply no longer economical to even decide whether to remember or forget” (Mayer-Schönberger 2009: 20). Digital technology provides us with means for cheap and reliable storage for our “memorabilia”. Do we benefit from such “perfect” memory or are we completely lost and imprisoned in our past?

Mayer-Schönberger argues that for the first time in the humanity’s history remembering is as easy or even easier than forgetting and we are facing fundamental question of whether we would like to remember everything forever if we could. However, he perceives digital remembering as a curse: “as we undermine biological forgetting through the use of digital memory, we make ourselves vulnerable to indecision or incorrect judgment” (2009: 72). Nowadays people are facing problems and issues like: filtering, selection, data management and interpretation challenges that have hardly existed before. Perfect remembering exposes us to what forgetting has mostly shielded us from. AJ is one of the few persons with nearly perfect long-term memory, however for her “remembering everything is both maddening and lonely” (Mayer-Schönberger 2009: 17). Even though our memory is fleeting and often unreliable, it enables us to abstract and generalize, to reason swiftly and economically, and to act in time, rather than remain caught up in conflicting recollections (Mayer-Schönberger 2009: 21).

However, one could probably argue that remembering is exceptionally human feature and what we call ‘digital memory’ is just technological devices or storage that have nothing in common with actual remembering. Probably it’s just a matter of settings or some changes in programming of technology and ‘perfect’ digital memory is gone. Maybe just because the term ‘digital memory’ became so commonly used we relate technology of information storage to human memory.

Moreover, without proper data management procedures, including frequent and
reliable backups in place, the benefits of digital storage cannot be reaped fully. There is no question that the amount of information people captured and committed to various types of external memory drastically increased over the last quarter century, with tools and devices emerging to aid our memory.

As Mayer-Schönberger states, it is important to “remember how to forget in the digital age” (2009: 18). Even though he may sound a bit too dramatic: “past follows them, ready to be tapped into by anyone with an Internet connection” (2009: 65). However, recent changes in European Commission ruling “Right to be Forgotten” proves it to be quite problematic and relevant issue.

2.1.3 ‘Memobilia’ – a form of wearable digital memory

According to Garde-Hansen, young people are more focused on capturing and storing everything about their own life. For teenagers who have grown up with their own mobile phone, memory is something very tangible, physical and positioned in space: they capture it, archive it, hold it, carry it around, play with it, plug it in, and so on. (Garde-Hansen 2011: 140). Reading is using a term ‘memobilia’ to refer to digital phone memories that are wearable and shareable multimedia data records of events or communications. Mobile phones are unique in relation to most other interactive media because they can be worn on the body; therefore they became like the life recorders, making it easy for people to collect life memories through images and messages (Reading 2009: 84). We can also see the new trend of measuring everything one does brought by smartwaches.

2.1.4 Memory as a form of narrative

Whenever we recover some aspect of the past, we do so in a new context. Moreover, every time we represent an aspect of the past to ourselves we inevitably change it.

5 “Right to be Forgotten”: Individuals have the right - under certain conditions - to ask search engines to remove links with personal information about them. This applies where the information is inaccurate, inadequate, irrelevant or excessive for the purposes of the data processing. Available at: http://ec.europa.eu/justice/data-protection/files/factsheets/factsheet_data_protection_en.pdf (accessed 23 June 2014).

6 Memobilia are an emergent memory form developing with people’s use of the mobile phone with three integral features. The first is a dialogic or polylogic relationship to the self or me; the second, a range of mobilities and mobilisations enabling the capturing, managing and sharing of data while travelling, and the third, the ability to be copied as a unit of information giving it meme like qualities” (Reading 2009: 90).
“Individual memory is dynamic, imaginative and directed in and from the present” (Garde-Hansen, Hoskins and Reading 2009). The moment we are trying to recall is not ‘fixed’, therefore the process of a memory forming requires a (re)construction of an event, person or place (Hoskins 2001: 335). Moreover, we remember events by retelling them and rethinking of them. Therefore, “renarratization is essential to memory”, since it operates as a “constantly rewritten script” (Sturken 2002: 200). In that sense we could perceive our remembrances as a collage of the past events and experiences in quite a similar manner as a generated haiku poem. One could probably see the connection between associative and filtering nature of human memory, technological features of the application and Haiku poetry.

Hoskins is raising very important question if photographic images allow the memory to come forth, or rather creates the memory itself. According to him, capturing images results in a preserved framing of a particular moment (2001: 338). Thus, what we remember depends quite a lot on the family or personal photo albums, as well as the images provided my the mass media. Therefore, the picture’s author’s role is rather important especially one’s photographic skills, preferences, views.

According to Gane and Beer (2008), the forms of past media technologies are remediated into the content of new media. As a result, new technology transforms the content of all communication in the form of binary code. “The code is all but invisible to the human eye, for it is designed to be processed by machines that follow their own preprogrammed rules of operation (Gane and Beer 2008: 108). It raises questions about interactivity of the new media and user participation in creating the media content. Our participation and interaction with the media is in fact quite limited and defined by the media institutions. Application Delete by Haiku works in the similar manner: it requires active user participation and content generation, however, in a limited and predefined ways.

2.2 Deletion, forgetting and reappearing

Larger inboxes and free email accounts mean that pressure to delete email has diminished rapidly in recent years. Google’s “never delete” ideology has arguably been one of the major motors and prime examples of the trend of storing digital
information in a limitless fashion. Space is not a constraint anymore and the act of recording and storing files, images, audio and other data becomes a routine (Van Dijk 2005). However, some academics argue that we should appreciate that information has a lifespan and that forgetting is not always a failure (Garde-Hansen 2011; Mayer-Schonberger 2009). Mayer-Schonberger suggests ‘an expiration date for information’. Van Dijk raises interesting question about “time to enjoy and relive recorded cultural and personal moments, while constantly being engaged in capturing and storing the newest and latest experience” (2005: 312). Thus, we should question a value, usefulness and loss of track of such records.

Many software projects (Shoebox, EOD, Lifestreams, Memories for Life or MyLifeBits) were created in order to lead us through plethora of digital memorabilia, to assist in finding particular items and save time to relive captured moments. However, very interesting observation made by Van Dijk is that due to digital technology, people are becoming life-recorders more interested in the act of collecting and recording than in the actual collection (2005). Perhaps the purpose of our personal archives has changed hand in hand with the technology, and retrieval to our records is not an issue anymore as long as we enjoy the process of recording and collecting and knowing that it is somewhere stored. Van Dijk very explicitly deduces that “the ultimate goal of memory is not to end up as a PowerPoint presentation on your grandchild’s desktop; the ultimate goal of memory (and memory machines) is to make sense of our lives, to create our own meanings of living” (2005: 329).

The process of deletion in the Delete by Haiku could be perceived as reusing or recycling the flow of SMS. Users do not simply loose their digital data by deleting it, but have a possibility to engage with data in creative and playful ways. In this particular case the process of deletion creates something substantially new.

To deal with the creative generation of new things from the old, it might be useful to look at the concept of ‘recycling’. According to Chambers, ‘recycling’ could be seen as the ideal of the day: “With electronic reproduction offering the spectacle of gestures, images, styles and cultures in a perpetual collage of disintegration and reintegration, the ‘new’ disappears into a permanent present. …[W]e move into a perpetual recycling of quotations, styles, fashions; an uninterrupted montage of the ‘now’” (Chambers 1986: 190). The idea of reusing and reappearing could be perceived in many ways. For Baudrillard, everything “[w]hat has disappeared has
every chance of reappearing. …[W]hat disappears passes into the state of constellation. It becomes an event in a cycle which may bring it back many times…” (1990: 92).

Haiku as a form of poetry and medium could be seen as a part of the process of circulation and reproduction. The functions and status of old form of media are shifted by the introduction of new technologies. According to Jenkins, “old media never die. What dies are simply the tools we use to access media content. Each old medium was forced to coexist with the emerging media” (2006: 13). “Delete by Haiku” project could perhaps be perceived not only as exploration between deletion and creation of digital data but also as convergence of the traditional poetry technique with the new media.

Some examples worth mentioning addressing deletion are “Snapchat” application, where sent and viewed pictures are destroyed within a predefined time interval, or “Meteor” – that deletes user’s images automatically after a certain amount of time.

2.3 SMS as the culture of written communication

We could perceive SMS as a sort of communication culture, meaningful communicative practices for dealing with interpersonal communications media. From this point of view SMS as a written form of communication could be compared with letter and e-mail. The function of an e-mail or SMS is wider, since it can function like a phone call as well. Even though the time of transmission of a written message is quite different (Höfflich and Gebhardt 2005: 11). Some theorists use the term “mobile email” to describe messages (text and images) sent via short message services (SMS), as well as mobile Internet services (Ling, Julsrud and Yttri 2005). Having in mind these features of SMS one can presume that it affects the language we use. SMS texting is quite complicated and inconvenient compared to speaking or typing on a keyboard. Therefore, one could expect to find strategies to save time, effort and space in the SMS language (Hård af Segerstad 2005: 35). This particular thesis is focusing on SMS as a form of mediated memory and its transformation into haiku poetry; therefore, it might be relevant to look deeper at the particularities of the SMS language. According to Hård af Segerstad, humans have the ability to adapt their behaviour, including linguistic behaviour or language use, according to various
factors. People use their knowledge and experience from their previous communication through various channels and for various purposes, and use their language in a manner suitable to the specific communicational situation (Hård af Segerstad 2005).

Most texts about digital memory and archive are dealing with online material. However, such multifunctional devices as smartphones minimize the difference between SMS and email. Especially having in mind products like, WhatsApp Messenger\(^7\) or Line\(^8\). As a result, SMS functionality and usage gets into quite uncertain position, in between of phone and Internet services.

2.3.1 The language of SMS

Ling describes language in SMS as a ‘trans-linguistic dragqueen’, since it includes characteristics of both spoken and written communication. Among several elements, he points out that SMS is more like speaking than writing because one often finds immediacy and informality in the communications: messages are often produced in first person, present tense and there is generally a lack of ceremony (Hård af Segerstad 2005: 36).

Studies have shown that texting is often used in a context for mediating and maintaining social relationships. The language in those exchanges are most often characterised by being informal everyday talk. One of the reasons is that most messages are sent between friends who share considerable amounts of personal background knowledge (Hård af Segerstad 2002; Telia/Temo 2002; Ling 2003 cited in Hård af Segerstad 2005).

Many linguistic studies of SMS communication (Thurlow 2003; Bodomo and Lee 2002; Kasesniemi 2003) report similar findings about particular features and various ways in which language is reduced and shortened (Hård af Segerstad 2005: 37). The most common texting linguistic practices are: acronyms and initials; letter/number homophones; ‘misspellings’ and typos; non-conventional spellings; omission of

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\(^7\) Cross-platform mobile messaging app that allows users to exchange messages without having to pay for SMS. (http://www.whatsapp.com/), (accessed 18 May 2014).

\(^8\) Mobile messaging app with various stickers and free voice & video calls (http://line.me/en), (accessed 18 May 2014).
The algorithm and vocabulary of Delete by Haiku application cannot deal with all the shortenings, misspellings and other “inaccuracies”. However, some of the popular shortenings (such as: OMG, LOL) were incorporated into the app’s vocabulary.

Together with linguistic aspects of SMS language it is important to consider ethical rules and thematic typology. Having in mind the content of SMS we can presume the specific characteristics of vocabulary used for haiku generation. Ling, Julsrud and Yttri (2005) analysed over 865 messages gathered from a random sample of Norwegians (all age groups) in 2002 and established main topics of messages:

<table>
<thead>
<tr>
<th>Genre</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle future coordination i.e. things that would happen in the next hours or next day</td>
<td>23%</td>
</tr>
<tr>
<td>Questions</td>
<td>11%</td>
</tr>
<tr>
<td>Grooming i.e. messages giving complements or engaging in “small talk”</td>
<td>10%</td>
</tr>
<tr>
<td>Near future coordination i.e. things that had already begun or would happen in the next minutes</td>
<td>8%</td>
</tr>
<tr>
<td>Short one word answers</td>
<td>8%</td>
</tr>
<tr>
<td>Emotional grooming</td>
<td>6%</td>
</tr>
<tr>
<td>Commands/requests</td>
<td>6%</td>
</tr>
<tr>
<td>Information</td>
<td>5%</td>
</tr>
<tr>
<td>Personal news</td>
<td>5%</td>
</tr>
<tr>
<td>Location information</td>
<td>3%</td>
</tr>
<tr>
<td>Sexually related jokes</td>
<td>2%</td>
</tr>
<tr>
<td>Distant future coordination</td>
<td>2%</td>
</tr>
<tr>
<td>Invitations</td>
<td>1%</td>
</tr>
<tr>
<td>Jokes</td>
<td>1%</td>
</tr>
<tr>
<td>Thank you notes</td>
<td>1%</td>
</tr>
<tr>
<td>Apologies</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Safety issues</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Creative messages</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

Figure 1: The genres of SMS messages. Source: Ling, Julsrud and Yttri (2005: 83).

The above mentioned issues, such as: shortenings, deletion of subject, preposition, article, possessive pronoun and quite limited amount of topics discussed via SMS eventually aggravated the development of the project and limited the richness of generated haiku poems. However, it would be interesting to note whether the usage of Delete by Haiku could develop certain linguistic practices (longer, grammatically correct SMS messages; descriptive language). Could it be possible to trace the main
genres of SMS communication in the generated haikus?

2.4 Haiku as a poetical and technological expression

An old pond!
A frog jumps in--
the sound of water.  

Haiku as a form of poetry originated in the sixteenth century Japan. Haiku by its nature aims to reflect or evoke emotion using an extremely economical linguistic form (Netzer et al. 2009). It is perhaps the smallest form of poetry in the world, yet it can say important and deep things about our feelings and surrounding environment. Haiku was traditionally written in the present tense and focused on associations between images, which support a deeper level of feeling. There was a pause at the end of the first or second line, and a season word, specifying the time of a year. The original form of poem is consisting of three lines of five, seven and five syllables, although modern and non-Japanese versions of haiku loosened this requirement. However, the philosophy of haiku has been preserved: the focus on a brief moment in time; use of provocative, colourful images; ability to be read in one breath; sense of a sudden enlightenment and illumination.

Probably the depth and shortness of the haiku evokes quite different perspectives and understandings. Bruce Ross describes haiku as a “quite beauty of ordinary things” that emphasizes “simplicity,” “intensity”, and “directness of expression” (2002). Also, haiku could be perceived as unfinished poems that require co-operative readers to fill the poem’s empty spaces with their own experience and imagination; incomplete metaphor or open doors that look closed. All these descriptions imply the use of the latent power that can sometimes be unexpectedly released by a slight change in point of view or angle of perception (Eaton 2009: 331).

Nowadays technology can be used to create systems generating poems. Theo Lutz

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9 Classic haiku by Matsuo Basho

10 Academy American poets
http://www.poets.org/viewmedia.php/prmMID/5782#sthash.oh78aV7q.dpuf, (accessed 12 April 2014)
developed a system of poem generation for the first time in 1959. “Hitch Haiku” is one of the more recent systems generating haikus by “hitching” the phrases chosen based on the users’ inputs. The inputs are users’ choices of the arbitrary phrases from a famous Japanese essay. “The user inputs some words into the system, and the system composes phrases consisting of five-seven-five characters which most fit with the user input” (Tosa et al. 2008).

The traditional, established news media institution developed another interesting initiative. The New York Times started “experiment in automated poetry detection” that is based on algorithm that periodically checks The New York Times home page for newly published articles and scans each sentence looking for potential haikus. An electronic dictionary – containing syllable counts and basic rhyming lexicon is used to generate haikus, such as (Harris 2013):

Stop the machine and
scrape down the sides of the bowl
with a spatula.

2.4.1 Can haiku writing be useful?

Can we learn something from such an old poetic form as haiku? Could we adapt the simplistic view of haiku to our digital data? Probably the philosophy of haiku could be useful in everyday life, enable us to see behind the surface, deepen our senses or amplify the value of quality instead of quantity. Postmodern consumerist society could definitely benefit from stopping and enjoying the moment of time. As Ross states: “It is very difficult to do something small in a meaningful way (...) to write a haiku means to write about how you feel at a certain moment in time” (2002: 1). The process of haiku writing could probably be perceived as some sort of meditation or balancing act. One could see haiku as an elegant and silent moment of awareness, insight, surprise, delight, however in a non-descriptive, explanatory, sentimental or dramatic manner (Ross 2002: 18-22). According to Ross, when we write a haiku “we are trying to present the deep feeling we experienced and describe what we saw” (2002: 11). Henry David Thoreau, a contemporary American poet, has even suggested that haiku, through nature, can heal the problems of society. Also, haiku writing “…claims and confirms one’s experience of the world and offers an opportunity to
construct ideal experiences which enrich one’s inner life” (Ziliak 2009: 123). Stephen T. Ziliak is talking about haiku from economy perspective: haiku writing helps to see language as the economy and the economy as language and thus economic writing and powers of observation could be improved in terms of clarity, accuracy, lucidity, decorum, elegance and especially economy. According to him, a wide variety of poets have practiced writing haiku simply to improve their own powers of observation (Ziliak 2009).

It is interesting to see if the usage of the app could work in a similar way as haiku writing. As Higginson observes, writing haiku “help[s] make our language more accurate, base our writing in images [not abstractions] and cut our words to the essentials.” (Higginson cited in Ziliak 2009: 123). Also, haiku can be refered to as “the most powerful tool of all writing”, because the idea of haiku is to get beyond language, to achieve a transparency of language inherent in wordlessness, and the whole point is to be suggestive—to avoid overt statement or claims that can be pinned down (Ziliak 2009).

2.5 Concluding remarks

The concept of ‘remediation’ can be useful analyzing media and memory interconnectedness. It allows us to think about digital media not as a radical break but as a process of reformulating, reformatting, recycling, returning and even remembering other media. No medium, it seems, can now function independently and establish its own separate and purified space of cultural meaning (Bolter and Grusin 2000: 55). Media are continually commenting on, reproducing, and replacing each other, and this process is integral to media. Media need each other in order to function as media at all (Bolter and Grusin 2000: 60).

Could similar processes be traced in Delete by Haiku app usage? Even though limited control of the process is provided to the user. However, the results gained from the digital creation does not have to be finished, it could become a source for other haikus generated in the same application by selecting several old haiku poems and regenerating them into a new one. Or the results could become a source for further development in the real life creation, by discussing, changing, adding, twisting, and similar ways of polishing the poem. In this way, the digital process of creation is
combined with the real life experience and creation of human memories. Maybe even
traditional haiku techniques or styles could be involved in this process.

According to Garde-Hansen, Hoskins and Reading, “…memory has projected itself in
multiple media and formats over the last few centuries: as script, audio, images,
artefacts, sculpture, artwork and architecture to name but a few” (2009: 8). However,
“… any attempt to save memory always entails loss and forgetting as well as
additions and supplements. We save our pasts only as something else: something
different, something less than, something more than” (ibid.: 14).

To summarize, most research examining digital media and memory focus on public or
cultural memory; collective memory within realm of new media (Sturken 2008); the
role of communication technologies for shaping social memory and forgetting
(Sturken 1997, Hoskins 2001). Memory studies analyse how people remember certain
events (Keightley 2010). Therefore, it could be said that the analysed topic is new and
unexplored, especially having in mind interdisciplinary and artistic aspect.

3. METHODOLOGY

In this part methodology and the chosen methods to gather empirical data will be
presented and discussed in relation to previously defined research questions.

3.1 Introductory remarks

“Delete by Haiku” project was presented at two events. The initial feedback about the
app was gathered during the Open House presentation at SICS (Swedish Institute of
Computer Science), March 27th, 2014. Another demo presentation was held on April
17th, 2014 at KTH, Student Interaction Design Research conference (SIDeR’2014). At
this point of research uncertainty was felt about the topic, mobile application and its
relation to memory. Therefore, above-mentioned events were treated like a pilot study
to check the research questions and their relevance. Conversations with events’
participants focused on the relation between SMS messages and memory, whether
messages could be treated as a form of memory records. Most of the gained feedback
was supporting, such as: “It’s nice to have story of communication”, “SMS are part of
I used to write down the important ones”, “I like to look through them”. Also, it was seen as a good opportunity to make initial contacts with possible informants, thus contacts of interested and willing to contribute people were gathered.

### 3.2 Methods

The conception of empirical study was quite shifting during the research period. Also, the interdisciplinary research topic made it quite difficult to find the right method. According to Emily Keightley, despite the increasing academic consideration and use of memory and remembering, there has not been an expansion in the debate around the methodological issues associated with memory. The interdisciplinary nature of the field of memory studies has neither agreed definitions, nor methodological co-ordination, resulting in suggestive and stimulating insights which are often in need of further elaboration (Keightley 2010: 56).

The initial idea was to combine ethnographic observation and interview methods. First of all, *Delete by Haiku* app had to be finished and available to download. However, this process took an additional month and in some cases technology proved to be unreliable. In the end, reception research was chosen as a most suitable for the particular case. Reception research could be described as an empirical study of the social production of meaning in people’s encounter with media discourse (Schrøder et al. 2003: 147).

The main question is how users (or audience in other words) perceive and use app *Delete by Haiku* (in other words medium)? Therefore, it could be said that this research is aiming to understand how people experience media content and the medium itself. As Kim Schrøder et al. state, we have to use a research approach that enables us to explore the process through which people actualize media meanings and incorporate them in meaningful ways into their daily lives (2003: 122). Furthermore, reception research about interactive communication is bringing together two modes of inquiry that are still to some extent, leading segregated lives: testing the technological communication systems known as ‘usability research’, which focuses on navigational aspects of computerized communication; and the more traditional kind of reception research that explores the user’s meaning processes as they are anchored in situational and contextual circumstances in the users’ cultural environment (Schrøder et al. 2003:
According to Schröder et al. the prescribed methodological approach to reception analysis is some kind of quantitative interview, in which viewers verbalize their experiences of media material (2003: 122). Qualitative research interview is “used as a discursive generator for obtaining an insight into the interpretative repertoires at the disposal of informants as they make sense of a specific media product” (2003: 143).

Therefore, for data collection individual semi-structured depth-interview and focus group interview were selected as the most “preferred methodological approach of reception research” (2003: 125). Both methods were used to answer the same research questions and all interviews followed the same interview guidelines (see appendix A). However, it is worth noting that focus group was used more like the ‘entrance to the field’. It is less time consuming method compared to individual interview and provides broader scale of opinions and views. Also, focus group interview was seen as a way to recruit participants for individual interviews. On the other hand, semi-structured form of individual interview allowed the participants to lead the discussion and fully explore and articulate their relation to memorabilia, deletion practices and Delete by Haiku experience. To sum up, these two methods used together work hand in hand and supplement each other in terms of gaining broader and deeper data for analysis.

3.3 Focus group

3.3.1 Focus group methodology

Focus group interviews provided means for exploring the concepts of digital memory and deletion. It was used to test theories, ideas and get evaluation and feedback from the broader audience. Also, it was a way to meet potential individual interviews’ respondents and explore different ways people talk about research area. According to David W. Stewart and Prem N. Shamdasani, focus groups provide data that are closer to natural and indigenous form, because it allows individual language, categorizations and associations (1990: 13).

Focus groups are particularly useful for explanatory research where rather little is known about the phenomenon of interest. Focus groups are used to obtain general
background information about the topic of interest; stimulate new ideas and creative concepts (Stewart, Shamdasani 1990: 15). Focus groups allow respondents to react to and build upon the responses of other group members. This synergistic effect of the group may produce data or ideas that might not have been uncovered in individual interviews. (Stewart, Shamdasani 1990: 16)

According to Schröder et al. meanings and opinions are constantly changing as people negotiate their inherent ambivalences under different situational and social circumstances (Schröder et al. 2003: 148). Therefore, group interviews could be perceived as a different situation and social interaction. Thus the clashes of different views and opinions can lead toward discovery of the new topics and ideas.

3.3.2 Selection and design
Two focus groups of 12 (7 males, 5 females) and 13 (6 males, 7 females) people were conducted on May 7th, 2014 at Mobile Life Centre, Kista. The participants were Interactive Design course students from KTH. Most of the participants were Swedish and their age varied between 21 to 35 years old (for a full list see appendix B). Both interviews were video taped, however the duration was quite limited (approximately 40 minutes) due to the intense schedule of the participants. Nevertheless, interesting insights and feedback were gathered during the interviews. Information about the type of phone and languages used to write SMS messages were collected and 13 people (Android users and texting in English) were contacted afterwards for longer individual in-depth interviews. Since Android phones and English SMS messages were necessary for a precise and long-term app usage. However, for focus group interview purposes all participants were included despite of the type of the phone. It was presumed that inclusion of different types of phone users could lead to broader spectrum of opinions about memorabilia, deletion and general feedback about Delete by Haiku.

3.4 Interviews

3.2.1 Interview methodology
The interview was chosen as a tool to reach personal attitudes, opinions and
individual stories about memory, memorabilia, deletion. It is a uniquely sensitive and powerful method for capturing the experiences and lived meanings of the subjects’ everyday world (Kvale 2007: 11). The form of semi structured in-depth interview was used in order to keep research field open for the new insights and expansion.

According to Schrøder et al. interview should not be seen as a device for digging out the core of informants’ experience, but rather as a catalyst for activating the palette of discursive repertoires available to informants, in connection with a specific media product. However, individual in-depth interviews enables to probe deeply into personal, possibly sensitive, perceptions and attitudes in connection with media experiences while asking more detailed questions, spending more time for answers and reflection (2003: 148).

### 3.2.2 Selection and design

‘Purposive sampling’ method was used, in which informants are selected non-randomly because they possess a particular characteristics. The notion of ‘diversity’ means that the goal to aim for is qualitative rather than statistical diversity (Schrøder et al. 2003: 159). The relevant informants in the reception study are simply those who have something to say about the media product because they are familiar with it (Schrøder 2003:160).

Application *Delete by Haiku* is developed for the Android OS and runs on most modern Android phones (version 4.0.3 and higher); also, it works only for English language. Therefore, participants should use Android phones and be English speakers or have English SMS. Also, for the long term app usage the constant flow of English SMS was necessary. The initial idea was to recruit participants during before mentioned presentations and focus group interviews. Possible informants (19 people) were twice contacted via email in the beginning of May, however the answer rate was very low (3 people) and they were not included in the sample because of certain issues (unwilling to have face-to-face interview, other than SMS messaging services used). Therefore, selection of the informants was made using snowball technique. The message was spread through personal online and offline networks. The fact that the application works only on Android phones and for English and the research took place in Stockholm was quite limiting. Thus, it resulted in quite narrow sample of...
informants from my personal network or my acquaintances’ networks. Selected participants were asked to download the app either via email or free Google play\textsuperscript{11} app store. Some of the possible respondents fell away because of technical issues such as: incompatible version of Android with the application, too old phones, protective phone settings.

Overall ten individual in-depth interviews were conducted based on the interview guidelines (see appendix A) and two follow up interviews regarding longer usage of the app. Only one interview was conducted online via Skype, because the absence of face to face contact and verbal language, technical issues such as, sound quality and breaking connection had obviously negative effect to the deepness of interview, length and openness of the informant. To guarantee anonymity participants’ names were changed, however demographical characteristics and other relevant information regarding conducted interviews are mentioned in the table below:

<table>
<thead>
<tr>
<th>Date of interview</th>
<th>Name (changed)</th>
<th>Age</th>
<th>Professional background, occupation</th>
<th>Ethnicity</th>
<th>Duration of interview</th>
<th>Interview place/notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>14/04/27</td>
<td>Adriana</td>
<td>30</td>
<td>MA degree in Physics; works at hotel</td>
<td>Lithuanian, 5 years in Sweden</td>
<td>20 min.</td>
<td>Participant’s home; Sunday evening; I felt like disturbing or it was wrong time</td>
</tr>
<tr>
<td>14/04/29</td>
<td>Jasmin</td>
<td>26</td>
<td>Erasmus student at KTH, MA program in Business Information Systems</td>
<td>German, less than a year in Sweden</td>
<td>30 min.</td>
<td>Office, informal, relaxed</td>
</tr>
<tr>
<td>14/05/08</td>
<td>Sarah</td>
<td>29</td>
<td>MA degree in Communication Design; works as designer</td>
<td>Italian, temporary in Sweden</td>
<td>32 min.</td>
<td>Office, informal, relaxed; bad English</td>
</tr>
<tr>
<td>14/04/30</td>
<td>Simone</td>
<td>27</td>
<td>MA degree in Media Technology</td>
<td>German, 3 years in Sweden</td>
<td>34 min.</td>
<td>Office, informal, relaxed</td>
</tr>
<tr>
<td>14/05/14</td>
<td>Ella</td>
<td>27</td>
<td>MA degree in</td>
<td>Lithuanian,</td>
<td>23</td>
<td>Skype interview;</td>
</tr>
</tbody>
</table>

\textsuperscript{11} https://play.google.com/store/apps/details?id=haiku.top&hl=en
<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>Age</th>
<th>Position/Background</th>
<th>Language</th>
<th>Duration</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>14/05/16</td>
<td>Santiago</td>
<td>29</td>
<td>PhD student at KTH, Software and Systems Engineering</td>
<td>Portuguese, 7 years in Sweden</td>
<td>60 min.</td>
<td>Office; very open, smooth; informant covered all the topics of interest; it felt like he knew the topic or prepared for the interview.</td>
</tr>
<tr>
<td>14/06/11</td>
<td>Asta</td>
<td>29</td>
<td>PhD student at Karolinska Institutet, Medical Research</td>
<td>Swedish and British</td>
<td>59 min.</td>
<td>Park; disturbing surrounding environment</td>
</tr>
<tr>
<td>14/06/11</td>
<td>Mark</td>
<td>31</td>
<td>MA degree in Physics</td>
<td>French, 5 years in Sweden</td>
<td>29 min.</td>
<td>Office, informal, relaxed; constantly checking his watch</td>
</tr>
<tr>
<td>14/06/18</td>
<td>Emma</td>
<td>32</td>
<td>BA in Education; works as a teacher</td>
<td>Canadian, less than a year in Sweden</td>
<td>69 min.</td>
<td>Office, informal, relaxed; very positive</td>
</tr>
<tr>
<td>14/06/24</td>
<td>Mat</td>
<td>34</td>
<td>PhD in Human Computer Interaction; researcher</td>
<td>Swedish</td>
<td>63 min.</td>
<td>Office, quite formal atmosphere; focus on technological aspects of app.</td>
</tr>
</tbody>
</table>

Figure 2: Description of informants and interviews

After in-depth interviews informants were asked to use the app for the longer time and have the second interview. However, only two informants (Simone and Santiago) were available for the follow up interviews.

Pilot interview was conducted with a colleague in order to test interview guide, formulation and clarity of the questions and some minor changes were made upon interview guide.

3.5 Treatment of material

According to Steinar Kvale, no standard method exists “to arrive at essential meanings and deeper implications of what is said in an interview” (2007: 103). Interactionist tradition contains a way of looking at respondents’ accounts which goes
beyond categorizing them as ‘true’ or ‘false’. As William F. Whyte observed, “ambivalence is a fairly common condition of man – that men can do hold conflicting sentiments at any given time (...) men hold varying sentiments according to the situations in which they find themselves” (Silverman 1993: 108). An alternative approach would be to treat interviews as giving us access to the repertoire of narratives that we use in producing accounts. Therefore, different methods were used to analyse the collected data.

All individual interviews were recorded, while focus group interviews were video taped, and transcribed word by word. Transcribed material consisted of 56 pages. Transcripts were broken down into initial themes of the interview that also related to research questions. Meaning condensation was used to summarize and compress the meanings expressed by the interviewees (Kvale 2007: 106). Also, meaning interpretation provided deeper and more critical interpretations of the text (Kvale 2007: 107).

3.6 Interview analysis as bricolage

One of the methods for interview analysis suggested by Kvale is bricolage. It refers to mixed technical discourses where the interpreter moves freely between different analytic techniques. This eclectic form of generating meaning – through a multiplicity of ad hoc methods and conceptual approaches – is a common mode of interview analysis. Bricolage implies a free interplay of techniques during the analysis (Kvale 2007: 115).

Some ad hoc tactics are referred to as useful for generating meaning in qualitative texts, therefore, the following techniques were used for collected data analysis: noting patterns and themes; seeing plausibility; counting; making contrasts/comparisons; noting relations between variables (Miles and Huberman cited in Kvale 2007:116).

3.7 Validity and reliability

Conducting a systematic data gathering, treatment and analysis contributed to the research reliability. Clear and explicit interview guidelines, information about the informants and a detailed research report are also provided.
It is worth reflecting on selected informants and their relation to obtained results. They could be treated as very specific group of rather young, educated, technology savvy people. Therefore, the findings of this research should not be generalised or used to represent certain population. Also, only two participants were native English speakers, which could affect their SMS writing in terms of language. The fact that most (7 out of 10) of the in-death interview informants were foreigners living or temporary staying in Sweden could result to unusual technology usage and messaging practices.

4. RESEARCH RESULTS AND ANALYSIS

The guidelines of the interviews were quite abstract and open and I tried not to influence the flow of conversation. Therefore, I ended up in very different interviews in terms of deepness, descriptivism, openness and length. All individual interviews as well as group interviews were transcribed and analysed together as these methods work together to answer the same research questions. Quotes were used to give the interviewees a voice and to underline or explain interpretations.

4.1 Presentation of results

Presented results will focus on the app relation to digital memory and creation through deletion. Information and feedback about technological issues, design and interface experiences will be used for further development and improvement of the project, however, not included in this particular thesis. As it was already mentioned data gathered from individual and focus group interviews were analysed together, however, the names marked as (FG) refer to focus group participants. Also, it is worth noting that information gained through individual interviews was more personal and descriptive, thus, provided fuller picture of Delete by Haiku user. Moreover, it made possible to obtain certain connections and plausibility between personal features and the practices of the digital media usage.

4.1.1 What is memory?
The topic of memory is very abstract and responses are very different. Some informants related memory with physical objects: postcards, furniture, others related it to digital devices, storage. Interesting that some respondents were talking about close people: parents, loved ones, friends; also, places or certain life periods are important.

In some cases memory was perceived as a possession of something quite concrete: “keeping the important things from the past” (Jasmin), “something that I have in my head” (Ella), “beautiful moments in life” (Emma). For Simone memory is “a gathering of thoughts, faces and experiences you have”.

Also, memory could be perceived as a fleeting narrative: “Sometimes I have this wondering about some memories, if I actually lived that memory or if it was just a dream. <…>. The facts are there and you cannot change them but the way you recollect them or present when you tell the story, the story you tell would change all the time maybe it’s more like I try to understand what role I played at that time. Like storytelling about this particular event.” (Mark). So after a while remembrances could be experienced more or less the same as dreams or stories.

Human memory can have situational aspect: “memory can also be different depending on the mood you’re in when you see the picture or text” (Kelly FG); “You not always check those old old pictures and it becomes like something new again” (Adriana).

As Marita’s Sturken notices, memory is “a narrative rather than a replica of an experience that can be retrieved and relived” (Sturken 1997: 7). However, Sarah thinks “if you have an experience you can live your experience second time, because you can collect, (re)organize your experience”.

Another important idea is that human memory is the process: “memory for me is ability to recall events or feelings, <…> something that happened in the past” (Santiago). However, we can see the difference among processes: “For me it’s a record of something, see again what I want to have in my mind forever. <…>. Live again something” (Sarah). Memory is so closely related to technology and the process of recording or even reliving of something from the past. However, to measure the “faithfulness” of our memory to the original event or experience is impossible. We could also notice the powerfulness of the media, serving as an
extension of human memory: “I have to ask myself: do I remember because I have a photo or I remember because I remember” (Emma). Santiago shares quite similar views:

Last year I was in the safari for example and right now I have a lot of images of the safari, but I think because I looked so much at the pictures that I’ve taken that safari kind of got crystallized in those pictures in my memory <…> right now what I remember from that trip is all the stories that I’ve told plus the pictures on Facebook and also with my girlfriend the stories that we share with each other, there’s several levels, but I can’t remember as vivid (Santiago).

The fact is that “original experiences are irretrievable; we can only “know” them through memory remains” (Sturken 1997: 9). It is interesting that Santiago compares the pictures and the stories that could be seen as an “old-fashioned” way of sharing memories. Even though, sharing nowadays is very much associated with social media, it is probably essential to the process of remembering: “I think it changes it… because you need to make it in a way transferable for other person to understand and then of course you change the story” (Santiago).

Informants are concerned about improvement of memory and different strategies:

Telling stories about the place makes you remember more, telling things to the people make you remember more, on the other hand you lose the richness of the experience that you feel with your whole body kind of like the wind and things that you see and hear and those things are hard to put into words, but once you put them into words they becomes your memory, because you articulate and it becomes, it’s much easier to remember what you’ve said than actually what you’ve felt (Santiago).

He also explains the process of turning something into memory. It is also possible to differentiate between verbal (stories) and visual (photo, video records) artefacts of memory.

For Mark, memory is closely connected to certain periods of the life and strong emotions: “It’s some memories when I was kid, I remember very clearly the situations, like I see myself through the eyes, impressions, the set up, I remember how I felt at that time. It’s some stuff that shocked me, the feeling I had on top of the situation.”
It can be noticed sentimental feelings attached to memory: “It’s kind of weird and it’s a pity that you lose that richness of present that sunset and light that is in my memory but will probably disappear” (Santiago).

Relation between digital memory and human memory

Some interesting comments could be mentioned regarding relation between digital memory and human memory: “a mirror of your personal memory” (Simone); “it’s like talking about it and experiencing it” (Santiago).

Digital memory is often seen as improvement of human memory: “digital memory is like a help to organize the other memory (Simone), “pictures provide us support for stories, kind of” (Santiago). On the other hand, destruction aspect could be noticed: “also for me it changes the way things I remember <…> it’s not only changing the memory, it also changes making of memories, part of experience is being there to create media, right, so that changes the whole…” (Santiago).

However, Asta perceives human memory as similar to digital: “The way our brain works is quite similar, I feel that everything is in some structure and that is quite similar to computer memory. It might take longer time to remember something but I think everything is in our heads, it just might be difficult to find.”

Perhaps we remember events according to the structure of our pictures or document folders. Memorabilia could be seen as a trigger or boost of human memory, “it sort of adds to the memory, and memories in your head are fluid and always changing, but when you see the pictures you sort of refresh it (Martin FG)”. For example, old documents itself may have no value for Emma, but they evoke remembrances about situation, place, people and similar: “I still have papers from university. Why do I need that? It’s like 10 years old. In some way I like those things, I like looking back. There’s a sense of nostalgia, I see myself. And it opens up the new level of memory, the memory that associates with it (Emma)”.

It might be that the constant usage of technology changed the way our memory works; as Mark said: “if you know they are stored somewhere you can just not think about them”. Sarah expresses similar ideas: “…today I feel like my memory is not as good as in the past, because I use a lot of technology that helps me to remember, but really it remembers for me, but not me. So it’s strange, because it’s like I have less memory now, my technology has more memory for me”. We can notice the
contradiction between the perceptions of digital memory. On the one hand it boosts and refreshes our memory and on the other hand our ability to recall certain things is decreasing. Perhaps nowadays we need to remember where the records about certain events are stored rather than events themselves. That also means the importance of documentation of our daily lives and proper, reliable storage. For some people such as Sarah the process of recording can be almost essential. On the other hand Emma and Santiago emphasize the feeling and enjoying the moment, because “if you take pictures you are constantly thinking, the light, the angle, and if you are there you just there, just looking around and taking it in” (Santiago).

However human brain and memory are very complex and still quite secret issues to the scientists. Technology is humanity’s creation therefore it is easier to understand its operation, rely on and control: “Digital stays the same forever, memory… personal memories are always skewed or modified, mould over time” (Bill FG). Also, memorabilia can be used as verification of our own memory. On the other hand one can lose track of memorabilia quite easy: “it’s always a fear that things would get lost, because I don’t make loads of second copies or have a hard drive or no… like memory card where I can store everything. I think there’s this fear that things will just disappear because it’s just numbers, it’s just data, so it’s easy to erase” (Simone).

Based on informants experiences it could be said that digital technology changes not only the way they remember things but also their daily habits, travelling experiences.

Personal situation can affect different usage of digital media: “I’ve noticed some changes since I’ve been here in Stockholm, I don’t delete anything on my phone, text messages. It’s like an archive. I reread my conversations (Emma).

4.1.2 The concept of personal archive

When asked to compare different forms of digital memorabilia, informants distinguished visual data: “…you forget text very fast. I don’t remember what I wrote yesterday… visual data has more value and information, you can look at it and you know the situation better than just reading it” (Jasmin); “for me text has no relation to memory, when I remember text I remember what I imagined when I read it” (Jacob FG).
However, Sarah (“For me it has the same value. <…> they have different function, but they are all important”) and Joel (FG) treated different content similarly: “I think if you read through old conversations with a friend or something it’s similar like looking at old photographs you kind of remember how you felt in that situation when you wrote it and you can remember how you felt when the picture was taken.”

Asta’s perception of photographs was quite exceptional, since “pictures are not important particularly. I think they are stupid and embarrassing.” It could probably be related to personal situation or character, maybe lack of self-confidence.

The importance of social media could be noticed in terms of memorabilia:

Ella (FG): Emails feels like not for fun, but necessity. You would revisit your emails just out of necessity. But Facebook is for everyday.

Tom (FG): I think Facebook and text messages are more personal, emotionally attaching, you talk about your feelings with someone in specific.

Ella (FG): Facebook is more like diary.

Tom (FG): I think it’s like response also since our generation doesn’t read emails so often. On Facebook is almost like instant.

Looking through memories

When asked about going back and looking through the memory records most of interviewed people admitted doing that quite rarely and for specific reason:

“I don’t know when I did that last time, maybe when I was changing mobile phone and realizing that I won’t use it anymore and just double look through what I lose, like before knowing that you will not have access to that maybe worth just checking it, like make a little outlook or little survey what you lose and is that important. I don’t know. At the end it’s not, but you just want to go through what you’ve got… it’s nostalgic feeling.” (Mark)

For Mat data that he created has more value and is exceptional (“something I was creating that was some writing task that I was doing every week and I didn’t think they were very important, but I would like to see them again actually”).

It could be noticed that Mat’s saving strategies made his data almost unavailable: “they are encapsulated in binary file. So I have no easy access to them. I think I still have them, because I dumped all the emails into something and usually I think I still
have a copy of everything”. He seems to be quite uncertain about the content of saved data, however, the fact that important data is saved somewhere is relieving: “I’m not 100% sure what’s inside, it’s like this old box in your house, you just want to make sure it’s there and take it to the new place.” Moreover, the overwhelming amount of data makes it almost unsearchable: “I was gonna search for phone number in the conversations few days ago, it took me like five minutes, swipe and scroll it, it was too much work” (Jacob FG).

Santiago shared some interesting behaviour regarding digital storage:

I have a hard drive at home that is dead for like six years, it’s broken. I moved already with a hard drive an I thought this is not working, but I have stuff in there, I don’t remember what, I’m sure there’s pictures, I’m sure there’s a lot of stuff in there and one day,… I just don’t want to throw it away. One day when I have time, which I never have, I’ll go and repair it, just find a way of repairing it, cause I never really dedicated a lot of time in repairing it. There are always ways to recover data. It’s dead, it’s broken and it’s physical thing that I carry with me, I could easily throw it away, but I don’t know why I don’t. But when it broke I wasn’t very worried about, I just got a new one.

Perhaps this hard drive itself could be seen as a memory artefact or provoke mysterious insights about the possible content. Also, Santiago’s example clearly shows that the value and importance of digital records, the fear of losing data can be slightly exaggerated. Tommy (FG) noticed very explicitly that “we tend to gather stuff, that after ten years we will throw anyway, there’s some kind of bond that you afraid of deleting or disappearing.”

Some of the informants (Sarah, Simone) expressed concern regarding overwhelming amount of data. Sarah perhaps could be described as a real hoarder she is zipping her files in order to keep it all, however she admits “it’s a bit a problem, because I usually keep all. All my technology is very full. Because it’s like, I don’t know if I can delete this or that, so it’s strange, so I really keep more than what I really need to keep. It’s like this, so it’s like to have more memory.” Also, she is making double copies to make sure nothing is lost. However, Mark trusted and relayed on technology: “In hard drive I have much more fate, maybe because I never had one failing. I have idea that it will last forever.”
Even though we have quite reliable technology and possibility of saving our data “forever”, do we really benefit from this particular situation:

_Ella (FG): This is why you use Facebook, so it is saved forever._

_Karin (FG): But then you can’t find them on Facebook, cause that takes a lot of time._

_Kelly (FG): if you have to find specific message on Facebook that takes a lot of time, you scroll and scroll._

### 4.1.3. Deleting practices

When asked about deletion and deleting practices some respondents (Santiago, Sarah, Emma) were very specific about the problems and difficulties they were facing. Their elaborate and descriptive answers show that these are the issues they are thinking about or facing on the daily basis:

…I feel that technology is giving possibility to keep all with me, but I can’t have like 3000 hard disks, so I need to choose what I want to delete, … generally I delete something that I decide I don’t need to have longer, or I just think my computer is very full I don’t have time to fix it, what can I do, ok I need to delete something, so I just choose stupid pictures or something that is not really important or maybe I think it’s not important. Sometimes I’m wrong, because maybe after three years I want to see this picture, but no I deleted it. I don’t know why I delete and what. I really feel I can collect all. I often think about it <…> I did one hundred or two hundred pictures of this place, for me they are all important, I don’t want to delete nothing it’s really a problem. (Sarah)

Even though, deleting is new activity for Mat, one could feel how conscious he is about it: “just recently started to delete stuff and I start with the stuff I have least attachment to, like ads, commercial, spam… and then it gets harder and harder, everyday conversations, emails with useful information or you might want to go back for some reason”.

Santiago mentioned that memorabilia are not particularly important to him or he was not “that kind of person who would like to look at them a lot”, however he adds surprise element to memory records: “I don’t get rid of them I have a problem in pressing the delete button, I could easily, I don’t look at them and I delete them, but then I lose that feeling of finding them by accident which is nice.”
The technological expansion, availability of digital storage and possibility of saving everything fascinate people. As Oscar (FG) said: “It’s not important anymore, we have space, we have everything, why should we delete?”

To sum up, it could be said that the process of deleting involves feelings of fear, guilt, nostalgia. However, Simone, Jasmine and Santiago expressed relief after the decision whether to delete or not is made (“I like when it’s a bit cleaner and I can breath” Simone). Emma prefers deletion as a two-step process where data could be retrieved after “temporary” deletion: “I always think how permanent this is. If I know I can recover it I’m much more likely to delete”.

Also, some of the comments especially Sarah’s and Emma’s are quite contradicting, that probably just proves how difficult it can be to press the delete button. These women were very clear about the importance and attachment to memory records they possessed and the tension between ‘keeping everything’ and ‘keeping what is needed’. It could be related to personality or profession aspects since Sarah is a designer and works with pictures and other data; Emma describes herself as an arty, emotional person, blogger and amateur photographer (some of her pictures were bought). On the other hand, Mark is very clear that he would like to save more data as he really does, just to be able to bring the memories back: “I never transferred the history <…> you just wan to go through what you’ve got… it’s nostalgic feeling, maybe you need that feeling”.

Deletion could be treated as physical deletion. Some informants (Ella, Simone,) the process of deletion related to physical space and possessions: “It feels the same as cleaning home and getting rid of any trash and unnecessary things, like making your personal space tidy” (Ella).

Moreover, Kelly (FG) equates deletion with human forgetting: “Sometimes, like I realized what a stupid thing I said and oh my god! I just had to delete it, and then in my mind it never happened (laugh)” . Her words could be treated as a joke or she wanted to look funny and probably forgetting certain aspects is not as easy as data erasing. Even though, perhaps the process of forgetting starts from deletion. We have to delete unwanted memories’ traces in order not to face them unexpectedly and be reminded of. We cannot control either remembering, or forgetting and we rely on technology as some sort of control tools. When asked about painful memories or
events they wanted to forget informants had quite few ideas to share: “… if I live a bad moment I don’t do pictures at that time” (Sarah).

Some parallels could be made between digital and physical possessions: “I think the process is the same you need to choose what you want to have forever and what not, but… so for me it’s almost the same if I need to put something in the trash because I don’t have space in my room or delete some data because I don’t have virtual space” (Sarah); “Decorative piece at my home or a file is exactly the same” (Emma); “Physical things they take space, digital it just happens, it just stores, you don’t actually have to go through them to actually store them. It might be not obvious connection” (Ella FG).

It is interesting that some respondents perceive memorabilia similarly to ‘box’: “It’s like you have empty storage room and you have a little thing, little box, and I don’t need this box, I don’t look at it and I put it in the storage room, one day I might need it. If a storage room gets full, then I just get a new hard drive” (Santiago).

4.1.4 What is the relevance of SMS writing in the era of digitalization?

To begin with, it is worth mentioning that the meaning and function of SMS is quite unclear and blurred. It could be noticed already during the selection stage. Most of the possible participants confirmed they were writing SMS messages, however, later on it became apparent that actually they were using other messaging platforms (Facebook, WhatsApp, Skype, Google+). This leads to the assumption that the SMS usage in the daily language might mean any kind of messaging platform. Perhaps the future of SMS service is not very clear and it might be a dying form of communication: “I think it’s relevant if you are travelling, if you don’t have Internet, like actually right now I rarely use SMS, if I’m in Sweden I use WhatsApp or Facebook messenger” (Santiago).

SMS service could be perceived as one of the messaging platforms, it kind of lost its exceptionality as a singe mobile messaging service, however, it is still distinct and perhaps used in different ways. As Adriana mentions: “If I have an option to write an email, message on Facebook or SMS, I’m sure that SMS will go fastest.”

Mark and Simone admitted noticing some changes in their messaging behaviour:
…because of this short messaging services and WhatsApp or Skype, chats, which are also on your phone and you can use it in the same, kind of in the same way. Before I tried to get as much information as possible and fill all spaces and I wanted to make it full and make it very full SMS and then I should put love you in the end and smiley here and really used the space I had, and now I keep on forgetting that this cost money or it might cost money. (Simone)

Sometimes I make a joke about it, writing one letter in one SMS, like writing 7 SMS A-W-E-R-S-O-M why would you send 7 message? 15 years ago that would be so expensive…now it’s more for the layout. (Mark)

The abundance of platforms could be seen as an expansion of messaging possibilities, not just phone calls, SMS or email. Mark explains it quite well: “You get different writing possibilities. <…>. You don’t use pictures in SMS, it’s expensive, that’s MMS – weird stuff that I never used. So if you use WhatsApp you will use more videos or pictures, if I use Line I would use more stickers. It’s not the same communication channel and that would effect how I write.”

Some informants (Adriana, Ella, Santiago and Asta) were very certain that SMS messages had no value and meaning in terms of remembrances and they could easily delete them: “message is a short information for that moment that was important. The point is to get basic information I don’t need to go back to it mostly. There is no memories in SMS, in my way”(Adriana).

To sum up, it is worth mentioning that analysis of informants’ comments regarding SMS messages can be problematic because various messaging services are interconnected and are treated similarly. Hence, commonly used term ‘message’ or ‘text’ might cover slightly different meanings. Also, in terms of Delete by Haiku application usage it could be suggested that SMS service is quite limiting feature. However, it opens up a new level for the project’s further expansion and adjustment to other platforms.

4.1.5 What are the user experiences about Delete by Haiku?

This part of analysis is very interesting and portrays the actual fear and insecurity about deleting. The core idea of the app is creation through deletion, however, for testing purposes save mode (without actual SMS deletion) was implemented. It could
be explained that the app is new, used by few people. Also, it is understandable that people are conscious about their privacy and data protection, therefore, suspicion could be felt when asked to download unknown app. Mark’s case is worth mentioning, as he tried to install generated contacts and SMS (version used by the project’s team) on his phone. His explanation was that he just wanted to see how it worked and he did not want to use his personal messages.

Adriana did not see herself as a user: “because it works only with SMS it is quite limited in my case. I don’t write SMS that are meaningful. I don’t think it would be very useful in my situation with SMS only. If it can adjust to email. Then it’s another story”.

It is difficult to perceive what Santiago really thinks about the app, since his comments are quite contradicting:

*Santiago: I’m afraid it will delete my messages, I hope the save mode is on.*

*I: But you can always choose what messages you want to delete.*

*Santiago: Yeah, but you want to get nice haiku. I made some nice haikus. It was conversation with my friend very sentimental, some old stuff, then I created a nice haiku. I don’t want to use messages with my girlfriend cause those are very personal.*

*I: And how do you feel about this process of creation through deletion, like instead of just deleting unnecessary messages transform them into haiku?*  

*Santiago: … I don’t know… it would be nice to have it some kind of timeline or different representation. For SMS I wouldn’t mind if it would be deleted automatically. I don’t really need this stuff. But I don’t trust the phone to make decisions for me. Sometimes there’s practical stuff, like door code and whenever I go to that person’s place I look for it. So there’s practical reasons for not deleting automatically.*

*I: But you can choose what messages you want to delete.*

*Santiago: yeah, I was thinking… maybe I need to try it more… It would be nice to have something from all conversations from 2013, like haiku, or other representation.*

Santiago is very explicit that SMS are not valuable or meaningful for him; however, some of them might contain practical information such as door code and he is afraid the app might delete it. It is difficult to grasp the reasons behind, it could be just a way to say he did not like or want to use the app. Also, later on he expressed the
absence of relation between generated poems and the conversations; questioned haiku as form of memory representation:

...to be completely honest, haiku is not my favourite way of representing it, I don’t know which way, but something that makes me (reminds) something that is a little bit bigger than haiku. I don’t know what is that, cause haiku is very short, it’s very poetic, maybe I didn’t see good haiku yet. But something that actually tells me a bit more information about what happened. It doesn’t have to be the text, it can be something visual… with words, some other way of representing that would trigger memory.

Simone was quite relaxed using save mode. Mat was the only participant who felt kind of cheated with the save mode:

For testing purposes I like the save mode, because you don’t know what’s gonna happen. But the whole idea is to go into sort of hardcore mode, to delete stuff. So having the save mode felt a bit like chicken <...>. You have to confront. You start with stuff you have no relation to and… It will be interesting to see how far people will go in the deletion procedure… and in the end if you want to have more haikus you might start deleting important messages. The core point is to dare… I think it might take it further, much further.

Mat was one of the few informants who shared his haiku poems via Facebook. He seemed to be really engaged user and brought other important aspects – creation and the act of performance: “I wouldn’t do it only for myself, but I think I would do it just to be able to share something… it also makes it much more sharable format than sharing the messages in raw form. It almost feels like you are creating something out of the junk. Also at the same time it’s a performance since I aim to share it.”

The experience and obtained value are quite different. Emma describes herself as “an arty, emotional person; I think I like to find the beauty of conversation. It appeals to me that something very random makes me smile, feel something. I use it with certain conversations”; “I was very intrigued with the idea of being able to delete stuff. It’s hard because it’s not something you do” (Mat).

Emma raises interesting questions, such as: “would it really sum up my conversation with people? How are you picking up what’s important for me from the conversation?” Obviously most of the app features and human interaction are predefined.
5. CONCLUSIONS AND DISCUSSION

The final chapter of this thesis summarizes the research findings, discusses challenges and gives an outlook for potential further project’s development. The aim for this study was to explore the interconnected relation between memory, digital technology, forgetting and deleting. The core of this thesis is *Delete by Haiku* application, which I assume provides this study with a very interesting interdisciplinary focus. Therefore, the digital media, memory, art and poetry theories were introduced in this thesis to define research field and context.

The main findings of this study will be summarized according to research questions.

1. How do the studied individuals perceive memory?

   The concept of memory is very abstract and personal, therefore, the perceptions of interviewed people varied a lot. The main themes expressed by informants regarding memory are: memory – as possession of ‘something’, memory – as a process, memory – as a fleeting narrative. Moreover, in some cases it was impossible to separate human memory, memorabilia and digital storage. Thus, it proves how heavily we use and rely on technology and that raises an interesting question: how much do we really remember because we remember. This fact also increases the fear of losing technological devices and data. Some of the informants were very conscious about protection of their data and it could be felt that these were the issues they were facing everyday. On the other hand, some of the people admitted that it is just data and perhaps not that important data. Moreover, it could be noticed that the amount and availability of the digital storage is still important. Perhaps at some point in the future our brain will “improve” its ability to select and filter.

2. What are participants’ notions of their personal archives (what is stored; if and how it is accessed and shared; how it is managed)?

   Mayer-Schönberger (2009) emphasizes the importance of forgetting and deletion, tries to warn people about online sharing. However, interviewed people were more focused on their “bad” memory and importance to remember rather than forget. Thus, it could be concluded that forgetting was perceived as a shortage of human memory. In addition, none of the informants seemed lost in their memorabilia or trapped in
their recollections. However, organisation and navigation through the personal digital archive are quite problematic and time consuming. Photographs were often mentioned form of memorabilia.

3. What are their deleting practices?

The issue of deletion is probably the most controversial in this research. Also, informants’ views regarding the topic were quite contradicting. Some interviews evoked the feeling that deleting practices were very chaotic; people could not state what and why they deleted. One of the often mentioned deletion reasons were too full or too slow technological device. However, they clearly stated that storage was not an issue anymore and deletion was almost unnecessary. Perhaps it could be argued that quite new, “fascinating” possibility to record, save and keep all the memory records is not fully perceived. Therefore, it might be difficult to reason our behaviour regarding new technology.

Another interesting aspect worth mentioning is that deleting was often related to ‘cleaning’ or getting rid of physical possessions. Only two times deletion was compared to the process of forgetting.

4. What is the relevance of SMS writing to the informants in the era of digitalization?

The vast usage of multifunctional devices as smartphones obviously influences SMS as a written form of communication. The abundance of messaging services provides users with different writing possibilities. It is clear that SMS lost its exceptional status as a messaging service, on the other hand it is established and well-known feature of any kind of mobile phone. The expressed value of SMS in terms of memory varied among informants.

5. What are the users’ experiences about Delete by Haiku and its relation to their memories?

Some informants assigned no value to SMS, therefore Delete by Haiku app had no relevance of their memorabilia. However, quite often a fear to use the app was felt because it might delete the messages, even though, they did not relate to their memorabilia. To sum up, Delete by Haiku app could be seen as an invitation to engage into playful process of creation through deletion. However, the obtained value is difficult to measure. On the one hand, it could be beneficial to get rid of the junk,
on the other hand, it could have emotional aspect similar to haiku poetry and “show a face of almost childlike simplicity, humour, and oddity” (Eaton 2009: 331).

Based on the obtained results *Delete by Haiku* user could be described as a nostalgic, sentimental, reflecting and preserving one’s memories and memorabilia, arty person.

To sum up, the concrete answer or explanation regarding memory is difficult to obtain. It could be perceived as a narrative, storytelling, fading away. Perhaps *Delete by Haiku* could be seen in a similar way: some parts of SMS are deleted, some used to make poems. However, everything is made by machine, human interaction is quite limited and predefined. Words that appear in generated haiku might have no relevance to the user, but depend on the algorithm and word frequency. Therefore, it is questionable if generated haiku would represent important aspects memory wise. However, it immerses user into the playful process: “You sort of get into the loop of hunting to get next good haiku. And that helps to get rid of all the junk” (Mat).

The further expansion of the project is focusing on the improvement of the app’s technological and design features since it proved to be quite problematic and unreliable. Currently expert interviews are being conducted in order to obtain precise feedback from the people working directly with mobile applications, poetry or art. It could be mentioned that this thesis provided context and opened up new possibilities for the project’s expansion. Thus, adaptation of *Delete by Haiku* concept to other messaging platforms and emails are being considered.
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SAGE Publications


APPENDIXES

Appendix A

Framework for the individual and focus group interviews

Thanks for coming there today and sharing your opinions and ideas. I want to assure you that all information gained today will be used only for research purposes, and your privacy will be guaranteed through anonymity. As I mentioned before, I am exploring concepts of digital memory, deletion, recycling. Let’s begin with quite a broad topic.

- Could you describe what memory is for you?
- What are your thoughts on forgetting? (You see it as a bug or a feature?)
- What are the differences and similarities between human memory and computer memory in your opinion?

Now we would like to turn the conversation to your digital archives (SMS, Emails, videos, pictures, etc…). We will refer to these as ‘digital memorabilia’ or just ‘memorabilia’.

- Do you store everything you get/produce?
- What are your deleting strategies? Do you ever even delete? In which cases?
- Do you go back in time to your digital archives? Which ones? What for?
- Do you remember recently how this made you feel?
- Do you spend much time organizing those archives? Which ones and in which ways?
- How do you share those memories? With whom? Which?
- Do you narrate your life and memories online? Why? How often?
- Do you delete any of your records? Why? How do you decide what to delete? How does it feel?
- What do you think about having an expiration date for your digital data?
- Do you write SMS? When? Do you look through them? Do you think it is part of your memory? Could you delete all your messages?
- Do you do anything with text, with personal data, with memories? Do you interact/play with your memories?

Now I would like to talk more about the project Delete by Haiku. The mobile application compresses users’ archives of SMS messages into short and expressive haiku. In short, this application feeds off the stored SMS messages on the user’s phone and assists the user in creating poetry out of past messages. The user can take advantage of different modalities for selecting groups of messages (by time, by topic, by thread, individually, or any combination of these), and progressively ‘deleting’, or perhaps rather ‘compressing’ them into a short haiku poem (Mobile life 2014).

- What do you think about this approach to ‘curating’ personal digital memories?
- Does application Delete by Haiku relate to your memories? Do you think the app
expresses the memories?

• What do you think about the process of creation through deletion? Do you feel like creating something with the app?
• What do you think about transformation of memories into narratives?
• Do you think that you, as a user, could gain something out of app?
• Would you like to add something, do you have any thoughts about the topic we discussed?
### Appendix B

Lists of focus group participants

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<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Age</th>
<th>Country of origin</th>
<th>Languages used to write SMS</th>
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