Thesatechnology: Designing for Death

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Thanatechnology, or the study of death technology, is based within the human need to “figure out” death. Through the ages, humans have used technology to further our understanding of what it means to die and what it means to mourn as a way of figuring out what it means to live. Digital data is a huge part of recent digital technology and includes social media data which is a part of many peoples’ daily lives. This leads to many questions including what happens to social media pages when someone dies. These “digital graveyards” leave a lasting impact on many social media sites, whether it be through the “clutter” they add to the site, confusion to its users, or trauma to the families. In many realms, the idea of a “digital death” has not been explored, nor have the implications of digital technology been studied widely in the modern death. Technology is expanding all sectors of the death industry, from the burial process to the remembrance aspect. Social media sites, personal cloud drives, and communal video games the deceased may have played are all aspects of death that should be designed for. Looking at what the technological implications of the modern death is vital to the future of designing digital technologies. This thesis explores current approaches companies are taking when it comes to a user’s death and explores potential other options. This is important to ensure that the future of a persons’ technological presence is preserved in a way they choose and want.

KEYWORDS: thanatechnology; grieving; mourning; digital death; ritual; death technology; digital graveyards; digital footprint; etc.
THANATECHNOLOGY: DESIGNING FOR DEATH

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ACKNOWLEDGMENTS

This paper would not have been possible without the many great academics who did countless hours of research before me. Dr. Carlson and Dr. Corness have helped me immensely throughout this endeavor for which I am so incredibly grateful. My family and friends were my rock during this process, and I could not, and would not, have succeeded without them. I write this in honor of my loved ones who came before me, whose lives were cut too short, whose lives I miss every day.

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I. INTRODUCTION

What does it mean to die? According to the Uniform Determination of Death Act it means “an individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions, or (2) irreversible cessation of all functions of the entire brain, including the brain stem, is dead.” (Sarbey B., 2016). Something that is just now starting to be explored is what it means to die digitally. Western culture has interwoven itself into digital culture to the point where we are at a crossroads. Digital culture is not going away anytime soon, however there is the question of what to do with the information left on social media by the deceased. Is the data on social media sites even worth saving? One could argue that the millions of cute animal videos and quickly made memes are nothing of value, however many argue otherwise. One argument for saving this data is so that the deceased can “live on” through their social media pages.

In the game World of Warcraft (WoW) a player passed away in real life and his friends within game took it upon themselves to hold a memorial in-game: “A few days after Michael’s death, Ghemit, his husband and fellow WoW player, organized an in-game memorial service in his honor. For over an hour dozens of players gathered under a tree in Night elf city, Darnassus, on the Proudmoore server, to pay their respects...” (Arnold, et al, pg 75, 2018). While game data is probably not going to be preserved in the same way social media data would it still holds importance to this conversation. Users of social media sites and in the case, games, find people they connect with. These connections do not end when one or both players pass away. Digital friends still hold importance in the deceased's life regardless of how the in-person family and friends of the deceased feel about it.
When we look at how online friendships form on social media, in this case Facebook we see that there is not a lot of space created for the mourning of loved ones. “Facebook and other social media sites were not created to be a platform for memorials, but users have adapted them to share information, and most importantly, their grief.” (White, 2017, 308). The death of a loved one holds enough unwanted trauma within itself, however finding out about it via social media rather than from the mouth of another loved one adds a whole new layer to the grieving process. I learned this personally after the passing of a colleague of mine was widely known online before I was told.

Additionally, when it comes to finding out that a loved one has passed on my personal first instinct is to check their socials. This can lead to issues when grieving depending on what people are able to post about them. White discusses how social media may cause living users more distress during the grieving process for their loved ones. (2017). This is due to the fact that their socials are now just what is left behind. I personally often view it as a ghost of who they were and similar to having to do the laborious task of cleaning out a loved one’s house after they pass. In the current digital climate around death users are left to clean and filter out data from the loved ones that may have been left their years ago, potentially reopening unhealed wounds.

All of this culminates into the question, what is to be done with digital data once a person has died? Furthermore, what “death technology” could be used to help with this process? Death Technology as defined by The Order of the Good Death, a leading organization working to make death less taboo, states that it is “any new technology that is used to dispose of a dead body” (2022). This can be expanded on in the context of this paper because social media sites are part
of the deceased person, they theoretically show who that person was. The term “thanatechnology” was coined by Carla Sofka around 20 years ago. It’s definition, “any kind of technology that can be used to deal with death, dying, grief, loss, and illness.” is the link between “death technology” and “thanatechnology” (1997). The field of thanatechnology looks at a lot of aspects, but most recently has been looking at the relevance and potential preservation of social media accounts for the dead (Biçer & Yıldırım, 2021).

The digital footprint of the dead is ever expanding and considered to be any piece of information a person would store on the cloud (Cerrillo-i-Martínez, A., 2018). Within the increasing digital footprint comes the implications of a “digital death”. Meaning that when a person dies physically they also “die” digitally because their online content can no longer be added to. (Biçer & Yıldırım, 2021). This is a new aspect to the process of death, as a “digital self” is a new aspect of human life. Digital death also opens the question on how to preserve any digital data that may be relevant to the sociology in future generations.

How will archeologists in the future navigate the memes, cat videos, and other information posted on a persons’ social media pages? Furthermore, how will they be able to tell what is true and what is just social media lies? Is there even any point to preservation of social media content? Carl Öhman and David Watson's paper “Are the dead taking over Facebook? A big data approach to the future of death online” (2019) stated, “The personal digital heritage left by the online dead are, or will at least become, part of our shared cultural digital heritage, which may prove invaluable not only to future historians, but to future generations as part of their record and self-understanding.” I do not post anything to social media that I find would be of value to future generations. However, what about the Twitter accounts that are purely academic,
the Pinterest boards that hold current trends in house décor and fashion? Are these digital representations of the current trends and teachings worth saving for future generations? Regardless of one’s own personal thoughts, some of this digital data will be stored for future generations, it will be what they look at to see where they came from. The bigger question here is how do we navigate the vast amount of digital data and find out what is worth preserving?

Personally, I think it should be left to the individual user.

In the context of social media, the implications of digital deaths are just now starting to be explored. In 2011 Getty and her colleagues looked at the implications of these continued interactions. They found that while interacting with the deceased’s page may be considered an unhealthy communication, it helps the bereaved process their emotions and look forward into the new future with this change. They noted that, “Death disrupts but does not need to end a personal relationship. A continuing relationship with the deceased represents a different kind of relationship situated in entirely changed circumstances.” I firmly believe that this approach is incredibly valuable and not that different than what we already do. When a couple breaks up they move from being partners to being ex-partners. They are often no longer involved in each other’s lives and they have to adjust to this change. By allowing the bereaved to continue to look at a loved ones social media site it helps the bereaved process any emotions towards the death that they may have. It also helps promote healthy relationships with death as the bereaved begin to think and learn how they want their body and digital data to be taken care of when they pass.

This thesis is exploring what it means to die on social media, and how social media can be better designed to prepare for its users’ death. Specifically, I am exploring how a user’s
wishes can be kept on their death bed and how website designs can implement the proper tools to ensure their wishes be carried through. This thesis looks at what has been practiced historically in the terms of the “digital death” through the literature and explores written and personal descriptions of experiences of social media users. I look at current examples of what social media sites already have in place for the “digital death” and evaluate the current opportunities for managing digital data once the user is deceased. Finally, I propose a design concept for a “thanosensitive” approach to maintaining digital data after death.
II. THANOTECHNOLOGY: DIGITAL DATA, DIGITAL DEATH, AND DEATH ANXIETY

Thanatechnology is the study of technology at the time of a user’s death and it is evolving to help with the death industry. According to Sofka, this technology is used by bereaved individuals to help navigate their new reality while there is still a footprint of the deceased’s online life. This can include finding resources for next steps, professional help, and a networked area (2012, page 20). The “network” Sofka and colleagues are referring to in this instance is the Internet. Much of everything nowadays is done online, especially in this “post” COVID-19 world. Over the last couple of years, the world has seen a drastic change from in-person interactions to a larger capacity of online interactions. This means that with less in-person interactions more people have probably found out about loved one’s death through technology. The need for technology to be “death aware” is vital to the wellbeing of our culture. One way that thanatechnology does that is by looking at the human computer interactions (HCI) aspect of it.

Part of what designers can look at when approaching the thanatechnology aspect should be designing with meaningfullness and purpose. William Odom and his colleagues worked on creating a slow device called “Photobox”. This device randomly printed three photos a month from the users Flickr account without any input from the user. However, they ran into issues where there were limitations with the technology that only allowed for short term use without user interference. They noted, “This inability to personalize for long term use had direct implications for our implementation. It also marks a larger open question of how modularity might be achieved in mass manufactured consumer items.” (2012). While Odom and his
colleagues are talking about a physical object, I think its principals and findings can be applied here. Almost everything is designed for human consumption especially when it comes to social media. Thanatechnology is aimed at helping the bereaved user process death and find resources, so how can we as designers look at what’s been done, like in Odom’s Photobox, and recreate it in a form that can apply to major social media companies.

In my own social media, I see sites like Facebook and Snapchat showing me memories that happened on that day in the past. This in a way is like Odom’s PhotoBox, but when it comes to the thanatechnology aspect there are a lot of complications within these sorts of displays. While it may be harmless on the surface, reminding someone of their past memories may dredge up something they might not want to think off in that moment. From personal experience I have been shown memories on both of the aforementioned sites of me and an ex, there’s no way for me to hide them or easily delete them without going through all of my digital data. Personally, I do not have the time or the mental space for that. What I am getting at is if sites want to include “fun” features like this they need to take into account features that can help hide aspects of their main feature. While I am well aware that this problem is in the minority, I firmly believe it is the job of the designer to design for as many people possible.

One way that this is being done is by designing technologies with a “thanosensitive” approach. One researcher in this area, Michael Massimi, studied thanatechnology during his PhD and into his postdoctoral work at The University of Toronto. During this time Massimi worked in the Technologies for Aging Gracefully Lab (TAGlab) which is a lab where technologies a used to find ways to help people transition into their older bodies. He has a
background in human-computer interaction and currently works for Slack in the User Research department. While with the University of Toronto he published 15 papers on what needs to be addressed to be successful in a thanosensitive design.

His collaborative work, “Memento Mori: Technology Design for the End of Life” discusses separating the design process of thanosensitive design into categories of design space, design methodologies, and design processes. He states that by separating out the design process it allows designers to take a step back and look at their work from a thanosensitive approach (Massimi et al., 2012). I find that this approach is common although I do not always benefit from breaking it down into categories. I find that with this breakdown of categories specifically, while theoretically it is helpful, I tend to get caught up in the wording. During my own design process, I look specifically at aesthetics, accessibility, and use the lens of thanasensitivity to inform all of my decisions.

In another paper by Massimi he takes a further look at the BeSupp platform which was used in the above study. In his paper “Exploring Remembrance and Social Support Behavior in an Online Bereavement Support Group” he looks at features on the site and how they were used by the study group. Features such as “Memory Box” or an online way to store links, journal entries, videos, photos, and stories, and “The Circle” the users curated group that is full of individuals in similar situations. This is a great way to help divide up the digital information that a user may want to share or not. Within the “Memory Box” you can share and unshare anything with your “Circle” with the exception of journal entries. This in itself would help a bereaved
person explore their grief in a empathetic environment and may help open the door to further grieving.

Massimi also co-authored a paper with Andrea Charise, a member of the English Department of the University of Toronto. Specifically, they state “For the first time in history, people are dying and leaving behind large amounts of personal information stored in computers and on networked systems.” (Massimi, Charise, 2009). As more and more people are dying there are more and more files left to be lost in the cloud computing void. How can we best design and navigate this amalgamation of files? The 2015 paper by Cristiano Maciel and Vinicius Carvalho Pereira talks about two different approaches to this. “Preservationists” suggest that the files go to the descendants of the deceased. “Deletionists” argue that the internet needs to “learn how to forget” and that the files should be deleted instead of given to “digital heirs” (Maciel, Pereira 2015). This is relevant to the conversation when it comes to what to do with the information and if it is worth preserving. I personally believe this up to the individual and why I believe naming a “digital heir” should be just as important as having a will.

On the other hand of the argument, what happens to these files when the "heir" is ill equipped to deal with this? Maciel and Pereira also talk about how while the older generations are able to decide what they should do with the files they are poorly equipped to follow through. While the younger generation knows how to handle the number of digital files, not enough research has been done on their opinions on what to do with them (Maciel, Pereira 2015). A vast amount of data is hard to sort through for any one single person, especially when that person is unfamiliar with it and may not be able to determine if it is of any value. Again, by leaving it up
to the person who owns the data to decide what is of value alleviates a lot of pressure from multiple parties.

Whether people choose to take either the “deletionist” or “preservationists” approach designers need to prepare in advance to consider either action and have both options be easily accessible and useable. In my perspective, having gone through this in 2016 a hybrid approach is best. Both of my paternal grandparents passed within four months of each other. They had thousands of digital pictures, e-books, and other online data that had to be sorted through. We backed up the pictures on the physical hard drive and saved the important online data, but then shut down the rest of the accounts. For my family it did not make sense to keep it all. There was just too much and for us it did not serve a purpose other than the pictures, although they have barely been looked at to this day. This data while had value to my grandparents has no immediate value to my family and me. If we had had conversations surrounding this aspect of death or had the websites had a thanosensitive approach with their design, it would have saved my family a lot of time and emotional energy when we were already struggling.

Personal data management is important both during life and upon death. I regularly consider how to manage my personal digital data and what will be left for others to manage when I am gone. On about a yearly basis I go through all my digital pictures and delete the countless memes and screenshots I know nobody will care about when I pass. I organize my data in a way that would make sense to someone else, and most importantly I have a physical place where I keep all of my passwords and accounts. These accounts that have “death” settings are in place and I am in the process of creating a digital will. I make the choices to spend time
managing my data because I believe taking a thanosensitive approach to designing my own data usage is important to both my own experience of my digital data, as well as to others.

A recent Pew Research study found that nearly 85% of Americans are active online every single day (Perrin, 2021). With technology being increasingly involved in everyone’s lives, designers have left a lot to be desired when it comes to end-of-life care in our technology. “...we wish to offer the community an exploration of humanist insight into the relationship between death and technology, which may then be applied to human-computer interaction (HCI).” (Massimi, 2009). The humanist approach to this topic is the most essential part, death will not evade any single human on this earth. Taking the approach to such a macabre topic from the perspective of being human is vital to going about the design process in a thanosensitive way. Technology design should include thanosensitive approaches that acknowledge that death is a huge part of the human experience that is worth designing for, as end of life care, in the myriad of ways that personal digital data is used.

Ernest Becker, a cultural anthropologist that studied death and how it effects the human condition, argues in his Pulitzer-Prize winning publication Denial in Death, “the basic motivation for human behavior is our biological need to control. Our basic anxiety, to deny the terror of death. By arguing the humans’ basic anxiety is the terror of death means that theoretically, if we eventually come to a place in our society in our society where we are prepared for death, and to prepare for death in all ways, that human could potentially overcome death anxiety. Becker’s claims have a lot of stakes when considering the rise of death anxiety with the recent COVID-19 pandemic.” (Menzies R. G., Menzies R. E., 2020). Becker’s
thinking naturally influences and collaborates with psychology to bring to light the “Terror Management theory”. “Terror Management theory posits that our awareness of our own death produces a crippling terror, and that humans have developed two distinct buffers in order to allay this fear: cultural worldviews, and self-esteem.” (Menzies R. G., Menzies R. E. 2020). With this theory cultural worldviews and self-esteem are the two most influenced emotions by death and death anxiety.

In theory, thanosensitive design would be in place to help ease these anxieties for both one’s own life and the lives of those around the deceased loved one. By acknowledging our very human relationships with death and the rise in death anxiety, and terror management, including thanosensitive design into our everyday social media experiences could help mitigate these fears. I look at this specifically in my own design approach talked about later. I’ve found with my own anxiety by allowing for as much to be planned as possible that it helps alleviate it as much as possible.

In my own personal experiences, I have also found that the anxiety that Becker talks about culminates more in younger people. I vividly remember my father telling me that my grandfather was interested and unafraid at what came next as he laid on his deathbed. This is also my experience in talking with my peers, while we are at the start of our lives we assumably live with the “promise” of decades, while this is unfortunately not always true we tend to harbor more death anxiety. This is where a thanosensitive design approach can help mitigate theses fears in the young and comfort older people that they have done what they can to help the people after them to sort through their data.
As people leave loved ones behind and our society becomes more and more complex, we have to come up with ways to help people navigate the death of a loved one. Advance Directives, or *living wills*, can be a legally binding plan for death. In a 1996 study performed by Laura Hanson it was found that of the 16,678 descendants polled, only 9.8% had advanced directives in place. Looking further into the study it was found that people of color, people who were undereducated, and uninsured people were even less likely to have an advanced directive in place. This is a societal issue that needs to be addressed, especially as humans delve further and further into a digital age. Advanced directives are an easy way to keep the deceased wishes protected and ensure that people who have ill will have a harder time acting on it.

What do advanced directives have to do with digital files? These legal documents can be put in place for not only, medical care plans, but also plans for what the person wants their digital legacy to be (U.S. National Library of Medicine, 2022). The Order of the Good Death, an online organization that is helping people take back control over their own death states, “Our team here at The Order suggests you begin by creating your Advance Directive/Living Will, this will help ensure your wishes are protected, in writing.” (2022). Digital wishes can be protected here as well. Aspects like what you want to happen to your social media pages, how you want your death to be announced digitally, if at all, and other similar tasks can be laid out within an Advanced Directive to keep the deceased wishes in place.
The other aspect of Living Will is that they can help protect LGBTQIA+ community members from family members who may not wish to carry out the correct identity of the deceased. The Order of the Good Death explains on their website that by naming a *medical proxy*, or a person who makes medical decisions when the patient is unable, the dying is ensuring they are asking for the appropriate care. The Order also explains that the *medical proxy* no longer has any legal power after the death so it’s equally important to have a living will to carry out wishes after death (The Order of the Good Death, 2022).

Unfortunately, in the society that we currently live in equitable death and end of life care is not a given. Living wills and medical proxies are legal ways to help further bridge that gap but are also still a barrier that many people cannot jump for a variety of reasons. For those of that are lucky enough to identify as the gender we are born with we have an immense privilege in end-of-life care. This is why thanosensitive design is so important. By being aware of the end of life designers can help bridge this inequality by allowing the user to ensure their own identity is upheld in the way they want it.

This assigns designers with an important task, how are we able to make design decisions that allow the *correct people* to access and change digital information? This has already started to be put into place with two-factor authentication which is now being used on sites like Facebook and Outlook. However, how can we as designers ensure that the correct person has these authentications? This is where living wills have to potential to play a big role. By keeping authentication information secret and only in living wills it will allow only the correct person to access the information. However, that also possess an issue when it comes to access because not
everyone has the time, money, or even the ability to have people help create a living will. So what can designers do now? My solution, and other social media sites solutions, is to offer in-app settings that the user can access and allow other people to have access to.

In an article about preparing digital accounts for your own death Melanie Pinola, states, “Preparing for your eventual demise is a gift your loved ones will appreciate even as they mourn your loss—and it will give you peace of mind in the present, too.”. The article recommends that only one person be named your “digital heir” to avoid confusion (Pinola 2019). For me this makes the most sense and leads to the least amount of confusion which is what's needed when people are already going to be focusing on other aspects of your death.

Pinola also uses the borrowed term “dead-man switches” giving the railroad term a new meaning in thanatechnology. Activating the “dead-man switch” means that after death the person who was given custody of the accounts after death would then carry out the deceased's last wishes on said accounts (Pinola 2019). This in itself is a wonderful analogy. If a person works with their digital heir to set their digital affairs in order before death, then when it happens it is one less aspect to worry about. However, the issue arises when two different circumstances are brought to light; what if there is no one the person wishes to name an heir, and, what if that heir passes at the same time or shortly after before their tasks are finished? A solution could be to name more than one heir and an order of succession for the latter issues but what about those who do not have anyone? This is where we have to rely on sites to use a thanosensitive design approach to help plan for these kind of situations. In order to further explore this, I look at what other sites have in place so far on social sites like Google, Facebook, and Twitter.

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Google has a plan in place for users' death that is a great example of what would happen when the “dead-man switch” is flipped. In everyone’s Google account there is an option to set up an “Inactive Account Manager” or in their words “Plan what happens to your data if you can’t use your Google Account anymore.” (Google 2022). While this feature is in place and it may not necessarily mean the user is dead, it could just mean they are locked out of their account. This is still an important feature that has a good structure. This feature allows users to go through step by step what they want to happen to their digital data that is attached to Google in the event that they no longer to use the Google account. It allows users to have a default person, or direct heir, that is notified when an account has not been used in the users chosen amount of time (either 3, 6, 12, or 18 months) (Google 2022).

This approach uses the thanosensitive way of thinking to design their feature. It keeps in mind that inactivity on something as important as someone’s Google account can be for multiple reasons and not just death. It allows users to pick what they are comfortable with, explains why it was designed the way it was, and is easy and accessible for anyone who may want to set this up. Not to mention the layout is consistent with Google’s minimalistic design approach and keeps the fonts easily legible and the information clear.
Figure 1. Google's "Inactive Account Manager" page that displays step by step what needs to be done to complete this setup. Picture taken on November 16, 2022.

Facebook also has a plan in place for a user's death. Within Facebook’s general settings users can access the “Memorialization settings”. On this page it allows users to tag a fellow Facebook user to take over the account after the designator’s death. For this to happen the named user will need to request that the deceased profile’s page be “Memorialized”. Should the deceased want their page deleted after they pass, they can also request this, and the process would be the same.
From a user standpoint, Facebook’s option is more intimidating than Google’s. While it does thoroughly explain what it means to name a “legacy contact” it relies on the user to fully understand what they are doing. Within this feature they also add “Remembering” to the deceased’s name, take the profile of typical web searches, and lock the account so that nobody can log in which possess an issue of accessibility. What if the deceased has no friends or family that uses Facebook? Through this death planning option, it specifies that the person names must have a Facebook account. If the deceased has not named anyone to take over their memorial
page, it will leave the page open to the public and anything can be posted on their page, and nobody will be able to manage it (Facebook 2022).

This poses a major issues especially when it comes to cases of suicide, foul play, or even general bullying. Leaving the account open and available for others to post on could cause the family of the deceased even more grief. This is why it is my firm belief that every human should be sitting down with their family and friends and having these kinds of conversations around death. I grew up having these conversations with my family and I am a stronger person for it. It has taught me that death is nothing to fear, it is only the next step after life. Adding these thanosensitive design elements into social media sites can be an excuse to consider decisions around digital data, and encourage communication about death and the appointment of a “digital heir”.

While Facebook has started to think about the death of its users and what it could mean for them, I fail to see the thanosensitive approach that I have been talking about. While it is true that many people do have a Facebook account, many people still do not and have no plans to have one. Additionally, what if the “heir” is locked out of their account? I agree and commend their approach to lock the account and not allow anyone to post on their page, take it off main searches, and even adding “Remembering”, I think there is a lot more that they could explore.

Twitter is a great example of not having a true plan for user death in place. When in Twitter’s “Help Center” you can find an article about how to contact them if you are trying to take down a loved one's account. In order to do this the requester must “provide more details,
including information about the deceased, a copy of your ID, and a copy of the deceased’s death certificate” (Twitter, 2022). While they state that this is necessary to “prevent false and/or unauthorized reports” there are much less traumatic ways to help users and families safely remove accounts from the Internet. By having a feature in the settings that allows the users to pick what happens it would not only save Twitter time from having to verify these “death reports” but it would also save the family time and emotional health by allowing them to have one less thing to wrap up with their loved one's death.

Figure 3: Twitter's Help Center that displays their "Deceased User" instructions. Picture taken on November 16, 2022.

Finally, Dead Social is a website that exists to help bridge the gap between the living and the dead by helping the living plan for their death on social media sites specifically. It allows for loved ones to have a localized place to access information and resources on how to proceed after the death of a loved one as well. While this is not a social media site it does have invaluable
information on it about how to plan for the digital death. On the sites “about” page they state, “The actions we take in life ultimately informs how and what we are remembered for in death. This is true both online and offline.” (DeadSocial, 2015). This is a lovely and powerful sentiment that speaks for itself but also circles back to the idea of having a “closed” social media site after a user’s death.

Preparing for death on social media sites

- Full Facebook Guide
- Full Twitter Guide
- Full Instagram Guide
- Full LinkedIn Guide
- Full Google+ Guide
- Websites & Blogs Guide

Downloading your media & data from social networks

- How to download your data from Facebook
- How to download your data from Twitter

To view a list displaying all of our tutorials and resources visit: www.deadsocial.org/resources

62% of us consider being able to access a deceased friend or family member’s social media accounts ‘important’ or ‘very important’

- Digital Death Survey 2014

Figure 4. Dead Social’s "Preparing for death on Social media sites" page with links to each sites page on what to do. Picture taken on November 16, 2022.
This website has step by step guides to guide people through the process of planning for their death on social media. It thoroughly explains why and how the steps should be taken. This approach takes the thanosensitivity perspective and allows the users space to process at the same time. Within this site there are also tools to help consolidate some of what needs to be done into one easy step through their “Goodbye Tool” which allows users to “create personal messages, videos and images' that will only be viewed after their death.” (DeadSocial 2015). This is a free tool that they use to help further their mission that a loved one’s digital data is important.

My personal thoughts on the website are the start of why I designed my website the way I did. Dead Social is in desperate need of an upgrade when it comes to design and accessibility. When looking further into the website it seems like it was designed as an afterthought to sell a similar tool to the “Goodbye Tool”. Then there’s the name “Dead Social”. The name itself is not thanosensitive and in my opinion sounds like something an edgy teen would come up with and a website I would have frequented myself as an edgy teen. While the name makes sense (it is a website to deal with the dead’s social pages) it would benefit from a different name.

The concepts of thanotechnology, and for designing for a user's digital death are still very new and very minimal. As we move forward in the digital age it will become more and more important for these tools to become more fleshed out and able to perform in ways that support the user’s needs. Having accessible and easy ways to use websites or features is absolutely vital to making sure the mental health of the grieving is being taken care of and the loved one's affairs are in order before they pass.
IV. PREPARING FOR DAISIES: MY THANOSENTIVE APPROACH TO END-OF-LIFE PLANNING

The overall goal when designing my approach to a thanosentive website for social media was to look at what I liked from my research and essentially build upon the ideas laid out on the Dead Social site. I liked the foundation they had laid and the fact that many social media sites are lacking in options for end-of-life planning I wanted to fill the gap. I came up with the name “Preparing for Daisies”. This name plays with the phrase “pushing up daisies” from the Wilfred Owen poem “A Terre”. In this poem Owen talks about the horrors of war and how “‘Pushing up daisies’ is their creed”. Basically, referring to how gravesites often become overrun with the flower.

Preventing for Daisies is designed to help you plan for your digital presence after you pass. This site will walk your through the steps of setting up your social media sites the way you want them and allow you to name digital heirs for them.

As we progress as a society and rely more and more on technology it is our belief that it is vital to protect and plan for our digital death. We believe it is imperative to keep in mind what happens to the digital data that we accumulate over our lifetime and make sure our loved ones know what we want to happen with it when our time comes.

Figure 5. The "Home" page for the proposed "Preparing for Daisies” sites is centered around calming colors and a minimalist design.
I wanted the home page to catch the user’s attention. I wanted the site to feature calm colors and be fairly minimalistic in design. This was important in my goal of thanosensitive design because I wanted the importance to be on the information and goal at hand and not all the bells and whistles that a lot of websites have. This also helps with accessibility regarding the less a website has to load the easier it is to load for people with limited internet access. This also helps people on mobile devices see a more accurate representation of the site without having to create a total redesign of the site. By choosing specifically blue and white in muted tones it allows for the user to easily oversee the background while still giving the site a modern web design feel.

Figure 6. The “Plan your Wishes” page is my solution to the gap in thanosensitive design. It allows users to designate their own wishes and will email them an easy-to-read list with their wishes.
I consider the “Plan your Wishes” page one of the most, if not the most, important aspect of my proposed build. This page allows users to quickly enter their email, name, and start selecting the social media sites they want to specify their wishes for. For me having a dropdown menu of social media sites is multi-purpose. The dropdown menu makes it quick and easy but also helps people remember sites they may have. I know that when creating any sort of list, I tend to forget what I have in the moment, so the dropdown menu is my attempt to help minimize this. The dropdown menu would include popular social media sites but also an “other” option for the social sites that may not be listed. Dropdown menus are also screen reader accessible further aiding in the thanosensitive design approach.

Another aspect of the design I wanted to keep in mind was the age and digital ability of the users. In this case, simple is best. The frills of modern design can be confusing to older generations and while the younger generations may prefer them, the idea of this website is to be accessible to all and hopefully to not have a use at some point in the future. Until then I made sure to use good contrast, make it screen reader friendly, include alt tags on pictures, and allow for customization when it comes to the options on the website. I followed the A11Y design principals within my design process to ensure that I was being as accessible as possible.

I want to point out the note on Figure 6 about the email. This website is designed to be a resource and an easy place to input digital wishes and the email is required so that an easy to read and organized PDF will be emailed to the user. It does not require an account, unless the user would like to make one, it will not save the email, nor will it save the wishes. On the PDF there will be a place for passwords and usernames so that they can be handwritten in for the most
security (and so that it can stay up to date). This website is not meant to be legally binding, or hold any sway with social media companies. It is merely a tool that a user can use to easily gather their digital affairs and bring to a lawyer or keep to in an important document folder as a reference. Additionally, I have not come up with the best way for usernames and passwords to be stored safely and be easily updated. This is a feature that needs improving on and would like to work on in future iterations.

Figure 7. The Resource page is meant to be a culmination of credible resources that users might find useful.

My design has a resource section so that I would be able to provide a wide range of information to those who may need or want it. I want to include information on topics like death anxiety, how to set up a living will (with extended resources for those typically unable to have one due to their status in society as mentioned in my “Current Strategies” section), information
on medical proxies, grieving, the history of common mourning rituals, and more spiritual sources for a wide range of beliefs. This further supports my thanosensitive design by designing for the most amount of people as possible. It would be impossible to do the research and include my own write up of those topics, so by linking to credible and trusted sites that are experts it allows more people to be able to easily find the information they are looking for.

Figure 8. The site would include a FAQ page to answer any questions that may be left unanswered on other parts of the site. I want users to be well informed about the importance of what they are doing and know that this is trustworthy site.

I want to emphasize that this site is for education. Along with the resource page I would like to deploy the use of social media to help further educate people on the importance of not only thanosensitive design, but also end-of-life planning. I cannot stress enough how important it
is to be prepared and have all of your physical and digital affairs in order before you pass. I want to create safe space where people can ask questions, learn, grieve, and process as they go through the end-of-life planning process.

Figure 9. Like most sites I include a “Contact Us” page to ensure that any questions that a user may have can be asked in an easy way.
V. CONCLUSION

Digital platforms and companies should take a thanosensitive approach in the design of their products. When designing Preparing for Daisies I was able to keep thanosensitive design in mind with little effort. Planning for the death of users before it even happens allows the company to be on top of how other people interact with the dead on their platform. This protects their reputation and their customers. Digital footprints are brand new in the grand scheme of humanity, but looking ahead towards the future, towards the end-of-life has been done for centuries. There is no reason why social media companies can not do the same in order to alleviate anxiety surrounding a customers’ digital footprint. As Neal Shusterman said in Scythe “Death make the whole world kin.”, at the end of the day we will all die, no matter that status of our life. Social media needs to have a plan in place for user death to help alleviate a lot of stress and trauma surrounding death.
VI. THE FUTURE OF THIS PROJECT: IDEAS, IDEALS, AND HOPES FOR THE FUTURE OF DEATH TECHNOLOGY

Preparing for Daisies is by no means a finished project. It’s in the early stages. For the future of this project and my career in this field of research I want to look more closely at topics such as how ritual plays into death practices, how grieving informs our decisions, and go even more in depth as to how death anxiety effects design decisions on platforms. These topics alone hold such a vast array of topics to study within the broader topic. I would like to take my continued research and work to adjust and edit Preparing for Daisies. I do not know if I would ever release this idea publicly, while that idea is a wonderful one, my hope is that this website would no longer be useful at some point in the future. If social media platforms could integrate their own services and fail safes when it comes to planning for users’ death, over all I think that would be easiest and the most beneficial to all parties.
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