ICT support for gift giving
Abstract

Gift giving has far deeper societal, sociological, and psychological implications than people are generally aware of. It can work in both positive and negative ways – building and strengthening or weakening and breaking social ties, imposing identity images on both the givers and the recipients. Gifts are also important from a consumer and marketing perspective, and tend to cause their seekers anxiety in many ways.

To counter the difficulties in the gift giving process it is important to record information about important dates, recipients, given and received gifts, as well as new plans. Many tools are already being used to help keep track of gift giving, and these range from simple pen-and-paper solutions to productivity applications like note-taking tools and spreadsheets.

The purpose of this thesis is to explore gift giving behaviour and make use of the Technology Acceptance Model to triangulate requirements for a gift giving support application, as well as offer a list of possible design contributions to meet each requirement. These results can then be utilised in future research to design and produce an actual gift giving support application, that will meet the needs of both gift givers and recipients.

Keywords
gift giving, ICT, Technology Acceptance Model, literature review

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1. Introduction

The purpose of this study was to explore the process of gift giving and define the requirements of a gift giving support application.

There are numerous occasions for gift giving: Christmas, birthdays, graduations, anniversaries, apologies, romantic occasions, spontaneity – all are occasions that can be associated with giving gifts in Western societies. The plentiful occasions for gift giving vary around the world, and carry a significant social value (Parker-Pope, 2007). Gifts are also often ritualised, such as Christmas, and gift-giving has then a symbolic acting out of commitment between the giver and the receiver (Furnham, 2016).

One of the most important reasons we give gifts is to feel closer to other people – to form and strengthen social bonds between individuals (and sometimes communities), integrate with others, in both personal and formal contexts – but also to reflect social distance (Schwartz, 1967; Sherry Jr., 1983). The act of gift giving, along with the related mental and physical processes, can give a profound sense of joy not only to the recipient but also the person giving the gift, and often other people, too, who are involved in the event somehow (Areni, Kiecker, & Palan, 1998). While usually more of an annoyance or inconvenience rather than an actual problem for most people, at worst, it can be the cause of a psychological phenomenon known as gift giving anxiety (Schwartz, 1967; Sherry, McGrath, & Levy, 1993; Wooten, 2000). One can assume a lot of excitement, thought, uncertainty and even agony go into the determining of the best possible gift for a loved one – or figuring out what is appropriate for a more awkward and formal occasion, when the recipient is perhaps not personally known.

The research problem was directly drawn from not only personal experience giving and receiving gifts, but also the experiences of family, friends, and even acquaintances: how could ICT help with the activities involved in the gift giving process, relieving anxiety and resulting in better gifting experiences? While not as serious a topic as e.g. war or poverty, gift giving is a significant historical tradition all around the world (Sherry Jr., 1983), and is especially alive and well in modern Western countries that focus more and more on a culture buying and consuming. Shops exist whose only purpose is to sell gift items. Still, there is nothing quite as admirable as observing someone who always seems to find great gifts for everyone. Gifts, that do not feel pretentious or shallow, but hold a deeper meaning.

People utilise many kinds of tools to help remember gifting occasions, plan gifts, organise combined efforts for bigger gifts, and to figure out what to get someone, as becomes evident from the tool usage examples of real-life gift givers (see Ch. 4). How to use this information to formulate a support application using ICT knowledge, however, is quite another thing. Combining experience with hard research material about gift giving, from the fields of cultural anthropology, consumer research, marketing, sociology, and consumer and social psychology on one hand, and productivity enhancing applications and behaviour change support systems from ICT field on the other, form the core of the present thesis, thus contributing directly to the identification and development of an ICT solution to help boost the process of gift giving. The present study, thus, reviews relevant literature on gift giving and problems
therein, explores real life examples of existing solutions to gift management, and finally draws together relevant features and system requirements. Such requirements are discussed in the context of the Technology Acceptance Model (TAM). (Davis, 1989; Davis, Bagozzi, & Warshaw, 1989a)

After this introduction, Chapter 2 describes the method and materials used for this study. Chapter 3 delves into the essence of gift giving, outlining the main approaches to research in the field, the characteristics of good gifts, and the ambivalence present in the process. Chapter 4 explores existing gift giving tools currently in use, including mobile apps. In Chapter 5 the Technology Acceptance Model is explained, while Chapter 6 integrates the contents of chapters 3-5 into a triangulated list of features and requirements of a gift giving support application, which should be used as a basis for further research – possibly utilising a design science research method – to design and produce an application to help streamline the process of gift giving, potentially increasing the benefits on all sides.
2. Method and materials

The method of this thesis was mainly a narrative literature review, with some added real-life examples of gift documentation. A goal for the review is to scope the state of the research topic at present in order to gain a good overview (Baumeister & Leary, 1997). By establishing such an overview, it is possible to gauge possible solutions or further directions of research for the stated problem (ibid.). The process of accumulating source material was started with a simple Google Scholar search into gift giving, to gain insight into the topic and which aspects should possibly be investigated in more detail.

This first round of searches especially provided two interesting finds: the existence of a psychological phenomenon known as gift giving anxiety, and a collection of fields that generally show the most interest in the topic of gift giving:

- Cultural anthropology
- Consumer research & behaviour
- Marketing
- Sociology
- Psychology, Consumer psychology, Social psychology

The literature searches performed for the present study indicate that gift giving behaviour is widely researched especially in the contexts of marketing, consumers, sociology, and psychology. The former two often have an interest from a monetary point of view (i.e., how to encourage gift buying, how to predict consumer buying behaviour), while the latter two are more interested in the essence of the behaviour itself (e.g., why do we give gifts, what effect does it have on our psyches and emotional lives).

The databases Academic Search Premier (EBSCO) and ACM Digital Library were mainly used in addition to Google Scholar to find articles of interest, and backward and forward searches from identified articles were used to identify further relevant records. The main themes searched for were the anthropological, social, and psychological perspectives of gift giving behaviour, what is important to consider when choosing a gift, productivity enhancement apps, and behaviour change support systems. For the topic of gifts, only articles with relevant abstract content were chosen, for the ICT portion the most central articles and models were triangulated and used.

The literature review was complemented by additional material from a real life sample of convenience, illustrating methods actually used in managing gift giving and gift receiving. The material is presented in Figures 1-6, in chapter 4.

Looking into the aspects of gift giving provided clues as to what to look for in the field of ICT that could possibly help in managing gifts and gift ideas. While no research on
actual gift giving software could be found, in the practical area, productivity applications seemed to incorporate relevant features, and were further explored to help determine how gift giving could be supported. As for a theoretical approach to drawing the literature and real-life examples together for a number of high-level guidelines for designing a gift giving support application, the present thesis based the design goals on TAM.
3. Gift giving

This chapter explores the many aspects of gift giving, as per literature. Section 3.1 goes through basic aspects of gift giving via cultural anthropology and social psychology. Section 3.2 handles the characteristics of a good/successful gift, while section 3.3 considers the negative side of gift giving – the less ideal emotions associated with it, as well as why some people are deemed difficult to find gifts for.

3.1 Approaches to gift giving research

It is generally believed that it is better to look for recipient-centric gifts, i.e., gifts that match the recipient’s tastes and preferences. However, several studies exist indicating the opposite. Paolacci, Straeter and de Hooge (2015) did four rounds of studies and found through all of them that gifts that draw from true core characteristics of the givers are liked more by the recipients, due to perceived identity-congruence. Aknin & Human (2015) found that giving giver-centric gifts increases the gains in relationship closeness between the giver and the recipient – albeit this was only evaluated from the givers’ point of view, therefore it is difficult to conclude if the gain is bidirectional or not.

Sherry Jr. (1983) took an anthropological point of view into gift giving behaviour and presented a model (see Fig. 1) to describe the process of gift-giving as early as 1983 that not only illustrates the many aspects of the gifting process, but also reveals how complex it is. As he aptly puts it, “Gifts are tangible expressions of social relationships ... Giving too much, too little, or too late can strain a relationship to the point of dissolution” (p. 158). The roles of a person change throughout their lives (son, brother, husband, father, etc.), and so must their gifting strategies. At certain phases there may be plenty of resources (and a gift can be made out of virtually any form of resource) for giving, and plenty of people to give to, at other phases that may all change drastically. (Sherry Jr., 1983)
The model divides the process of gift giving into three stages:

**Gestation** – The idea of the gift becomes reality, usually following a motivational trigger such as Christmas approaching. The giver deals with the search/creation of the gift, investing a symbolic meaning, while the recipient intentionally or unintentionally elicits for a gift.
**Prestation** – The actual exchange happens, not only in the form of the material gift. The giver worries about the recipient’s response, the recipient evaluates the gift and responds, and the giver evaluates the verbal and nonverbal responses.

**Reformulation** – The gift is consumed or stored, the effects of the exchange on the relationship take place. The roles of the participants are often reversed at this point, forming a continual pattern of gift exchange.

Schwartz’s (1967) perspective is that of social psychology, and presents gift exchanges in a darker tone, going as far as citing the way gifts are used in prisons to establish dominance over other inmates through indebtedness. He stresses the role of gifts as impositions of identity. That is, giving a gift not only expresses and confirms the identity of the giver, but also communicates an image of the recipient. Accepting a gift is accepting the image, rejecting a gift rejects the image.

Gifts have many uses in parent-child relationships. They can be used by parents to indoctrinate their children with the features they want them to adhere to (e.g., giving “masculine” gifts to a boy and “feminine” gifts to a girl). Excessive gift giving on the other hand tips the scale of balance in the parents’ favour and robs the child of opportunities to self-hood strengthening experiences through gifting. It may also be intended for other reasons: by making it impossible for the child to return gifts of equal value they become inferior, subordinate, obedient – “the only way he can pay his debt may be to accept the orders of the giver” (p. 4). In a similar way Santa Claus is used to assert control, by using him as an instrument to sanction bad behaviour and encourage good. A gift can also be used as punishment when it is presented to the child as a reward while stressing it is being given despite the child’s poor behaviour, not deserving it, which results in shame. Sometimes children are given gifts beyond their age and abilities, to facilitate (or impede) maturation, but this also tends to cause anxiety for them. (Schwartz, 1967)

Gifts can also be used to boast identity and social status: a husband may give his wife elaborate gifts to display, making the wife an instrument of amplification for his own identity. Same can happen with children. (Schwartz, 1967)

Professor Ellen J. Langer points out in an interview (Parker-Pope, 2007) that a present trend of forbidding gift exchange, for example at Christmas time, may be counter-productive in social terms: banning someone from giving a gift also puts restrictions on that person’s freedom to think about another person’s likes and what would bring that person joy.

Whether seeing gift giving as part of creating social conformity and enforcing social dynamic, as in Schwartz’s (1967) view, or a ritual that supports social bonding and closeness, as in Langer’s (Parker-Pope, 2007), the common element is interaction. Researchers have also approached gift giving from the point of view of what gift giving as an act means in different relationships (Otnes & Beltramini, 1996): for example, what type of gifts are given to a casual date vs. an established lover (Belk & Coon, 1993). The ritualistic aspects of gift giving are also not merely customary gift exchange, but have a deeper function of societal preservation (Otnes & Beltramini, 1996), which essentially aims at promoting social conformity.
3.2 What makes a good gift

Areni et al. (1998) gathered personal stories about memorable gifts from 174 people from both the U.S. and Europe, and were able to form 10 common themes/characteristics for gifts that really left a mark on either the recipient or the giver. The participants had been asked to tell the story of a memorable occasion of either receiving or giving a gift. The gender distribution of participants was almost precisely 50/50, while most roles (71%) described were that of a receiver. The relationships of the gifting occasions were divided into romantic partners, parents, grandparents, siblings, and friends and kin. The themes serve to indicate what the perceived value of meaningful gifts can be based on, i.e., what makes a good gift, what should be strived for. The themes are described next.

**Personal history** – The gift uniquely symbolises a period of the giver’s life. This could be, for example, a personal item or heirloom that has been with the giver through interesting life experiences, e.g. a war.

**Helping others** – A gift that specifically helps the recipient at a time of need, e.g. a gift of money at a time of temporary poverty.

**Surprise as value** – The gift is so unexpected it causes a strong reaction, be it shock, thrill, etc.

**Secrecy/deception** – The recipient is misled or their attention diverted away from a gift they might otherwise have anticipated. Done on purpose, to increase/create the surprise factor.

**Sacrifice as value** – Time, effort and/or personal sacrifice expended to plan, acquire or create the gift. The most obvious example would be crafted or partly-crafted gifts, such as knitted blankets or personalised items.

**Planning everything to a tee** – The giver meticulously plans something so elaborate and precise the effort put into it cannot go unnoticed by the recipient. This theme is favoured by male gift givers.

**Family tradition** – Families sometimes have traditions regarding gifts, often in certain situations. It could be a family heirloom passed down to the next generation, or something as simple as letting everyone in the family open one Christmas present early every year.

**Symbol of relationship** – Jewellery is a prime example of this theme, e.g., rings given to romantic partners. They do not even have to be promise or engagement rings which are traditionally thought to be very meaningful, but also any other items symbolising the relationship will suffice.

**Trust/responsibility** – A gift with a trust/responsibility theme can be something valuable (or even dangerous) that the recipient is then trusted to take good care of or know how to handle properly. These are mostly used as gifts for younger people, by their parents or grandparents, as a sort of coming of age or rite of passage symbol.

**Perfect thing** – A gift that is exactly what the recipient needed/wanted, often obsessed about, for a long period of time, or just something that perfectly matches their personality.
3.3 The negative side of gift giving

Despite its depiction, the ritual of gift giving is not always a positive experience but often one of mixed emotions, and one of the last real remaining tests of social ties (Sherry et al., 1993). Generally, anxiety levels rise the more the giver wants to impress the recipient, and the less certain they are of their success – often due to uncertainty as to what the recipient wants or would like – but some givers enjoy the challenge it provides (Wooten, 2000). People also give gifts that are not meant to be desirable to the recipient, according to Schwartz (1967) this is to satisfy “man's need to give gifts that hurt or embarrass” (p. 5) but does not elaborate on where such a “need” stems from or even what evidence the notion is based on. He also points out the way gifts are used in prisons to establish dominance over other inmates through indebtedness.

Sherry et al. (1993) conducted a sentence completion exercise around four themes: the wrong gift, the problem with gifts, last minute shopping, and owing someone a gift. All of them yielded mostly negative responses from the participants.

"The wrong gift" brought out emotions like frustration, disappointment, annoyance, embarrassment, and even despair through the belief of unavoidability. Only one response was positive. For "the problem with gifts" there are mentions of technical difficulties like mailing, wrapping, and shopping. Thinking of the right gift, time, expense, and propriety also worried the participants, some going as far as guilt and obligation. While negative evaluations were clearly more common in "last minute shopping" as well, some participants also found the thrill, excitement, hectic fun, delight, and potential for treasure finding positive aspects. Again, there were references to guilt, but also foolishness, pain, and even experiences of psychological threat.

"Owing someone a gift" was found the most disconcerting to the participants, with a wide range of negative connotation, and many feeling it goes against the whole idea of a gift, while others considered it normal. For some, a time-constraint was identified in the obligation of payback, feeling pressured in many ways, or even as if they were being blackmailed.

Sherry et al. (1993) describe the strain on both parties of the gift giving process:
"Recipients must gauge the motivation of the donor and calibrate a response. Donors must gauge the response and divine a motivation." (p. 230), which matches the contents of Sherry's previous model of the gift giving behaviour process (Sherry Jr., 1983) presented in section 3.1, albeit appearing here in a gloomier context. Gifts strengthen and threaten social ties, cause logistical and psychological trauma, and the considerations of propriety and negotiation of identity involved in the act of giving gifts add tension to what is generally expected to be a fun activity. Giving the wrong gift can imply to the recipient the giver does not know them well enough, which especially in a romantic relationship could be detrimental. Themes of negativity are also identified: entrapment in ritual, relationship of substance to sentiment, displeasure at the extremes, discontent in possibility and reality. (Sherry et al., 1993)

Negativity also stems from perceiving certain people "difficult" as recipients (Otnes, Kim, & Lowrey, 1992). It appears the closer the recipient is to the giver, the more pressure they feel for the gift to be good enough (Paolacci et al., 2015), however, out of the usual recipients of gifts, in-laws, stepparents, and other affinal relatives were the
most likely to be deemed difficult by the participants of the study by Otnes et al. (1992). They were able to find nine typical characteristics of a difficult gift giving relationship: perceived lack of necessity/desire, fear of being unappreciated, different tastes/interests, unfamiliarity with the recipient, perceived recipient limitations, imposed giver limitations, imbalance, personality conflicts, thwarting of a gift selection.
4. Gift exchange tools

Productivity suites and apps are already being used to support gift giving activities. A small number of people were kind enough to allow the use of screen captures and photographs of their actual usage of Google Drive and Docs, as well as traditional pen-and-paper solutions, to be used as examples. Four categories of tracking can easily be identified (described more closely in the following sub-sections): Christmas cards, birthdays, gifts given and received, and planned gifts and/or gift ideas. Sub-sections 4.1 to 4.4 will cover each of these categories separately, while 4.5 offers a brief overview of mobile apps already available in the market.

4.1 Christmas cards

Christmas cards are typically exchanged between members of the same social circles every year. Since the balance of giving and receiving is at least somewhat important, it can be wise to keep a list of whom cards have been received from, and whom they have been sent to, each year. In Fig. 2 a simple spreadsheet has been used to keep track of card exchange over a course of three years by a female person. The first column lists all the people the person exchanges Christmas cards with, after it there are two columns per year to be marked with Xs: one for having sent a card, and another for having received one. Two of the rows visible are partly coloured grey which is used to indicate the recipients are no longer eligible recipients: row 6 depicts a couple that has divorced, while row 13 depicts a grandmother who has passed away. (personal communication, March 23, 2017)

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<td>Pila ja Aslak</td>
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<td>Milla ja Urho</td>
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<td>Vesa ja Hel</td>
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<td>8</td>
<td>Sami ja Annis</td>
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<td>Rönköt</td>
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<td>14</td>
<td>Laura</td>
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**Figure 2.** A screenshot of a Christmas card log in a Google Docs sheet
4.2 Upcoming birthdays and other occasions

A rather obvious part of gift giving is knowing people’s birthdays, anniversaries, etc. The usual method of keeping up with this information is writing down said birthdays and other occasions on a calendar – in the case of Fig. 2, a fairly standard day planner, which has had one of its pages refurbished to serve as a reminder of whose birthdays are coming up in January. Birthdays could also be added to a calendar app on a phone, or a cloud-based calendar like Google Calendar. Unfortunately, most such productivity apps do not provide a “monthly birthday view” such as depicted in Fig 2., making it slightly less convenient to stay up to date on which birthdays are coming up next.

![Image of a calendar page with birthdays listed]

**Figure 3.** A list of birthdays coming up in the month of January

4.3 Gifts given and received

The more people in one’s social circles, the more gifts tend to get exchanged. It would be unfortunate to find a great gift for a friend, only to realise after giving it you had already given that exact same item to the same person a couple of years earlier. Also, some gift ideas can be somewhat universal, in that they would be suitable for more than one person. It is easy to forget and get mixed up, resulting in embarrassment and less enjoyable gifting experiences. Therefore, it makes sense to keep track of what has been given to whom, and perhaps also what has been received from whom. It would be equally embarrassing to give the same gift back.
Figure 4. A gift log

Figure 4. is an old gift-logging system dating back all the way to 1979, the log is still in use. The first column houses recipient names, and the columns marked by years contain gifts given to each person that year, including the money spent on them. The log does not have information on received gifts. The person kindly allowing the use of their gift log for research purposes used two versions of this log: one for her own relatives, and another for her husband’s relatives (personal communication, March 24, 2017).

4.4 Gift ideas and planning

One of the greatest enemies of blissful gift giving is time – or, more accurately, the lack of it. Time is needed to generate and look for ideas, as well as making preparations such as acquiring a gift (e.g. waiting for the postal service to deliver an item ordered from abroad), or crafting it. Therefore, it can be useful to plan ahead, and try to have at least some idea of what to get somebody, preferably well in advance.

There are countless guides to generating ideas, and common points tend to be allowing time for the subconscious to work, and to do exploring, find inspiration.
Figure 5. A list of gift ideas per person, contained in a Google Doc

The list in Fig. 6 acts as a sort of a “gift idea pool”. Several gift ideas are listed per person, used ones have been marked by strike-through, the occasion the gift was given on, and the year the idea was used. The user of this list had a habit of writing down gift ideas whenever they happened to emerge, so that there would hopefully always be something to use when the time came to get or create a gift for someone, thus avoiding panic and anxiety. (personal communication, March 23, 2017)

4.5 Existing gift giving applications

This section is a brief subjective overview of the current supply of gift giving support applications on the smartphone market. A search for “gift giving” in both AppStore and Google Play gives plenty of results in both free and paid apps. Most of the apps found this way are intended for earning money or gift cards through completing tasks like completing surveys or testing apps. Gift-wrapping tutorials are also a prominent theme, and there are some apps that allow you to exchange digital gifts like pictures with your friends.

While neither of these types of “gift apps” help the actual real-life process of gift giving, there is only a small number of real gift apps on the market that can indeed support the tasks implied in the previous subsections, at the very least by offering gift suggestions or ideas. The features most commonly offered are tracking given and/or received gifts, adding gift entries with details like price and where to buy it, importing phone contacts to be used as gift recipients, and adding notes to gift or contact entries.

The problem with the available apps is that while they offer varying combinations of the features described in the previous subsections, none appear to include all of them.
5. Technology Acceptance Model in developing a gift giving support application

The previous chapters have focused on identifying characteristics of gift giving as a cultural phenomenon, in terms of behavioural aspects, and also through real-life examples of gift giving management. The present chapter presents an overview of Technology Acceptance Model (TAM) (Davis, 1989; Davis, Bagozzi, & Warshaw, 1989b) as a lens for evaluating feasible and functional system features of a gift giving support tool.

The purpose of TAM is to predict new system acceptance. The model assumes that if the perceived ease of use and perceived usefulness of a system are high enough, they have a positive impact on attitude toward using, leading on to intention to use and finally to actually using the system. The basis of the model is in Fishbein and Ajzen's (1975) Theory of Reasoned Action (TRA) where, in short, beliefs, attitudes, norms, and intentions form the basis for actual behaviour.

![Technology Acceptance Model](image)

In other words, according to TAM the actual use of a system is predicted by intention to use, which is predicted by attitude toward using the system. How useful and easy to use a person believes a system to be in turn predict the said attitude. The model also suggests a direct connection between perceived ease of use and perceived usefulness so that a perceived increase in ease of use means, in practice, improved performance (the system is more useful when you can do more with the same effort). Perceived usefulness and perceived ease of use can also be influenced by external variables such as training, documentation and user support made available to the system users (Davis et al., 1989).

An application that would assist a person in finding, selecting and managing their gift giving should, in line with TAM, provide its user with a sense of perceived usefulness and perceived ease of use in order for the user to develop and maintain a strong intention to use the system. By early user testing for perceived usefulness and perceived
ease of use it will be possible to establish users' willingness to take the system into use before putting great effort into actual development (Davis et al., 1989). On the whole, establishing a system design that supports intention to use means a higher chance of overall positive user experience with the system.

The implications of the constructs from TAM run alongside the design considerations in chapter 6, where the literature and real-life based predominants of developing a gift giving support application are pulled together into design requirements.
6. Discussion

The purpose of this study was to analyse gift giving to build design guidelines and system requirements for a gift giving support application. What makes a good gift (chapter 3.2) and what is already being done to help the process of gift giving (chapter 4) are the main basis of what a gift giving support application needs to support and encourage. The darker side of gifts (chapter 3.3) outlines the problems that need to be countered and/or alleviated by said application. The Technology Acceptance Model (TAM) helps conquer these goals by providing a framework to work with.

There are two perspectives to gift giving – that of the recipient, and that of the giver. Choosing a gift that reflects the giver will also increase the giver’s perceived closeness to the recipient, while choosing a gift that reflects the giver’s knowledge and understanding of the recipient will increase the recipient’s perceived closeness to the giver. The identity-imposing effect of gift giving plays a big part in this, as people like to give and get gifts that match their self-image, and the images they have of others.

As we know from chapter 3.3, anxiety stems from virtually any kind of uncertainty. It could be regarding what will be “good enough” or appropriate or what message the gift conveys, how to convey a desired message via gift, what to get someone who “already has everything”, or just what a gift could be. Another common situation among an immediate sample of convenience is somebody’s birthday approaching, stress levels increasing as the day gets closer and closer, and no gift solution has been found.

To battle these problems, one needs to know and remember details about the people they give gifts to (both for better chance of ideas and to avoid contradicting anyone’s identities), and try to plan and come up with ideas as early as possible. Some sources of anxiety, like choosing to conform to the idea of “owing someone a gift”, are very difficult to change, but even if one felt obligated to match a received gift with their own, a support application could still at least help them achieve that. After all, the intention is not to judge or attempt to alter personal gift giving philosophies, but to support the process and user needs, whatever the sentiment behind them.

It is more convenient and much less stressful to gather potential gift ideas along the year, instead of always trying to come up with one right before a birthday or Christmas. There are already great tools for ideas, such as Pinterest and big webstores such as Amazon. These are great for combining user data to suggest items that might never have occurred to a giver otherwise. Once one learns how to search and where to look, and how to think, managing gifts becomes more of a problem of abundance and organisation: recording useful details, and cataloguing/organising ideas and projects yields more benefit to the actual routine and act of gift giving. Having such a tool handy can also help adapt into the new way of thinking and observing.

The following list outlines the points that would most likely help:

1. Regularly keep tabs on the calendar regarding birthdays and other significant days that may involve gifts;
2. Know the people you exchange gifts with – not only does it help with gift idea generation, the two-way identity-imposing effect of gifts makes it all the more important;

3. Accumulate ideas over a longer period – picking from a pool is much easier than having to come up with something out of nowhere, at the last minute;

4. Ideas birth new ideas – sometimes just looking into the pool will yield something completely new;

5. Plan ahead with "do it yourself" (DIY) projects – allocate the time needed to gather the materials for and complete them;

6. Keep track of gifts received and given – reduce the fear of accidentally duplicating a gift, or gifting the same item back;

7. Keep track of budget – resources for gifts can be limited, which is another known potential source of distress, knowing what is being spent on each gift helps avoid going over budget;

8. Mobility – implied by points 1, 3, and 4, having the application at hand when an idea or inspiration unexpectedly arises is ideal.

Preparation, considering the recipient, thinking up ideas and then recording them continuously can help support the above-listed approaches to easing gift giving anxiety. A productivity-oriented application solution would bring together the elements of knowing the people close to you (much like profiles and contact lists), collecting ideas (similar to solutions like Pinterest or Amazon's wish list), reminders for up-coming events (much like calendars and organizers), and ideation (seeing your own plans as a means of creating new ideas) into a package that should appeal to a need for usefulness. Taking away effort of multiple records of what presents there could be, what has already been bought or made, and when and to whom they are intended cognitively streamlines gift giving into one continuous process. An amalgamation of such related pieces of information into one application provides also ease of use compared to using multiple systems for the gift management purpose.

Table 1 collects the identified system requirements (listed above) alongside a design contribution possibility that would aim at increasing perceived ease of use and/or perceived usefulness. Naturally, a good level of UX hygiene (e.g., Krug, 2014) for the interfaces needs to be maintained throughout the design, and the listed elements in Table 1 focus on task-related aspects of ease of use and usefulness.
Table 1. System requirements and suggested design contributions

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| 1  | Regularly keep tabs on the calendar regarding birthdays and other significant days that may involve gifts | • Calendar integration or API: adding a birthday or other applicable event in one is visible also in other (pending user settings);  
• Top level content in an application, always visible when starting the application; |
| 2  | Know the people gifts are exchanged with                                            | • Creation of profiles with details on each person that can be easily accessed and kept up to date. |
| 3  | Accumulate ideas over a longer period                                              | • System enables listing possible gifts with tagging that enable sorting for example by date/holiday period/gift recipient;  
• Interface for tagging and sorting lists with should be in the same view with the lists so as to minimize view changes;  
• Such a feature will, over time, reduce last-minute gift buying stress and leverages gift buying activities to suitable slots of time early on instead of requiring an extra effort at the last minute. |
| 4  | Ideation based on existing gift lists                                              | • System offers "gift pool" views sortable per gifts given in the past (time of year/holiday season), gift type (e.g. Birthday/Christmas/per person, relationship, etc.);  
• Noticing trends or themes of previous gifts and gift ideas can help in gaining new ideas, thus reducing stress. |
| 5  | DIY planning                                                                       | • Early notifications can be given for example when a homemade gift idea has been listed for a recipient (reminders for supplies, etc.);  
• "Outsourcing" memory in this manner is a known stress reducer (Levitin, 2014). |
| 6  | Tracking received and given gifts                                                  | • Build a database where gift entries can be added with giver/recipient connection, dates, and other details. |
| 7  | Tracking budget/prices of gifts                                                   | • Price of gift or materials could be a detail that can be filled in for gift entries in 6. This information could then be used for different kinds of budget calculations, e.g., comparing tallied prices against a set budget for a group of people. |
| 8  | Mobility                                                                           | • Store all application data in the cloud.  
• Use mobile-first design approach to optimise application use on mobile devices. |
Using these guidelines, it could be possible to design an application that helps keep track of people and upcoming gifting days as well as ideas for gifts. If expanded with third party services (such as Amazon, Ebay, or Google), it could even directly help finding new gifts by generating suggestions based on combined data from other users and finding similarities.
7. Conclusion

Throughout this thesis gift giving has been explored from multiple viewpoints – exploring the research approaches, triangulating the characteristics of good gifts, while also touching on the negative aspects of gift giving. Current gift giving support tools were explored, both in the form of pen-and-paper solutions and digital productivity applications, even providing real-life examples of usage of currently available tools. Combined with the Technology Acceptance Model a list of requirements and possible design contributions for each requirement could be formed.

There are already productivity apps that can be used for tracking gift ideas, basic note-making apps such as Microsoft OneNote and Google Keep, not to mention calendars and contact lists, and even actual gift giving support apps for smartphones, but these features either are not combined seamlessly, or some features might be missing.

Implications for future work not only include the design and development of a gift giving support application, but also to use appropriate theories and frameworks in ensuring that such an application produces the right responses: using the application should ease gift giving anxiety and increase the level of management and organisation (and thus productivity) of giving and receiving gifts. One potential framework for targeting system features to user learning a perspective of long-term planning in terms of gift giving could be the Behaviour Change Support System (Oinas-Kukkonen, 2013) and the Persuasive Systems Design (PSD) model (Oinas-Kukkonen & Harjumaa, 2009).

For further development, a more thorough and systematic review of available apps in the market would be advisable, as well as gathering information on how and what tools a wider base of gift givers is using to support their gift giving process. The effect of gender roles in gift giving would be another valuable target of further investigation, especially in the context of user group identification.
References


