

Green is the new black

Understanding current and prospective pro-environmental activities in ritual and practice on death

Amber Golding

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(30hp/credits)



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Lund University Centre for
Sustainability Studies



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Submitted May 10 2022

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Abstract:

Niche pro-environmental innovations in death practices are gaining attention from sector and public stakeholders but can be sidelined due to lack of ritual and practice to support their implementation. The way death practices are conducted in Sweden is examined using transdisciplinary research methods and the multi-level perspective to understand which niche innovations have and have not been incorporated into the regimes which contribute to the bereavement sector and subsequent landscape of Swedish culture. The results of interviews with key sector professionals and a participatory scenario planning exercise with lay persons are presented to assess existing implementation and the potential of current niches. This thesis provides an example of Sustainability Science principles applied in a culturally charged case. Cultural practices are key to consider from within sustainability science as, if harnessed, pro-environmental practices can become embedded culturally. This study highlights that a plethora of actions together make qualitatively significant socio-environmental contributions.

Keywords: death; pro-environmental; bereavement sector; ritual; practice, Sweden.

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With thanks to my ancestors, blood related or otherwise, dead or alive. Whether we agree or disagree, I continue to gain so much from the explorations which others have made before me.

“Whichever road I follow, I walk in the land of many gods, and they love and eat one another. Walking, I am listening to a deeper way. Suddenly all my ancestors are behind me. Be still, they say. Watch and listen. You are the result of the love of thousands.”

— Linda Hogan (1995).

To Teresa Golding for her endless support, patience and understated wisdom.

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Acronyms

DPSIR - Driver-State-Pressure-Impact-Response

MLP - Multi-level perspective.

PSP - Participatory Scenario Planning.

SBF - Sveriges Auktoriserade Begravningsbyråer. The authority for Sweden's funeral homes.

SKKF -Sveriges Kyrkogårds-och krematorieförbund. Swedish Cemetery and Crematorium Association.

1. Introductions

1.1 Introduction

Death practices could be far less polluting if pro-environmental practice is integrated in a morally and culturally conscious way. Where many areas of our lives are hotly debated in the name of sustainability, from diets to driving, pet ownership to having children (Wynes and Nicholas, 2017) death once again presents itself as the last hoorah. Research into pro-environmental death practices is happening with research in the Netherlands (Keijzer, 2017) and in the United Kingdom (Davies and Rumble, 2012) however there is space for further research in Sweden.

When it comes to death, a rite of passage occurs whereby the living become the dead, this is marked with symbols and ritual (Metcalf and Huntington, 1991) which serve the living as a part of the grieving process. The impact of death practices on the planet must also be considered as our environment serves the living by providing a habitat which is stable for life. As with many issues, it is challenging to know what the most pro-environmental practice is, here there is the added problem of the need for ritual.

Swedish culture has intentionally been built on a negotiated relationship between individualism and social concern (Barinaga, 1999). With Sweden having led the way in establishing itself as an environmentally conscious country as part of the Nordic alliance in the 1980s with the Brundtland report (Brundtland, 1987), the eyes of the world are on this influential country to see what 'green' trends, innovations and cultural norms can be adopted elsewhere.

The progressive society in Sweden allows a space for the taboos of environmental issues and death to be examined. With 82.95% of people being cremated in Sweden (The Cremation Society, n.d.), Sveriges Kyrkogårds-och krematorieförbund (SKKF) represents cremation professionals; key stakeholders who dominate the market. This bias can restrict the drive for the sector to lobby for ritual and practice which are alternative to cremation, impeding change. Here the interplay between culture and practice is examined.

This work has implications more broadly than the bereavement sector. By applying the multi-level perspective to tackle a subject shrouded in taboo, more is understood about what restricts and permits

pro-environmental ritual and practice. Sustainability science's engagement with bereavement sector professionals allows a deeper understanding of how market forces, cultural norms and government policy can impede the growth of green innovation and pro-environmental behaviour; findings which can be applied to other regimes.

1.2 Questions, aims and objectives

The analysis of gaps in the current literature on pro-environmental death practices, theoretically underpinned with the multi-level perspective (MLP) (see theoretical basis), led to the construction of the following questions, aims and objectives for this thesis:

Research Questions

To what extent, using the Swedish bereavement sector as a case study, can death practices be pro-environmental?

How does culture and subsequent ritual support or impede the prospect and integration of pro-environmental niches?

Aim 1: Regime

Investigating in what way the Swedish bereavement sector (including crematoria workers, celebrants, undertakers) has been working to ensure death practices are pro-environmental.

Objective i. To understand challenges and opportunities which the Swedish bereavement sector (represented at regime level including crematoria, celebrants and undertakers) face in implementing pro-environmental practices.

Objective ii. To explore what challenges and opportunities culture and subsequent ritual in prospecting and integrating pro-environmental niches into the bereavement sector in Sweden.

Aim 2: Cultural landscape

To investigate the current lay and sectoral relation to pro-environmental death practices and how this relates to possibilities for a greener future in said practices.

Objective i. With lay people, develop a narrative for future pro-environmental death practices.

Objective ii. Investigate how lay ideas for pro-environmental practice or cultural niches in the bereavement sector correlate with realities faced in implementation.

1.3 Definitions

1.3.1 Pro-environmental

The findings of a series of in-depth interviews with professionals across the sector, attendance at events from within the sector, a participatory scenario planning (PSP) exercise with lay collaborators and information from a literature review are synthesised. This means that results are triangulated, showing areas which have potential for innovation, forming a communication which creates a vision for death practices which are as pro-environmental as possible.

Here the term pro-environmental means; carefully selecting behaviours to be changed, examining which factors cause these behaviours, applying well-tuned interventions to change relevant behaviours and their antecedents and systematically evaluating the effects of interventions on behaviours themselves (Steg and Vlek, 2009).

1.3.2 Culture, ritual, practice

The term ritual is used in this thesis in the broadest sense, meaning the enactment of culture (Stephenson, 2015). Buying flowers for a funeral is a ritual practice, as is going for a meal after the funeral. Ritual is part of culture; a framework by which to grasp the complexity of life which gets tested to its limits when a member of the cultural group dies (Highmore, 2016).

One collaborator comments on the role of ritual:

Ereshkigal: "I think rituals are good for you so I do have, like a moral view on this. I think rituals help us with life. Rituals of joy, rituals of sorrow, that they are good for you in a way, that they think, something has happened in your life and you need to take care of that..."

Practice is a word which can include ritual. In the same way that a sport is practised; a doctor has their practice and; faith is practised, practice is putting knowledge to use in a performative way. 'Practice' is used here to emphasise the role of ritual beyond the disposal of a cadaver (Shelvock, et al., 2021). This thesis includes Shelvock (et al., 2021)'s definition of practice; action, ritual and ceremony, as well as including policy enactment.

1.4 Thesis road map

This thesis begins by outlining the methods employed to research the bereavement sector in Sweden. After the methodology section is the background chapter; framing the case of pro-environmental death practices. The theoretical basis for the thesis is outlined; the importance of synthesis of knowledge via a transdisciplinary approach, using the MLP. The results and discussion chapter presents findings on the Swedish case using data collected, integrating findings with one another in order to answer the research aims and objectives. This chapter will also draw out the strengths and weaknesses of the thesis and situate the case in the wider discipline of Sustainability Science. Finally, the conclusion summarises the main findings of this thesis along with suggestions for future research.

2. Methodology

This research uses a triangulation of methods to consider different perspectives on the intricacies of the nested hierarchy on death practices in Sweden. The case, despite in this thesis being restricted to the boundary of nation scale, is a problem to which multiple efforts need to be exerted to untangle, improve on and even then, clarity lacks as to whether the problem is solved; is therefore wicked (Wexler, 2009). This case affects the environment and social systems on a multitude of levels and is impacted on and impacts the socio-technical regime (Geels, 2002). For cases as complex as death practices, a transdisciplinary collaboration is required to create knowledge through joint framing and understanding from members of civil society, and private and public sectors (McGregor, 2017). The MLP provides further triggers to gain insight regarding all levels of the hierarchy in question.

The emphasis here is on collecting qualitative data as this case is approached from the cultural perspective. Death practices cover the rite of passage from death to the disposal or rather dispersal (Rumble et al., 2014) of the cadaver. An understanding of how death practices are chosen based on values, norms and beliefs is presented. When feeling a familiar emotion, after the death of a loved one, there is a range of different responses which are acceptable (Metcalf and Huntington, 1991, p.43). However, habits can clash with one another (Shilling, 2012). For example the desire for pro-environmental behaviour can conflict with the need to conduct a funeral within culturally acceptable responses. This qualitative data adds to emerging quantitative research on the subject (Keijzer, 2017; Lee et al., 2022).

Sustainability science works with the intention of mutual learning; from working in a transdisciplinary and therefore socially relevant way (Lang et al, 2012). To this end, those involved in the research are referred to here as collaborators. This research is valid due to the knowledge; academic, professional or lay, held by all parties involved, not only that of the researcher. This thesis showcases knowledge by providing a platform for the bereavement sector to speak to academia.

A consent form ensured that all parties understood what the research entails, how the data collected is used and to assure confidentiality (Appendix B).

2.1 Triangulation

Methodological triangulation works to add depth to the data that has been collected (Fusch et al., 2018). This multifaceted approach enables an understanding of what is being doing to actualise a more pro-environmental future for the bereavement sector. The data collected was subjected to thematic analysis and is framed using the Driver-State-Pressure-Impact-Response (DPSIR) model which provides answers to the research aims, objectives and question in a meaningful way (Scharp & Sanders, 2019) including a poem. See figure 1 for illustration of the research approach.

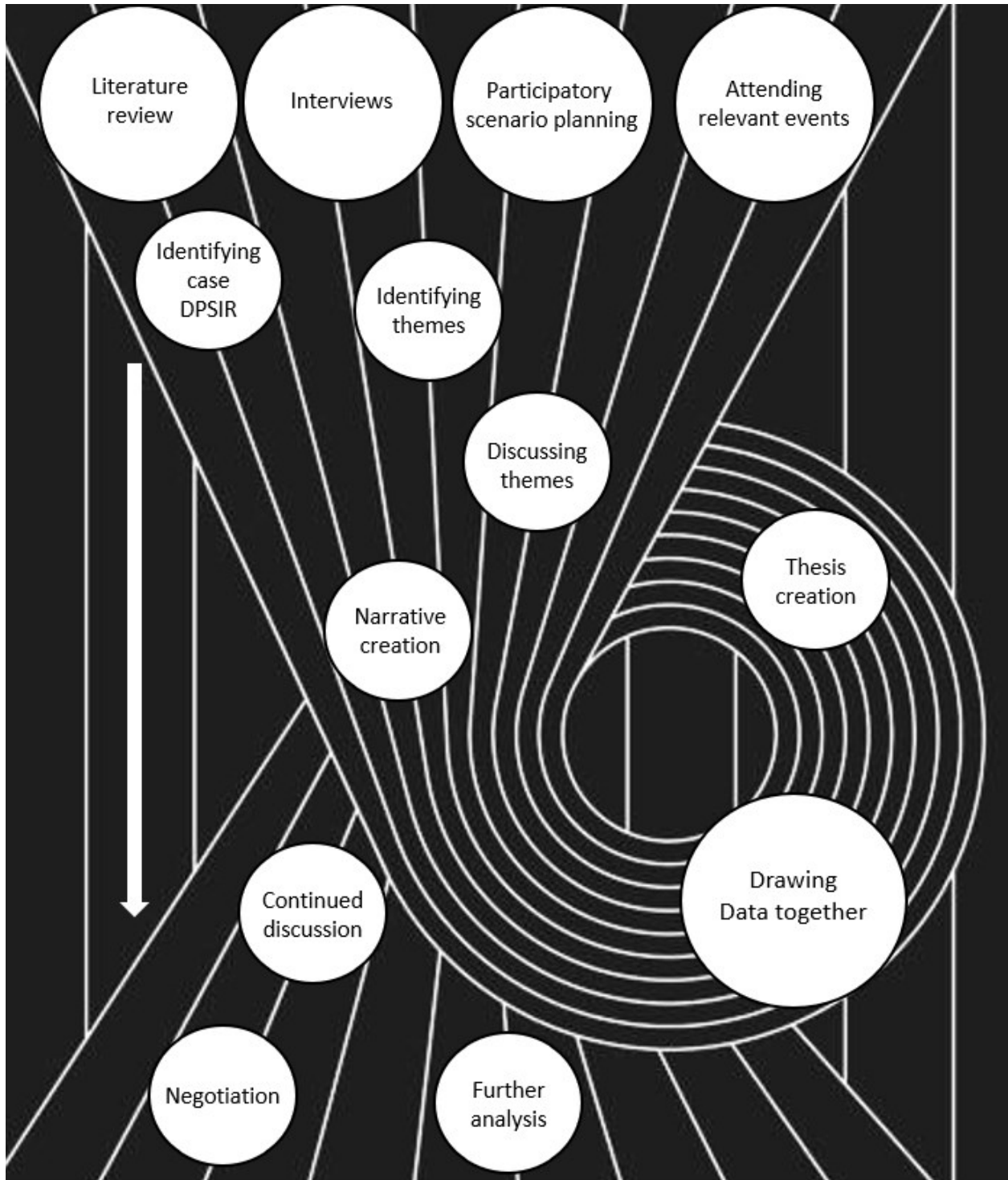


Figure 1. Diagram to show the methods used in the creation of data for this thesis and suggestions for future pathways

Figure text: See top row for methods used for the collection of data for this thesis. The resulting case, themes and narrative are drawn together into this thesis which forms a piece of communication. As part of a transdisciplinary approach, the discussion should continue beyond this piece of work. Right hand side loop indicates author's input on the case. Spiral design; Wakerly, n.d., Text and circles; authors own.

2.1.1 Literature review

The literature integrated into this thesis was gained by investigating research into death practices in Europe and into pro-environmental death practices.

The following search terms were used on Scopus:

(green AND death AND practi*)

(death system) AND cremation

(environmental OR green) AND (burial OR "body disposal")

(environment* innovation) AND death

Search results were filtered due to relevance of papers to ritual and practice in relation to death. Further resources such as books were identified using bibliographies of resources found through scopus. There is a limited number of relevant books and papers hence the decision to attend relevant sector events to gain deeper insight (stage 4).

The political and cultural situation in Sweden is unique however, as the discussion shows, the Swedish funeral sector has ties to other the rest of the world, allowing information to be drawn from other geographical spaces and applied in the Swedish context. There was a lack of specific research into pro-environmental death practices in Sweden written in English. The literature review informed the research questions posed, both via what is present in the conversation such as, a historical context to the present situation (Davies, 2005; Davies and Rumble, 2012; Keijzer, 2017), what themes are emergent in the present discourse (Stock and Dennis, 2021; Lee et al., 2022) and what is missing such as using a pro-environmental lens to gain first-hand accounts of working in the bereavement sector. The DPSIR model is applied to assist with compiling data to specifically contextualise pro-environmental death practices in Sweden.

2.1.2 Interviews with industry experts

Six in-depth interviews were carried out to collect rich thick (Fusch et al., 2018) qualitative data, this allows a broadening of the understanding of the Swedish context of pro-environmental death ritual and practice. The interviews were analysed following a thematic approach (Scharp and Sanders, 2019) based on the aims and objectives of the research.

Interviewees were; two bereavement sector leads, two leading voices in pro-environmental practices in their work in the bereavement sector (one inner-city and 1 in a more rural setting) and; two church leaders, one involved in research and a part of the Swedish Church and one theologian who is independent from affiliation to any specific denomination. Interviewees have been given pseudonyms after death deities from different global and historical contexts. See table 1 for interview details and appendix C for the interview guide.

These collaborators hold techno-social knowledge on death ritual and practice and opening a conversation with them allows for incremental improvements to be made toward a more pro-environmental bereavement sector. See appendix A. for initial email to collaborators in the industry.

Asking collaborators open ended questions informed by the literature review, plus ensuring that collaborators felt at ease led to detailed responses (See Appendix B. Interview Guide). The intention was to make the interviews more of a social moment (Volcic, 2007 p.72) such as a fika to allow the collaborators to feel comfortable and thus speak more freely about the subject matter.

Table 1. Table to show details of the interviews which took place in support of this research.

Pseudonym	Role(s) as discussed at interview	Date	Length of interview
Mantus	Gardiner initially Crematoria worker Industry lead	08/02/2022	00:56:12
Barastyr	Funeral director with expertise in different faith practices Undertaker Celebrant	14/02/2022	00:19:50
Vichama	Funeral director Industry lead	21/02/2022	01:00:25
Ereshkigal	Minister / celebrant Interest in ritual; weddings, funerals PhD in the field of funerals	24/02/2022	00:56:59
Kalma	Cemetery manager	08/03/2022	00:45:15
Donn	Retired minister Engaged in parish work and theology Past engagement in relief work Studies in theology & engineering	17/03/2022	02:10:20

2.1.3 Participatory Scenario Planning exercise

PSP is a dynamic solutions-oriented approach (Oteros-Rozas, 2015), this method allows discussion on what a future might look like through an exploratory approach. The benefit of PSP is that it encouraged collaborators to have conversations about the current situation (Kok et al., 2011) and identify challenges, opportunities, and prospective actions in relation to pro-environmental death practices. Two PSP exercises were planned with the aim of having attendees representing the bereavement sector. Without strong pre-existing relationships to the sector in Sweden, it was challenging to convince bereavement sector professionals to take part. This was also due to the lack of perceived pay off for their time invested (Jasny et al., 2022).

Asking the lay population allowed more scope for creative thinking without knowledge of the limitations and challenges in the sector. See Appendix D for the event poster. Due to interest, one exercise took place on 23 February over 2.5 hours and included principles from; hackathons (Kohne & Wehmeier, 2020), world cafe (The World Cafe, 2022) and visioning/ PSP exercises (Kok et al., 2011; Oteros-Rozas, 2015; Raudsepp et al., 2020; Wyborn et al., 2020). See Appendix E for the participatory scenario planning exercise plan.

2.1.4 Attendance at relevant bereavement sector events

Relevant events were attended to gain a context and deeper understanding of current discussions happening within the bereavement and sustainability science sector (see table 2). The events were in English however, there are similar discussions and forums in Swedish as exemplified in section 5.2.2.

Table 2. Table to show the details of events attended in contribution to this research.

Date	Title of event	Host	Location
7 October 2021	Negotiating sustainable development: Nordic visions for common futures before the Brundtland report	LUCSUS - Melina Antonia Buns	Sweden, via Zoom
31 January 2022	Are we ready for conversations about death and dying?	Marie Curie Hospice, UK	United Kingdom, via Zoom

9 February 2022	Direct Cremation	University of Bath Centre for Death and Society, UK	United Kingdom, via Zoom
30 March 2022	The impact of cremation and burial on the environment conference with The Cremation Society, The Federation of Burial and Cremation Authorities	The Cremation Society, The Federation of Burial and Cremation Authorities, Association of Private Crematoria and Cemeteries and the Institute of Cemetery and Crematorium Management, UK	Coventry, United Kingdom

3. Case background

3.1 Biographical background

In the Summer of 2015, I attended my first Death Cafe.

“At a Death Cafe people, often strangers, gather to eat cake, drink tea and discuss death.”

- Death Cafe (n.d.)

There was no other reason to go aside from the desire I had to break free from taboos; the discussion of death being one of them. The event went well and sparked a curiosity in me about death, dying, end of life matters and how to support bereaved friends. I indulged in podcasts, books, seminars and videos on the subject and did my best to talk to friends about their grief, delivering care packages in support of those grieving.

On 13th August 2020 my Grandpa died in Bristol, United Kingdom. On the 17th of August 2020, I moved to Lund, Sweden. Without my existing support network physically around me I would have struggled; however, I was recommended by a student counsellor to connect with the student chaplaincy. In discussion with them, I was able to channel my grief into facilitating a Death Cafe which happens once a month.

The student chaplain, a grief counsellor and polymath, I spoke with was curious about my masters in Environmental Studies and Sustainability Science which led to discussions on the subject and subsequently conversations about death and sustainability. It was through these conversations which I became inspired to write my thesis on two of my passions and how they intersect.

3.2 Pro-environmentalism in death practices background

Individual funerals may not be significant, but the bereavement sector as a whole is responsible for the release of large amounts of carbon each year. Depending on the source, cremating a body alone produces between 210kg (Little, 2019) and 400kg (Kalia, 2019) of carbon dioxide. For the purposes of this thesis, the global average of 245kg calculated by Lee et al (2022) will be used. 245kg is the same amount as driving 3 589 km in a petroleum car and would need to be offset by 15 trees grown for 10 years (EPA, 2010). The weight of carbon released is far higher than the weight of a human body due to the amount of fuel required to get the cadaver to temperatures of over 800 degrees Celsius in order to cremate the majority of the body. Figures showing the specific carbon dioxide release from cremation in Sweden were unavailable.

82.95% (73 497 of the 88 601 people who died in Sweden in 2019 were cremated making Sweden the country in Europe with the 3rd highest cremation rates (The Cremation Society, n.d.), (see Table 3)). A basic calculation (210kg carbon released x 73 497 cremated) shows that cremations in Sweden in 2019 released roughly 18 006 765 tons of carbon. This figure does not consider other aspects of the funeral such as transportation, flowers, food and so forth, each with their own impact on the environment.

Table 3. Table to show the uptake of cremation in European countries.

Year data collected	Country	Percentage of deceased cremated
2019	Switzerland	85.79%
2018	Slovenia	83.91%
2019	Sweden	82.95%
2018	Denmark	83.90%
2019	Czech Republic	79.13%

2019	United Kingdom	78.80%
2019	Germany	69.00%
2019	The Netherlands	66.95%
2019	Hungary	66.90%
2019	Luxembourg	65.61%
2019	Belgium	62.32%
2019	Finland	57.38%
2018	Austria	44.64%
2019	Norway	44.09%
2019	Iceland	43.80%
2018	France	36.79%
2018	Poland	24.00%
2018	Italy	23.90%
2019	Ireland	22.69%
2019	Serbia	20.85%
2018	Latvia	14.78%
2018	Bulgaria	5.08%

Note. International Statistics 2019. Latest data to show the percentage of bodies disposed of via cremation (The Cremation Society, n.d.). Sweden features in the top three largely due to being situated as a previously protestant community. Bulgaria on the other hand, with the lowest cremation rates, is largely Greek orthodox. The question of death practices in Bulgaria is research for another day.

Green death practices (Shelvock et al., 2021) such as methods involving composting of human remains and alkaline hydrolysis - liquidation of remains - and other areas of consideration such as sourcing local flowers, using biofuels in hearses and allowing families to attend funerals online, are being slowly but surely introduced into the zeitgeist. This research shows an overview of whether new practices affect ritual and cultural practice and what governance is required to enforce practice (table 5).

It is relevant at this stage to give a brief overview of the ways in which a cadaver can be disposed of or rather dispersed into the natural environment (see table 4). Using environmental discourse, waste, such as a deceased person, is transformed, by the processed engaged leading to their disposal, into its elemental

form so that it is useful for the wider environment (Rumble et al., 2014). Rumble (et al., 2014)'s work suggests a reframing, from seeing a cadaver as waste to seeing the body as something to be recycled.

Table 4. Table to show different methods of breaking down a body

Method	Description	Employed
Cremation	In Sweden; burning the body in an enclosed furnace at temperatures of between 800°C to 1 100°C. The bones are all that remain and are ground, using a cremulator, into the ash which weighs around 2.4kg.	Widely across the world with variations throughout human history. The current regime; one of two options in Sweden.
Burial	Previously the preferred method by Christian communities as the body remains whole as it goes into the ground. In Sweden, the coffin is buried 3.6m deep. Note. The breakdown of the body into the soil can take months or even years dependent on the temperature, humidity and soil type (Lee et al, 2022).	Widely across the world with variations throughout human history. The current regime; one of two options in Sweden.
Green burial	Burial of body with no or a wicker coffin, in a site where the graves are part of the indigenous biodiversity i.e. no grave to upkeep (Davies, 2005). Included here to emphasize the difference between the methods below which are also referred to as green burial in popular culture references.	Niche in Sweden but possible as part of the current regime.
Promession	The remains are cooled then vibrated to break down the body. Then there is the freeze drying of the corpse (Davies and Rumble 2012 p.57) into an ash like substance.	Theorised by a Swedish biologist. Never tried on a human body. Promessia Sweden did not respond to communications.
Aquamation / Alkaline Hydrolysis / Resomation	Alkaline dissolving of a corpse (Davies and Rumble 2012 p.57) in water at 150°C. Bones are ground down Wastewater from the process is safe however there is not yet space in the regime to allow for release into the general wastewater due to norms around cleanliness.	Growing interest and legal status across the world. Challenges with gaining support from local water treatment facilities. Not available in Sweden.
Organic Dispersal / Human Composting / Natural Organic Reduction	Placing the body into a vessel with materials which will promote the composting of the body. Carbon, nitrogen, oxygen and moisture are controlled to promote microbes and bacteria involved in decomposition. An accessible name for the general public is being decided (Holden, 2022).	Growing interest and legal status across the world. Not available in Sweden.

Note. This table shows some of the current innovations in the dispersal of a body. This list is not exhaustive.

The term 'pro-environmental' has been employed here in the most part, occasionally, there are mentions of 'green' practices and the word ecological is also used. The following clarifies what these words indicate to the lay person;

- Ecological carries scientific validation
- Green suggests political activism (Davies and Rumble, 2012 p.1)
- Pro-environmental as a term comes from behavioural psychology and means behaviour which harms the environment as little as possible.

4. Theoretical basis

4.1 Transdisciplinarity

Sustainability science has the epistemology of working in a transdisciplinary way, meaning that not only are views from a wide range of academic disciplines integrated into research (interdisciplinarity) but that knowledge which comes from outside of academic discipline is also considered. In collecting data for this thesis, collaborators from many walks of life were contacted to gain insight from a variety of rich backgrounds allowing for complex and cross-fertilised knowledge (McGregor, 2018). This cross-fertilisation of ideas is supportive of multi-levelled ontology rather than in relation to knowledge whereby specialists have become siloed. The theoretical basis for this thesis draws in from a wide range of knowledge systems all of which encompass and allow learnings from across time and space leading to what are intended to be mutually-beneficial and productive outcomes (McGregor, 2018), namely the review of current and suggesting prospective niches for the future of pro-environmental death practices.

4.2 Pluralism

Overarching is the application of the theory of metamodernity which sits well within Sustainability Science. The intention of metamodern theory is drawing knowledge from indigenous, traditional, modern and postmodern codes and to see the pitfalls of each, allowing for the protection of cultural codes and learnings to be taken from malpractices (Anderson, 2019). This pluralistic perspective is tested here in cultivating an understanding of layered knowledges.

Postmodern theory has a shadow of angst, to say the least, whereas metamodernism provides space for optimism whilst acknowledging that change is needed and that lessons must be learnt. For example, according to postmodernists, passive sensory overload is taking place in everyday life as signs and

meanings detach from each other. The current social climate is individualistic and has a sense of disenchantment resulting from the enlightenment (Beckford and Luckman, 1991).

This being said, individuals' do employ agency to pick and mix cultural practices (Lyon, 2000). Ritual and practice are key aspects of what happens to an individual after they die. With or without religion, ritual is important as part of the human experience in order to contribute to our growth as individuals and communities (Davies & Rumble, 2012). In recent years with globalisation, individualisation, and the growth of market values, some come to have a relationship with death as another tool by which to express their individuality (Davies, 2005). The exclamation, "truth is one, paths are many" indicates religious or spiritual pluralism (figure 2). Overall, academic pluralism, found in transdisciplinarity, along with the aforementioned religious pluralism is indicative of a metamodern society supported by the socio-technical regime in which actions take place.



Figure 2. Sand mandala with the symbols of world religions.

Figure text: demonstrating a sense of equity between different belief systems, including the importance of each as a path to understanding the world in which we live (Kerby, 2019).

4.3 Multi-level perspective

In order to understand the current situation within the death industry to a greater extent, the multi-level perspective is applied (see figure 3). The MLP allows society to be understood in terms of change and challenges in creating change by showing how different actors interact (Geels, 2002). For example, an aspect of the regime in Sweden is a state of strong governance whereby the state can often be involved in the establishment of niches. In this setting, niches can be developed once they have been authorised by the regime.

An example of this is the bereavement sector's (regime level) intention to safeguard the environment leading to experimentation and innovation within safeguarding boundaries set by governance (regime level). Existing regime structures which have developed with niches become hybridised versions of what they once were (Geels, 2002). An example of this is Skogskyrkogård, Stockholm which integrates cremated remains into a wooded site which promotes biodiversity. Niche innovations such as the skogskyrkogård do not become integrated of their own accord, there is a complex web of informal and formal systems, and within them regimes, which consciously and unconsciously collaborate to mainstream and maintain elements of the socio-technological landscape.

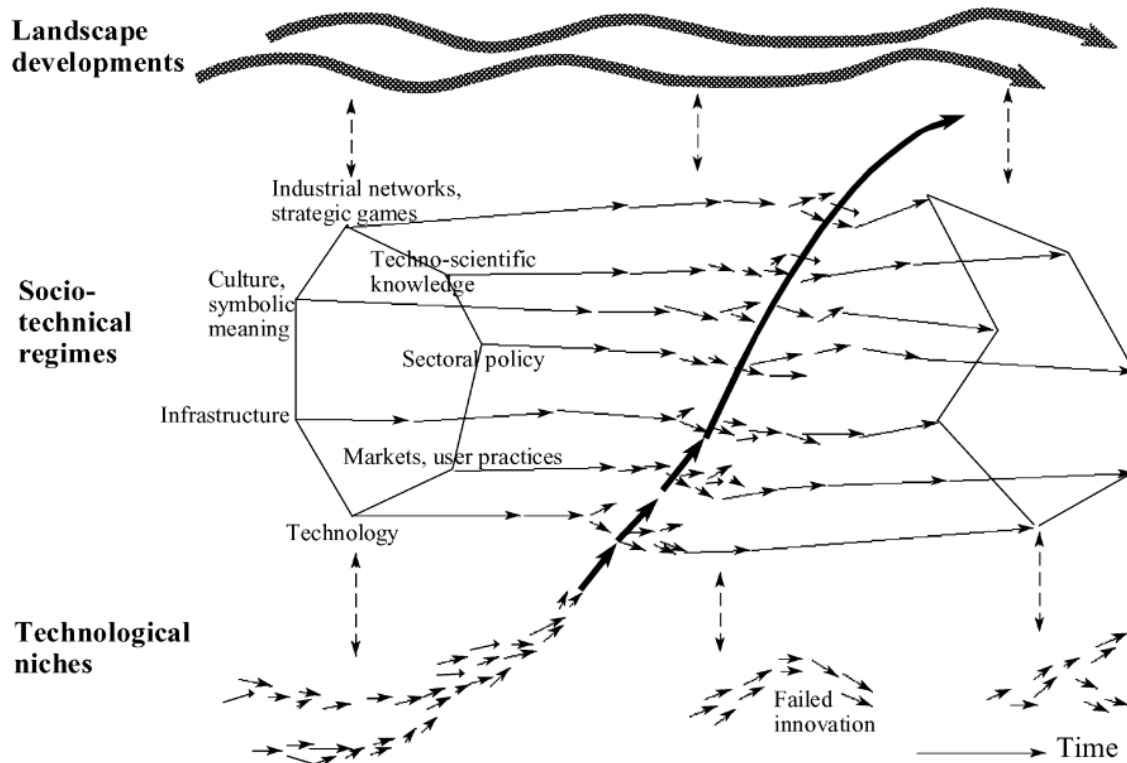


Figure 3. Figure to exemplify the multi-level perspective.

Figure text: Geels, 2002. Figure showing the interrelations of the levels in the MLP. In the example of pro-environmental behaviour in relation to death practices in Sweden: (1) Cremation itself was once a technological niche which is now an integrated part of the landscape as a cultural norm: (2) The bereavement sector spans a number of socio-technical regimes including owning technology, infrastructure and techno-scientific knowledge: (3) Finally, as an example of a technological niche, promession (table 4) has been unable to emerge from the protected space of a niche and has failed as an innovation thus far.

5. Results and discussion

The research questions pertain to understanding how the bereavement sector interacts with environmental concerns. Many quotes are drawn from interviews and events attended with key industry professionals to ensure that these expert and experienced voices are showcased.

The research aims, objectives and research question have been worked to create subheadings for the results and discussion chapter.

In the following, when there is a parenthesis in the paragraph, this indicates the speaker said more between the two parts of the quote. When the parenthesis splits the two paragraphs, this indicates that both the collaborator and the researcher spoke in the omitted transcript.

The quotes are accurate to what was said by collaborators despite any English grammatical error. Use of grammar does not detract from the quality of the knowledge shared in the interviews.

5.1 Assessing the context of the Swedish bereavement sector in relation to sustainability

Seismic cultural shifts occasionally happen and can perpetuate technical trajectories. When it comes to cremation, there was alignment and coordination between groups to perpetuate an emergent niche to become an embedded part of the socio-technical landscape. In the 1800s and into the 1900s, cremation as an emergent niche was campaigned for across a majoritively Christian Europe and has gradually become integrated (Davies, 2005 p.63) constraints in industry structures were challenged allowing for cremation to be offered alongside burial largely in previously Christian nations. At this time, a new method of dealing with human remains (See figure 4) was needed as a key improvement due to pressure on space and sanitation issues in increasingly densely populated cities which impacted the state of the system. On a cultural level, Sweden's roots in protestant theology were changing. Emphasis on the afterlife, for which the body needs to be whole, in Christian and especially protestant communities, decreased making space for cremation to be taken up (Davies, 2005, p.58). The final nail in the coffin was a series of responses including sanitary reform and modern development which led to the legalisation of cremation (Davies, 2005 p.63). This section is in relation to Aim 1.

Now, a new shift is required, as Davies (2005, p.87) states, cremation can no longer be described as the most hygienic method of disposing of corpses as, with a scientifically informed notion of ecology, there is a renewed interest in morality and ethics. To understand how the Swedish bereavement sector supports or impedes moving to pro-environmental practices, the DPSIR model is used here to summarise relationships within the set of regimes relevant to this case (see figure 4). The DPSIR allows for identification of causality (Kristensen, 2004) and areas where further research is needed (Yee et al., 2012). The contextualising DPSIR is used in 5.1 and the MLP, offering a deeper theoretical perspective, is applied throughout the thesis.

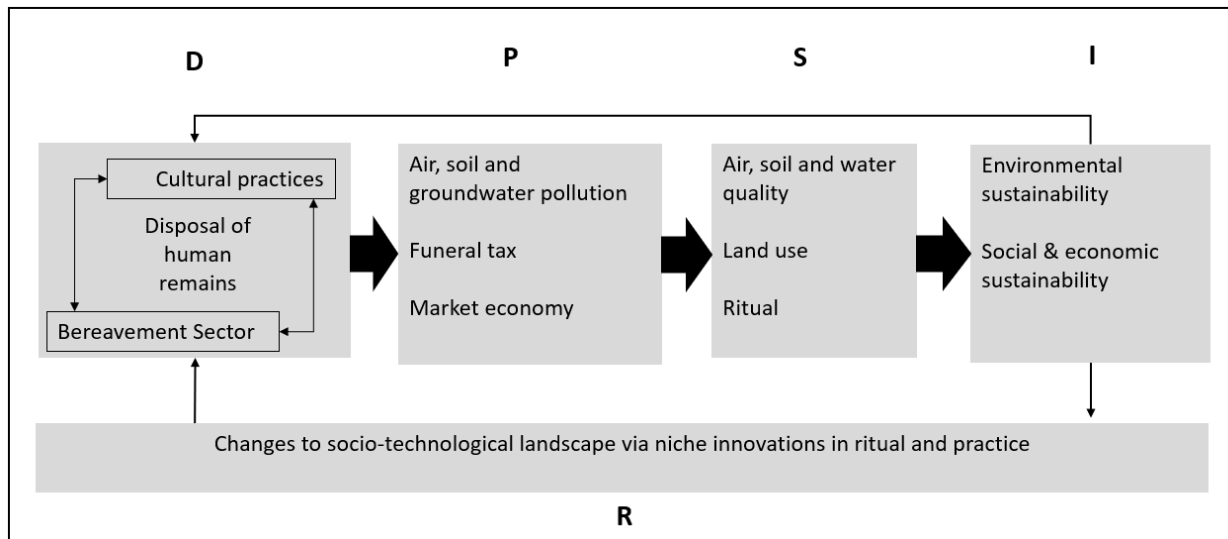


Figure 4. Disposal of human remains in Sweden - DPSIR

Figure text: A DPSIR indicating the ongoing negotiation of elements in the hierarchy surrounding the bereavement sector. In the following case background text, items in bold are found in the DPSIR image. Responses are covered in the rest of the discussion section. Authors own.

5.1.1 Driver

Disposal of human remains impacts the environment as shown in detail in Keijzer’s (2017) environmental impact assessment of cremation and burial in The Netherlands.

Once a person has died, **cultural practices** at landscape level dictate how Swedish people respond to a death. The Swedish community have given the bulk of the responsibility for death and dealing with the deceased to Svenska Kyrkan (Grönwall et al., 2020). These landscape level norms are enforced by regime level grammar such as the Swedish church who are moderate and the Swedish population who are largely secular (Lundåsen, 2021).

Begravningsbyrå and crematorium representatives and others who play a significant role in supporting people in times of grief and after death, are referred to as the **bereavement sector**. SKKF and SBF are allied institutions who have power to lobby for changes to the bereavement sector (Haworth, 2017). These changes appear as niche innovations which may or may not become integrated as part of legal practice.

5.1.2 Pressure

This section highlights overarching challenges to be overcome when working with niche innovation. The drivers described above exert pressure on the earth's ecosystems, the effects of these pressures can be measured, monitored (Burkhard and Müller, 2008) and amended if identified correctly. Svenska Kyrkan and the SVB are both producing numerical data to understand their respective impacts on the environment to allow for the scale of challenges faced to be assessed and worked with accordingly.

Funeral directors work within the broader economic market. The Swedish public allow the state to care for the dead through the **funeral tax** (see explanation under 5.1.4). However, the public must arrange the funeral itself which is where the **market economy** takes hold (Shelvock, et al., 2021).

Barastyr talks on the complexity of moving toward change in the Swedish bereavement sector which despite being state led is influenced by external market factors.

Barastyr: "...what happens in the US generally impacts on the rest of the world because they can do it in a marketing."

Researcher: "They kind of do it with the market in mind don't they."

Barastyr: "If the market wants it too then that could give an impact rather quickly to spread that technique."

The main intention of death practices is the disposal of a body which impacts the environment in many ways. A cadaver is waste as much as anything else that is added to the recycling (Davies, 2005 p.84). As with any other waste disposal, there will be direct and indirect impacts on **air, soil and groundwater pollution**.

5.1.3 State

Within the DPSIR model, pressures act on the state causing it to change, there is inbuilt resilience in any state which is dependent on what thresholds are in the system (Kristen, 2004). Here both ecosystems and social systems are considered.

End of life ritual and practice impacts the environment which impacts **air, soil and water quality**.

In terms of **land use**, cemeteries are spaces which need management. Management can be with biodiversity in mind and can add to the support of nature reserves (Kalma in discussion with author, March 8 2022). Legally, the spreading of ashes in Sweden is only allowed in certain spaces. A recently integrated technological transition potentially caused in part by the restrictions on ash spreading; is that 36% of ashes are buried now in memorial gardens. Ash is rich in nitrogen which can be beneficial to the soil quality (Hamidi et al., 2021) however there is little research to show what ash build up in such quantities as in memorial gardens can do to affect the makeup of soil. In terms of burial, bodies in Sweden are buried at 3.6 metres deep to interfere as little as possible with top soil (Vichama in discussion with author, February 21 2022).

The cultural landscape of individuality in Sweden affects end-of-life **ritual**. Legally, the choice is between cremation or burial; no other alternatives are available for the disposal of the body. However, there are many choices when it comes to coffins, urns, flowers at the ceremony and whether to opt for no ceremony, known as direct cremation or burial. Choice in and of itself presents an opportunity for the expression of culture.

5.1.4 Impact

Keijzer's (2017) lifecycle analysis of cremation and burial shows **environmental sustainability** concerns to address at the socio-technical landscape level such as; the emissions of crematoria; potential groundwater pollution around cemeteries; decomposition process in the soil and; emissions into soil, water and air.

The Swedish authorities have implemented a tax applied in working people's wages which is dubbed 'the cremation tax' by some or a 'burial fee' by others. Legally the term is Begravningsavgift which can be translated as funeral fee. Further detail translated from Skatteverket (n.d.): "The funeral fee shall, among other things, cover costs for the care of cemeteries, cremation and burial. The fee, however, is not linked to individuals' funerals."

Mantus: "Crematoriums are paid by the taxes in Sweden. It is almost the same in other Scandinavian countries. ...that could be one answer why it is natural for the Swedish to choose cremation because it is something that is included... you just need to get a coffin... In other countries, it is more like a business and that's also a way."

There are some costs which must be covered by the individuals and their estate. Yet regulations such as the funeral tax support the execution of ritual practices such as the need to have an end-of-life ritual to mark the death of a loved one (Worden, 2018).

Despite, and in fact because of, the nature of Sweden's governance, if a pro-environmental niche innovation were to be authorised then it could be implemented across the country in a short space of time. Governance regulations at regime level help feed into cultural norms at landscape level which uphold **social & economic sustainability**.

5.1.5 Responses

The DPSIR covers a final section on integrated responses to the drivers and impacts of a problem. Responses will be expanded upon in the remainder of this discussion section particularly chapter 5.5.

As has been discussed, legislation in Sweden protects the current landscape of ritual and practice restricting the uptake of niche innovation. For example, a dead body can only be disposed of by cremation or burial.

Kalma: "I follow the law and the law says the funeral law begravningslagen says that we are going to have all the different gravskjik (burial customs), we should erbjuda (offer) to bury a coffin and we have the possibility with the great memory places minnesplatser in Sweden but yes, and this is what we should have, right or wrong, but the law says you should erbjuda (offer) the citizens this possibilities."

Barastyr also touches on this.

Barastyr: "That way I can say we are depending on what the authorities accept, because without that, we can't do it, you can not change the way we deal with a deceased body without acceptance from the Swedish authority because it is close to legislation what way you can because in Sweden you have to option to bury or cremate, there is no nothing in between for the present time so they must be in it as well so to speak."

In a globalised world, if a niche such as human composting (available in 3 states) or aquamation (available in 20 states) (see table 4) is successful under a different set of regimes, such as the liberal market economy found in the United States, findings are shared with members of alternative regimes in different landscapes such as members of the bereavement sector in Sweden. Local policies can be addressed to create opportunities for the niche to be adopted. This integration can occur if those perpetuating industry structures in the existing regime have energy or drive to create change to the current routine.

For example, Vichama talks on how the sector in Sweden, which is more protected by policy, remain poised to see how developments go in the United States, a nation based on a free market.

Vichama: "...I think more about the composting, I think that will be the first thing before water resomation. I think that will be yes. But I don't hear anything from the US about how it is going, Washington they will try it, so after that we will think about it some more."

The above statements from collaborators show how strong landscapes and technological trajectories can present challenges for prospective niches to develop. Subsequently other regimes are limited in what potential changes can be made to them. The MLP is criticised for showing a lack of analysis of agency (Smith et al., 2005); here three forces which enact on the regimes interact whereby (1) cultural actors and the (2) bereavement sector show agency by creating incremental improvements to ritual and practice within the protection of what is allowed by (3) the state.

5.2 Understanding the challenges and opportunities which the Swedish bereavement sector faces in implementing pro-environmental practices

In the following, Aim 1 objective i) is assessed by looking at challenges and opportunities which impact the sector specifically. These opportunities would require buy-in from the bereavement sector to be successful.

- *Challenges* present themselves when changes to the existing regime or landscape needs to be amended to allow for practices to be implemented. These challenges can be to a lesser or greater extent dependent on the barriers, limitations, impediments, or constraints in the hierarchy which reinforce the current hierarchy by stopping change.

- *Opportunities* are spaces in the socio-technical landscape which allow for incremental improvements toward pro-environmental breakthrough. Regimes can act in support of change in which potential is seen.

5.2.1 Internal Challenges

Good working conditions must be respected

Keijzer (2017) talks on how important it is to consider social, cultural, local economic, ethical and environmental arguments. At the event titled, the Impact of Cremation and Burial on the Environment, crematorium technicians expressed an acute awareness of the effects which switching to electric cremators would cause to their working day. They were concerned about power cuts, long cremation times and having to potentially work night shifts (conference participant personal communication, March 30 2022). With strike action taken on 2022 April 27, within the church of Sweden due to a lack of transition in line with other employers' working conditions (Hivert, 2022), a clear demonstration has been made to show that worker's compliance cannot be taken for granted. Incremental improvements must be made to retain good standards of working in line with changes to legislation as well as taking into consideration pro-environmental practices.

Cross sector communication to be improved

Communication was noted at the sector event on 30 March 2022 as being a key part of a sustainable industry (Cross, 2022) this correlates with following a transdisciplinary approach (McGregor, 2017). Positive communication is an important method for gaining internal buy-in to pro-environmental niches. Buy-in for a prospective change relies on communication between multiple parties within the bereavement sector. Many changes require the input of multiple parties for example when it comes to the flowers at funerals, Barastyr's quote below shows that all of decisions are the result of the collaboration of many stakeholders who have engaged their ability to adapt to shifting pressures applied to the regime (Smith et al., 2005) in this case; environmental concerns.

Researcher: "Is it something that you feel as a business that you initiated?"

Barastyr: "...They (the cemetery) say, we don't accept these and these materials, no plastic and so on. It's a cooperation with the funeral directors, and the cemeteries and the florists, the coffin makers and so on, in a way to make the environment better."

5.2.2 Internal Opportunities

Integrated concern for the environment

The sector itself has been working on making themselves more environmentally conscious for the last 5 - 10 years (Barastyr in discussion with the author, April 14 2022).

Barastyr expands on this and how it relates to the sector itself.

Barastyr: “We try to do what we can for the environment because in a way it has impacts on our way of working as well, it’s our working environment that is important as well.”

The above quote shows how the landscape of the bereavement sector within Sweden is maintained and adjusted through seeing socio-technological changes as opportunities to create positive change for those within the sector, wider society and the environment.

Integrated modes for cross sector discussion and external lobbying

In more general terms, the bereavement sector are close knit and work on keeping the industry abreast of new pressures and novel innovations, many of which have an ecological component to them. Mantus described how the SKKF have a conference.

Mantus: “...a smorgasbord that describes our conference also... It’s about 500 to 600 people who attend, everything from vicar to cemetery workers.

SKKF communicate effectively and are keeping abreast of changes in the sector and beyond. Additionally funeral directors and their peers are part of an elite who can lobby for legislative changes (Haworth, 2017) to death practices.

An example of a talk including niche elements in relation to the landscape and regulatory matters is provided here by Mantus.

Mantus: “Next time in Borås we will have two women talking about the water in every aspect, everything from the water drainage from the soil and out to the pipes...”

The above covers how the sector responds to change from the outside enacting in, yet the bereavement sector are made up of powerful groups who can both reproduce the existing regime and make amendments to them.

Researcher: "...if you wanted to change the laws, is there a lobby group?"

Vichama: "Yes you can say the funeral industry, SKKF and that organisation it's not only the funeral homes, we have to have other parts with us to deal with these questions so it's a big thing of lobbying."

Opportunities for integrating new ways of working

Internal change can be more subtle than lobbying for large scale policy change. Rather change can come from amendments to practice within the sector. When it comes to a focus on environmental issues, Kalma is seeing change coming through in their younger colleagues working in the bereavement sector.

Kalma: "...my colleagues, they are young and they have recently got their educations and this is a big part nowadays that people should take care of the environment..."

Young members of the public may not arrange a funeral themselves for some time, but their demographic is represented in the crematoria staff, at undertakers and within the church.

5.2.3 External Challenges

Lack of public interest

Vichama from Sveriges Auktoriserade Begravningsbyråer (SBF) shows how the regime of sectoral policy, whilst looking out for the needs of the public, also hold responsibility for the environmental considerations to both assist the environment and to support those whom they work with. He continues:

Vichama: "When a person dies, the environment is not the first thing that the relatives think about, it's very low down in their thoughts, nearly no body thoughts about it when a person is dying so it is a very big responsibility for us in the funeral business to think of these things because they will not ask us. We will offer them."

The challenge faced here is when the bereavement sector work on pro-environmental practice without the public's input. This means that (1) the sector are responsible only to themselves and (2) agency is removed from the public.

Challenges with government impeding change

Pro-environmental niches in death ritual and practice can be impeded by those working to reproduce regimes via means, such as policy, in relation to death in Sweden. Regimes interact with each other meaning that for a niche to be integrated, alignment and coordination are required to tackle all regimes, allowing change to emerge into the wider landscape. Change can be slow, expensive and require a lot of energy, however postmodern scholars would point out that change whether desired or undesired is constant. Energy for change can be harnessed to create radical transformative amendments to the landscapes in which we live which is required for a sustainable future (Raudsepp-Hearne et al. 2020). The following exchange is just one example of restrictive governance in practice.

Researcher: "So with something like composting then... to have something like that at least trialled, how much work is there that you would have to do?"

Vichama: "It's really big work before, because you have to search about the new form of composition (human composting), it's a big work to take it to a document and then you will lay it to the government who will make the decision. So, you can get the answer from the government first and then you start it to work. You have to work with it first before you gave it to the government for a decision so that will cost a lot of money."

5.2.4 External Opportunities

Is there a lack of public interest?

Change is afoot in the bereavement sector, of the 6 collaborators interviewed, 4 talked on big changes coming in the future whether that be in terms of the uptake of environmental concerns.

Vichama talked about observing that younger generations were both more aware of the emotional aspects of death and grief and also into environmental issues, this collaborator observed that change will come as they get older.

Vichama: "In my age, about 60... we think that the world will crash if we are not at work. So don't 30s today think they seem to have no problem to be free 4 or 5 days if someone death by the nearest, so that will be a change in about 20 years. They will make time for it."

...

"They in their 30s will be more interested in the environment so we will see a big change there."

Human-nature connectedness as a gateway to pro-environmental behaviour

The service which the death industry provides to the people is important and Kalma sums up well the relationship which they feel cemeteries hold for the public.

Kalma: "...They (cemeteries) are the citizens places and it is the citizens that will decide what is ok... It is not my cemetery but they fill a purpose for the citizens. It is an important role that they fill because there is not that many places that they have in common."

In creating green space for citizens to engage with deceased loved ones, cemetery managers are creating the potential for increased human-nature connectedness which can help promote pro-environmental behaviour in the public in other regimes (Capaldi et al., 2014).

Ereshkigal highlights a point which is found in Swedish culture that individuals should be encouraged to make their own decisions despite any knowledge held by the person asking the questions or providing counseling or expertise.

Researcher: "and with the research which you were doing, was that to contribute to change or... to document...?"

Ereshkigal: "Document, analyze, I think, maybe a change of views more... not that I want to teach anyone what they should do... if you talk about things, you might highlight things which people don't think about and that can change..."

The above quote speaks in response to the importance of transdisciplinarity i.e. working outside of siloes or even national boundaries.

The Swedish bereavement sector making an impression on an European scale

Sweden has a role on the global stage as environmentalists (Buns, 2021). The bereavement sector too has ties to the rest of Europe and the rest of the world. Here Vichama specifically talks about his work toward the removal of zinc from the industry.

Vichama: “Now I am the president of the European funeral business... I think it will take 2 or 3 years before we are there because it is a change in the law, here in Sweden, in other countries and in the aeroplane business... it happens but it will be years I think.”

There are intricate links within the system in question; the bereavement sector in Sweden, and the above shows that there are links to other regimes within the global landscape which would require further research.

5.2.5 Challenges and opportunities in integrating alternatives to cremation or burial

The disposal of the body is the primary objective of death practices. As such, this analysis will not be complete without looking deeper into alternatives to cremation and burial; as much as there are changes which can be made within the broader scenario of death practices to make the overall environmental impact, acute investigations are made here to see if disposing of the cadaver can be made more efficient (refer to table 4). The disposal of a cadaver presents itself both as a prospective opportunity for the implementation of pro environmental practice and as a challenge due to the (1) Financial input needed. (2) Interplay of the bereavement sector and the marketized industry. (3) Technical barriers. (4) Governance barriers. (5) New societal norm required (see table 5).

Promession

Promession was an idea theorised by Swedish biologist Susanne Wiigh-Mäsak who made promession her life’s work until she died and was cremated in 2020. The subject of promession is of specific interest within the Swedish context due to its being conceived of in the country. Four of the interviewees mentioned promession in some way.

Kalma: “I think its a practice that you need to investigate, to see is it possible, is it not possible. it was the same for about 100 years ago for cremation, it was not obvious for all the people and the Swedish church

were at that time, very much against it and now we talk about promession, it's a parallel maybe to this, you have to be strong, you have to fight to get your ideas in practice.”

Ereshikgal also talked on this.

Researcher: “...legislative problems but also moral.”

...

Ereshikgal: “Yes, the research was lacking. Yes, but there were lots of, actually, both state and church interest in it, to develop it but it never happened actually.”

There was a flurry of interest in promession in the early 2000’s (Miller & Morgan, 2001; Helmersen, 2007) however the approach never got beyond the theoretical stage i.e. a human body has never been through this process and, has been hotly debated in terms of morality. As much as promession may seem like a failed innovation, as Geels (2002 p.1258) says, “previously archived closure can be undone”; there is still interest in the concept of promession (Lee, 2022).

Other alternatives to cremation or burial

Three of the interviewees mentioned other ways of disposing of the body.

Vichama spoke on water resomation and composting.

Vichama: “...we must move forward to that. Cremation we have had since 1887 so we have a new technique.”

Alternatives to cremation were discussed in general terms by Mantus who called for further investigations to take place into cremation and burial to find if one or the other has greater environmental impact.

Mantus: “I think we need a study to begin with, coffin burial, cremation, lifecycle analysis. We need that... We begin with the material needed to make the coffin, the process taking care of the body and the burial, the transportation, the fuel needed for cremation but also the fuel needed to dig the grave, the big grave and the small grave and then the soil, the place you needed to bury the coffin, big towns, small towns. Now I just give you some words for what needs to be studied so we can know which kind of burial process are the most value for the earth.”

Understanding which option or which combination of options has the lowest environmental impact is not straightforward as the web in which it exists as a process is integrated with other processes. The issue is wicked and must be understood in quantitative and qualitative terms.

5.2.6 Summary in answer to Aim 1, Objective i

Internal challenges involve gaining buy-in from all parties within the bereavement sector some of whom are concerned about changing the way in which they work. Internal opportunities arise from ongoing internal discussion and from those who are new to the sector and can see where pro-environmental change could be implemented.

External challenges are posed by lack of input from the public which could cause a lack of accurate representation of their wishes. To turn this on its head, external opportunities are again seen in those who are looking at the sector afresh who will bring new rituals and practice to deaths in the future. Also, opportunities exist in indirect pro-environmental behaviour such as the desire to access green space.

5.3 Challenges and opportunities which culture and ritual posit in integrating pro-environmental niches into the bereavement sector in Sweden

This section is in relation Aim 1 objective ii) and will look at challenges and opportunities which culture and ritual posit on pro-environmental practice by the bereavement sector.

5.3.1 Challenges which culture and ritual posit - individualism

Regime shifts have been initiated via individuals' agency over their beliefs and how they enact them through ritual and practice. Current cultural practices herald individualism meaning that any uptake of a new niche will be dependent on personal or familial desires. Mantus talks on personalisation.

Mantus: "Personal, you want to make things personal, not going with the mainstream. One thing is the spreading of ashes in places other than burial grounds. The environmental wishes increases, people want to have a smaller footprint, if you say so."

...

"...also how they arrange their own space, the gravestone and that should be more personal. In the 70's and 80's everything looked similar... Now everything gets what they wanted."

...

Mantus: "We don't want too many restrictions on the regular places."

Over time death practices have transformed from being (1) about God and the person's finding of heaven to being (2) about the deceased and their wishes and now there is a shift toward (3) the rites being for the living. In the first instance, any changes would have had to have come through the church, such as with cremation, however now for pro-environmental practice to be implemented buy-in must be gained from those who are left to execute the estate.

The average of 24.5 days from death to disposal is heavily impacted by the public's desire for the ceremony to be on a Friday. In the United Kingdom for example the average is 14 days and is rather impacted by the sector themselves. In Sweden, the public...

Vichama: "... are waiting for a free Friday so they can have their funeral ceremony.

Vichama continues;

Vichama: "It will be better with the time between deceased and the funeral ceremony because the fridges is not so environment, it's a long time when we are laying in the fridge, so that will be better when we are cremated faster."

Embalming is not used in Sweden meaning that cooling the body is the main source of preservation prior to burial or cremation. Ambient coolers are present at some cemeteries but there is also a reliance on electric powered refrigerators. Cooling one body for up to 49 days may not have a great impact in relation to an individuals' carbon footprint however, the sector as a whole must take responsibility for the overall impact of the cooling of cadavers for such a long time.

5.3.2 Opportunities which culture and ritual posit - growing pro-environmentalism

In the same way that environmentalists can, when outside of one's echo chamber seem few and far between, there are few instances where environmental issues feature as key considerations for families who are arranging a funeral.

Vichama: "...it (environmental issues) will pop up more and more. Because for everyone, it's a real important thing to think about it. Like the funeral business we have a big responsibility because, like I said, the relatives will never ask for it, maybe one of 1,000 will ask for it and that we must offer it before."

Whilst respondents were quick to say that environmental issues did not come up for them when talking about funeral rites with the public, findings showed that human-nature connectedness was felt to be important. When individuals feel a connection with nature they are more likely to act in pro-environmental ways (Capaldi, et al., 2014; Dhiman & Marques, 2016; Ives et al., 2018).

Researcher: "Are people asking you questions? are they looking to be more environmentally conscious?"

Kalma: "Yes they are, at the moment, they are asking, it is possible to bury the ashes in the woods for example."

...

Kalma: "and a lot of people don't want any gravestones or whatever, they want to be a part of the nature and the green spaces we have. They don't express any need of I have to go under a gravestone or I have to plant flowers... I would like the ashes to be a part of the nature."

Researcher: "...is that part of spirituality or how does that relate to beliefs?"

Kalma: "...I think people are thinking quite practically too."

The drive which collaborators have to work toward a pro-environmental future is reflected in their proximity to working in a natural space. For example, Barastyr, who works as a Begravningsrådgivare (funeral advisor).

Barastyr: "...I try to do my part, I would say that I most likely could be better on it but at least I do what I can."

Researcher: "That's all we can do isn't it. Is that something you brought into your work or visa versa?"

Barastyr: "Well I think a lot of us, we work very close to nature in and of itself. We work daily on the cemetery. We can see the impact on the soil and so on. Of course, we can care for what is around us and what we can bring onto the next generation."

A connection to nature is always good for the mind (Davies and Rumble, 2012) and as such has been incorporated into rituals which allow individuals to grieve such as ensuring that crematoriums are

seemingly 'natural' places to visit. Connecting with nature can also enable individuals to have a better wellbeing (Capaldi, et al., 2014, Dhiman & Marques, 2016; Ives et al., 2019) which will provide resilience in the grieving process. This is an example of an indirect way to gain buy-in from actors; they find natural environments soothing, supporting social sustainability and in turn their footfall in cemeteries helps to bolster the sector's argument for the creation of more biodiverse spaces to remember the dead, thus improving environmental sustainability.

5.3.3 Summary in answer to Aim 1, Objective ii

One major challenge in integrating pro-environmental niches into culture, ritual and practice is the prevailing theme of individualism. Currently Swedish death practices are primarily aligned to those who attend the funeral and their individual needs. For pro-environmental practice to be integrated, pro-environmental ritual would need to become part of the landscape; i.e. a norm, which is acted on without question. At present, pro-environmental practice is one aspect of ritual and practice in a plethora of others and can therefore easily be watered down.

On the other hand, collaborators suggested that human-nature connectedness (Riechers, 2021), is an element of Swedish culture which is prominent; by harnessing the understanding of the importance of a connection to nature, pro-environmental cultural practice can inadvertently follow suit.

5.4 A narrative for future pro-environmental death practices

Pro-environmental death practices can be furthered through the creation of a narrative. As part of the PSP exercise, the collaborators came up with their vision for funeral ritual and practice in 2050. This in combination with visions from interviewees (See appendices F & G for more detail) was formulated into a poem; an artistic output which works to normalise pro-sustainability (Oteros-Rozas, 2015) both for collaborators and for any audience who interact with the work created. This section is in relation to Aim 2 objective 1).

This poem is presented here as a finding from the research and forms a concise piece of communication for the sector and laypersons alike as a potential future scenario to be conceded with or contested. Here inspiration has been drawn from the Hot Poets workshops (Torc, 2022) which is about "powerfully communicating climate change science and action through spoken word," Liv Torc (2022). Poets are paired up with scientists to gain knowledge and then to write a poem about that scientist's subject. Here

the narratives of the lay collaborators of the PSP exercise have been collated into a poem reflecting what pro-environmental activities could look like in death ritual and practice in 2050.

5.4.1 Narrative poem made from collaborator's contributions

She died in 2050.

With euthanasia readily available, she was able to actively choose when the end came.

She had prepared for death by arranging her own funeral, writing a will and involving her family and friends in her preparations.

Dignity, sustainability and affordability are all considered.

Transdisciplinary research and accessible education on research findings mean that carbon footprints are well communicated for different elements of end of life practices.

Water, soil, and air quality are all considered of vital importance to vitality of the current and future populations.

Cremation? Burial? Aquamation? Composting? Freeze Drying? - whatever is best for the planet based on the resources and capacity of the technological regime of the time.

With the support from the state, the deceased is transported away and disposed of.

The state operates in a degrowth society so her funeral will not contribute to gross domestic product nor will her funeral have any great environmental impact just like the rest of her life.

A small artefact is returned to the family to mark a memorial space.

For her funeral, friends travelled by bicycle, horse, train, they stayed home or joined from the local area.

These loved ones were able to engage with the funeral online or in person.

They partied, they laughed, they cried, they remembered her legacy over a hearty meal cooked with locally sourced seasonal ingredients.

She spent her life across two continents.

There are places to remember her for those that know.

For those that don't, she left no trace but a walnut tree.

Her remains, already broken down into accessible nutrients for the soil.

New life came from her death.

5.5 How do lay ideas for pro-environmental practice or cultural niches in the bereavement sector correlate with realities faced in implementation?

In the following section, which addresses Aim 2 objective ii), perspectives of industry experts are integrated with the findings of the participatory scenario planning exercise which, as lay insight, helped to open the discussion away from siloed thinking. This culmination of the result of this research into pro-environmental death practices in Sweden is found in table 5. Table 5 shows that some niche ideas have already been taken up by the bereavement sector; these ideas are *integrated* into the regime and in some cases, also integrated into the landscape. Some innovations are available as a choice but are not the prevailing norm; these are *optional but not integrated* into ritual and practice. There are other ideas which are *prospective*; these are ideas which are conceptual i.e. before or at the niche stage.

Two examples are chosen here to illustrate what table 5 shows:

Suggestion 5. shows that fossil free transportation can be tackled at niche level. The sector has begun to introduce electric hearses thanks to financial input and technological advances. There is no need here to overcome governance boundaries. There was a new social norm which led to the advancement of technologies to manufacture electric cars but this was a shift which took place outside of the landscape of the bereavement sector in Sweden.

Suggestion 13. on the other hand, requires more change to take place before it is adopted. For vegan food and drink to be consumed at all wakes, a new societal norm must be taken up. This requires a landscape level shift in practice. Some will choose vegan food however in this individualistic culture, it will be challenging to create universal change.

Table 5. Table to summarise elements of pro-environmental ritual and practice

#	By whom (PSP exercise and the bereavement sector) - Niche innovation	Detail from the PSP exercise	Input from the bereavement sector as to current status of niche	By whom (PSP exercise, the bereavement sector, researcher input) - Barriers or challenges identified numerically indicated
1	PSP - Online funerals	- Less transport - Flexibility in grief	- Early innovation - Digital legacies are provided in relation to alla helgona (all saints day)	PSP - (3), (5) Optional but not integrated
2	PSP - Flexibility in grief	Not expanded upon	No direct input from interviews	Researcher input - (5) Optional but not integrated
3	PSP- The importance of a will	- Pro-environmental preferences can be stated prior to death	No direct input from interviews	Researcher input - (5) Integrated
4	PSP - Conversations on death	- Open dialogue - Education	- Happening in more progressive communities	Researcher input - (5) Optional but not integrated
5	PSP - Fossil fuel free transportation	- Electric cargo bike - Car pooling	- Introduction of electric hearses	PSP -(1), (2) Optional but not integrated
6	PSP- Minimise travel	- Morgue and crematorium on the same site - Ceremony and wake on same site	No direct input from interviews	Researcher input - (2), (3) Prospective
7	PSP- Buried in own clothes	- No need to buy new clothes to be buried in	No direct input from interviews	Researcher input - (5) Optional but not integrated
8	PSP- Elimination of the casket	Not expanded upon	- Not with cremation as coffin is fuel - Possibility with burial	Researcher input - (2) Optional but not integrated
9	Bereavement Sector - caskets	Not expanded upon	- adaptation of the coffin - Removal of metal from the coffins including zinc	- With cremation, coffins add to the fuel for burning the body. Some caskets do not provide enough fuel Researcher input - (2), (5) Integrated
10	PSP - Biodegradable urn	Not expanded upon	- Environmentally friendly urns offered	Researcher input - (1), (3), (5) Optional but not integrated

#	By whom (PSP exercise and the bereavement sector) - Niche innovation	Detail from the PSP exercise	Input from the bereavement sector as to current status of niche	By whom (PSP exercise, the bereavement sector, researcher input) - Barriers or challenges identified numerically indicated
11	PSP - Use the heat energy generated from crematoria	Not expanded upon	- Reuse of heat energy happens	Researcher input - (1), (5) Integrated
12	PSP - Green fuel source for cremator	Not expanded upon	- Crematorium sector en-route to be fossil free 2023	Researcher input - (1), (2), (3) Integrated
13	PSP - Vegan food and drink	- For the wake	See below. Bereavement sector - food and drink	Researcher input - (5) Optional but not integrated
14	Bereavement sector - food and drink	Not expanded upon	- Encouragement of people to eat at local eateries - Picnics	Researcher input - (5) Optional but not integrated
15	PSP - Flowers	- Having less flowers. - Ensuring flowers are not imported - Contribution to a charity instead	- Indigenous plants rather than cut flowers - Composting flowers	Researcher input - (2), (5) Optional but not integrated
16	PSP - Biodiversity at the crematorium	- Minimal grave maintenance	- Promotion of biodiversity. - Protection of space as both of environmental and cultural importance	Researcher input - (3), (5) Optional but not integrated
17	PSP - Forest burial and ash spreading sites Bereavement sector - Memory Garden	Not expanded upon	- Burial after cremation with up to 250 others - Uptake by 36% of the Swedish population	Researcher input - (1), (5) Integrated
18	PSP - Grave stones	- Exotic and large stone used	- Local stone - reworked stone	Researcher input - (2), (3), (5) Optional but not integrated
19	PSP - Preservation of the body	- Length of time between death and burial in Sweden - Use of fridges	- There is generally no embalming in Sweden - The public want to have funerals at a time which suits them	Researcher input - (1), (2), (3), (4), (5) Prospective
20	Bereavement sector - removal of metal from the body	Not expanded upon	- Recycling 22 tonnes of metal every year	Researcher input - (1), (2) Integrated

#	By whom (PSP exercise and the bereavement sector) - Niche innovation	Detail from the PSP exercise	Input from the bereavement sector as to current status of niche	By whom (PSP exercise, the bereavement sector, researcher input) - Barriers or challenges identified numerically indicated
21	PSP - Alternatives to cremation or burial	- Green burial - Promession - Aquamation - Organic dispersal	- For industry input see section 5.2.5	PSP - (1), (2), (3), (4), (5) Prospective
22	PSP - Plaque or tree in memoria.	- No need for ashes or body to be present	No direct input from interviews	Researcher input - (3), (5) Optional but not integrated
23	PSP - Less emphasis on the importance of the body once the person has died.	- Government is given responsibility for disposing of the body - Arbitrary burial of bodies	No direct input from interviews	Researcher input - (4), (5) Prospective
24	PSP - Less emphasis on funerals as an <i>industry</i>	- Supportive of people from all socio-economic backgrounds - allows reconciliation of wishes and what is available	- Acknowledgement of the importance of the voice of the public - Sense of duty to provide for the public and to protect the environment	Researcher input - (4) Integrated into policy but threatened by market society
25	Bereavement Sector - data collection	Not expanded upon	- Undertakers and Svenska Kyrkan are working on data to give current readings to see improvements against	Researcher input - (2) Prospective - data from the undertakers is available from May

Note. Table to tackle every aspect of death practice from death through to disposal. Ideas floated by the collaborators, the detail of the idea, whether this is something which the bereavement sector are already working on and, what would need to be addressed to allow this innovation to be integrated if it is not already. Final column codes: Niche level: (1) Financial input needed; (2) Technical barriers. Regime level: (3) Interplay of the bereavement sector and the marketized industry; (4) Governance barriers. Landscape level; (5) New societal norm required. Innovations or niches are prospective, integrated or, optional but not integrated into current landscape

5.6 Summary in answer to research questions

In answer to the overarching research questions;

To what extent, using Sweden the Swedish bereavement sector as a case study, can death practices be pro-environmental?

How does culture and subsequent ritual support or impede the prospect and integration of pro-environmental niches?

Death practices can be pro-environmental so long as cultural requirements of are also met. It can be said that this problem is wicked and therefore requires multiple solutions (Wexler, 2009) from all regimes within the landscape. Interviewees from the bereavement sector professed their sense of responsibility for this problem; they see their role is as guardians to the public and also to the environment as a resource. For example, cemeteries are a common space for the public to use as they like; the bereavement sector facilitate this.

Culture and ritual can both support and impede the uptake of pro-environmental niches dependent on how aligned with current structures the niches are. The disposal of a cadaver requires a set of strong cultural norms at a landscape level, supported by processes, skills and artefacts administered by institutions such as SKKF and the Begravningsbyrå in Sweden. These institutions work together to upkeep moral values, support the maintenance of social systems in relation to the human body (Shilling, 2012) and ensure that the rite of passage of death is represented (Metcalf and Huntington, 1991) in a satisfactory way to the bereaved. The result of collaborating with the bereavement sector and lay persons has shown that the more radical a niche is those who uphold ritual and practice, the more challenging it is for it to evolve, never mind how pro-environmental the niche is.

The bereavement sector represents the people and has the power to lobby for change (Haworth, 2017) a tool which has been used to some extent but could be drawn on even more to engage with policy makers and the public to create change which is integrated at all levels. Interviewees from the sector see that change is coming whereby individuals are more willing to take time to grieve and will also have more of an interest in the environmental impact of their activities even after death. The PSP exercise with lay participants indicated that culture and ritual are changing to integrate pro-environmental practice at least within groups of people represented by the respondents. However, increased individualism was also observed by collaborators which impedes universal uptake of pro-environmental ritual and practice.

Vichama describes that, "...the funerals in Sweden has always been a conclusion of how society feels and I started in the beginning of the 1980's and I can see it now."

This collaborator is describing the bereavement sector as a microcosm of the present society. Death ritual and practice is a reflection of the ways in which people respond to one another and the natural environment throughout their lives.

5.7 Reflections

5.7.1 Method

It is important that this thesis is presented with integrity, as such the above work is accompanied by the following section which shows that as well as strengths, were challenges in the research practice which had to be worked with or overcome.

The interviews and the PSP exercise were conducted in English. At times collaborators were assisted in finding the words which they were seeking which may have influenced their answers. In working with an informal method of interviewing, an exploratory setting was created which allowed interviewees to disclose their own perspectives (Hammond & Wellington, 2021). despite any preconceived barriers, language or otherwise.

Ethically, speaking about death has the potential to be a triggering topic. Energy was focused initially on working with members of the bereavement sector who, through their work experience, have more tools to support themselves and are very used to the subject already. Collaborators in the PSP exercise were followed up with after the exercise to see how they were. Overall, morals and gut-feelings as to what was ethical were relied upon in the moment (Smith, Todd & Waldman, 2009).

Of course, the narrative poem which is given as an outcome of this research stage does not include all variables, and there will be nuance in the way things happen in actuality. It can be noted that all predictions are wrong but having a prediction allows some planning for the future to take place (Wyborn et al, 2020). The intention is to create a shared vision, not necessarily a shared or fixed future.

5.7.2 Theory

The multi-level perspective is tested here by putting it into the context of bereavement ritual and practice in Sweden. The perspective has withheld on many levels however, there were times when it felt

challenging to describe integrative change to the hierarchy via the three levels; interactions of actions from across levels quickly led to complex issues. Overall, the application of the MLP in this case provides evidence that death practices in Sweden is a wicked problem. Popper (1963) states that a theory, when it is upheld despite continuous testing, is reifiable; this can be said of the MLP.

With these open discussions, challenges arise as to whose truth is the most important and for what reasons. However, the importance of working in a transdisciplinary way outweighs the benefits of working in silos. Working more openly is of benefit as complexity is acknowledged and integration of different kinds of logic can occur (McGregor, 2018).

5.7.3 Analysis

The thematic approach is only as good as the data provided (Scharp & Sanders, 2019). The application of a thematic analysis enables rich qualitative data to be upheld rather than reduced to codes or numerical data. This honouring of the expertise of the collaborators was an important driver behind the production of this thesis. However, despite researching the subject via a literature review; offering grounding in the subject and attendance at industry events; which gave up-to-date insight on developments in the field, asking open questions to interviewees and leading a PSP exercise, there are themes which may have been altogether missed from the conversation.

5.7.4 Implications for future work

The research presented in this thesis forms a piece of communication, enabling lay people and academics to see what is already being done by the bereavement sector to address environmental issues. This work is part of a process of discussion, feeding back and acting. The next steps will be to gain feedback from my lay collaborators on the poem (see 5.4.1), consult with the interviewees as industry experts and continue the conversation. There is a role for Sustainability Scientists to further this research by continuing qualitative data collection and to understand emerging quantitative data to give a baseline reading of the impact of the bereavement sector from which to work. Continued work on this subject is beyond the scope of this thesis but not beyond the scope of Sustainability Science as a discipline.

5.7.5 Death practices and the bigger picture of Sustainability Science

Transdisciplinary working is a process of co-production of knowledge between scientific and non-scientific actors (Rosendhal et al., 2015). In the same way that the multi-level perspective has been tested here, so too has the transdisciplinary approach; a distinguishing factor of Sustainability Science. This thesis has

worked to gain insight from many different stakeholders who engage with death practices, either as professionals, academics or members of the public as a process of co-production. This thesis showcases the thoughts of sector experts with input from lay persons to create a balanced and communicative discussion on the topic. More work should be done with this topic as part of the process of working to a future which is as green as possible whilst considering the needs of the public and the scope of the bereavement sector.

Initially death practices were considered to show that no stone can be left unturned in seeking a pro-environmental future. The way in which the bereavement sector works in Sweden can be extrapolated to other sets of regimes. Due to the sensitive nature of their work with individuals who are mourning, the bereavement sector take responsibility for themselves both as advocates for the environment and for people. The work of this sector can be extrapolated to other sectors as an example of acting responsibly any actions in support of the planet and its inhabitants.

5.8 Contributions

5.8.1 Pro-environmental death practices

- A major challenge is the diversity of perspectives within the bereavement sector and the public which can lead to low implementation and integration of pro-environmental ritual and practice.
- Opportunities exist within the growing sectoral interest in pro-environmental practices.
- Opportunities exist within harnessing the Swedish public's interest in human-nature connectedness.
- The problem of pro-environmental death practices in Sweden requires multiple solutions with actions from many stakeholders at the level of culture and practice. The shifts required within the socio-technical regime make this problem wicked.
- Overall, the Swedish bereavement sector can serve as an example to other sectors in the way they work to serve the people and as guardians of the environment.

5.8.2 Theory and method

- Collecting qualitative data is appropriate for analysing this ubiquitous and thus culturally charged topic.
- The MLP worked well in application to this example. This thesis contributed a deeper look at the role of agency within the model.
- In the metamodern epoch, pluralism reigns, this was reflected both in the theoretical findings, the literature review and in conversations with collaborators on individualism (see 5.3.1).

6 Concluding remarks

In this thesis, the dust has been blown off, caskets have been opened and skeletons in cupboards have been revealed. On the whole the bereavement sector in Sweden have excellent tools to engage with and create pro-environmental practices, in fact, they have been working on such practices for up to 10 years. There is space created for internal discussion to take place however, gaining buy-in for pro-environmental niche take up is challenging to attain from all parties within the sector. The general public are showing signs of engagement with pro-environmental ritual even if indirectly from the perspective of a desire for human-nature connectedness. This socio-technical shift to focusing on the environment represents an opportunity for the sector to engage with the public to create pro-environmental practice which is reflected in ritual and culture. The Swedish church and the SBF are both working to gain more data on their environmental impact which will contribute to understanding any progress made in the future. The conversation on pro-environmental practices should continue in a transdisciplinary way to create positive incremental change within the sector and as an example to other sectors. Any changes to practice must be considered in terms of its impact to ritual as a process which allows the bereaved to grieve.

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8 Appendices

Appendix A. Initial email to bereavement sector professionals (amendable template)

Would you or one of your colleagues be interested in taking part in research into Death Practices in Sweden with a specific focus on imagining an environmentally conscious future?

I am a masters level student studying Environmental Studies and Sustainability Science at Lund University. For my thesis I am researching death practices in Sweden with the view to understand more about how environmental considerations feature on the agenda of death practitioners. This includes understanding the role of the state, the public and actions from within the industry.

I can only read so much on the subject before I feel I want to hear from the experts, i.e. you!

I will hold a workshop on the afternoon of Wednesday 23rd February 2022 in Lund. We will work together to create a vision for possible greener futures for death practices in Sweden.

Date for the diary: 23 February 2022 13:15 – 16:00 details to follow.

It would also be excellent to speak to you in advance of the session to understand more about your work and your understanding of current death practices.

If you have colleagues who might also be interested in getting involved, please pass on this email with my details.

Thoughts, questions, ideas? I look forward to hearing from you.

Kind regards,

Amber Golding
email: XXXXXXX@XXXXX
telephone: XXXXXXXXXX

Appendix B. Consent form



CONSENT FORM

Study title: Green Death Practices, Sweden

Researcher name: Amber Golding

Please initial the box(es) if you agree with the statement(s):

I understand the background information pertaining to this research project and have had the opportunity to ask questions.

I agree to take part in this research project, for my voice to be recorded whilst taking part and agree for my data to be anonymously used for the purpose of this study.

I understand my participation is voluntary and I may withdraw myself and any collected data at any time without my legal rights being affected.

I understand that this data is collected for use as part of an academic study which is not commercial. The resulting thesis will be available on a public website managed by Lund University library.

Data Protection

I understand that information collected about me during my participation in this study will be stored on a password protected computer and that this information will only be used for the purpose of this study. All files containing any personal data will be made anonymous.

Name of participant (print name).....

Signature of participant.....

Date.....

Appendix C. Interview Guide

Background

Tell me about yourself.

Are you interested in environmental issues?

How does this appear in your day-to-day life?

How did you end up in the industry and role which you are in?

The history of Sweden's death industry?

Decline in emphasis on the afterlife?

Cremation in relation to burial?

Professional

How do you view the body? Disposal or dispersal?

What are your thoughts on cremation?

Do you have any helpful statistics or reports on your work in relation to environmental issues?

Long time between death and burial/ cremation. Preservation or embalming of the body?

Is there interest in alternatives to cremation or burial within the industry?

Professional state

What is your relationship to the state?

Is there interest in alternatives to cremation or burial from the state?

Professional public

Do you have much interaction with the public in your role?

Is there interest in alternatives to cremation or burial within the public?

Is there much advocacy of forward planning over one's death?

If so, do people take this up?

Do you ever feel in between the desires of the state and the desires of the public?

Personal

Would you tell me of your personal experience?

Were there things which could have been in place which would have made their funeral more environmentally conscious?

The Future

What opportunities do you see for greening the industry?

Start to finish.

Does this future involve cremation?

Is enough being done to make cremation a less polluting practice?

Other

Is there anything you feel that I have missed?

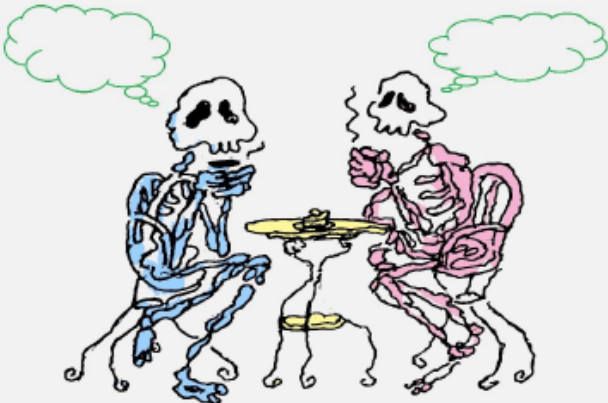
Do you have any other suggestions for people I should contact on this subject?

Appendix D. Poster for events

Lund University Master Thesis Research...

Imagining Green Death Practices

In person event Wednesday 23 February 2022 13:15 arrivals Start 13:30 End 16:00 Kyrkoforum Cafe, Lund	Online event Tuesday 8 March 2022 13:15 arrivals Start 13:30 End 16:00 On Zoom
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This event will be a hands-on experience to generate ideas, share experiences and understand what could make the funeral industry more attuned to environmental issues.

Could the funeral industry be more ecological? Greener? Pro-environmental?

Target group
People with experience of the funeral sector in Sweden; members of the public, funeral directors, religious and non-religious people involved in end-of-life ritual...

This is an opportunity to discuss ideas big and small, experiences which could have been improved, practices which are great or need to change, ideas for physical changes to implement, all are welcome.

This research is carried out to fulfill the thesis element of my Master of Science in Environmental Studies and Sustainability Sciences. Sustainability science is solutions based, looking at social, environmental and economic issues to find a best route forward which protects people, our planet and the systems which allow stability for both.

Registration and further information:
Amber Golding
ambergolding28@gmail.com | +46 (0) 724425281

Appendix E. participatory scenario planning exercise plan

Plan - Participatory Scenario Planning Exercise		
FACILITATOR:	Amber Golding	
VENUE:	Room at Domkyrkoforum Cafe, Lund	
THEME:	If pro-environmental ritual and practice is crucial, what opportunities and challenges are there for the future?	
DATE:	In person - 23.02.22	
TIME/DURATION:	13:15 - 16:00	
RESOURCES:	Necessary: brains. Optional: pens. Tea, coffee, cake, fruit. Flipchart, post-it notes, pens, recorder x2	
AIMS FOR THE FACILITATOR:	To invite creative thinking on a pro-environmental bereavement sector in Sweden.	
OUTCOMES FOR THE COLLABORATORS:	Psychomotor	Demonstrate an awareness of how to be present when listening to others.
	Cognitive	Recognise the complexity of the influence which one has over others and others over oneself.
	Affective	Immediately after the session appreciate a sense of insight into current practices and potential for change or stability.
DATA COLLECTION METHODS:	Inviting comments from the collaborators. Observing the session. Taking photos. Taking notes. Ask collaborators for assistance in the above.	

TIME TAKEN	TIME	CONTENT	METHOD	PURPOSE/ RATIONAE/ BENEFITS
15 mins	13:15 - 13:30	Arrivals. Make tea, settle in		
5 mins	13:30	Housekeeping	Passive instruction	For comfort of the collaborators

10 mins	13:35	Introductions Name, role and organisation What do you like to do when you aren't at work? Any expectations for today? Thoughts on environmental issues?	As a whole group	To meet everyone and for everyone to know each other
15 mins	13:45	Activity - understanding the current situation - comic or bullet points	Group work - jam board 3 - 4 good number	To give a context to the future discussions
10 mins	14:00	Feedback on the activity to the group. Where can we think about environmental issues here?	As a whole group	To relax individuals into talking to the group
5 mins	14:05	Think of an environmental activist who is inspirational. How would Greta Thunberg (another Swedish environmental activist?) approach this problem? Activity - rapid ideation - individuals write on post it notes	Individuals – post-it notes	To generate ideas
10 mins	14:10	Activity - pick an idea (or a few ideas) and create a ceremony / series of events.	Group work	
10 mins	14:20	Break time		
10 mins	14:35	Share group work (we will discuss further after every group has shown their thoughts)	As a whole group	
15 mins	14:45	A Discussion as a group - Review the ceremony / series of events considering the discussion add in resources, buy in, cultural change to allow this to happen. What would allow this to happen? What might get in the way?	As a whole group	
15 mins	14:45	B Discussion in smaller groups - Review the ceremony / series of events considering the discussion add in resources, buy in, cultural change to allow this to happen. What would allow this to happen? What might get in the way?	Group work	
10 mins	15:10	Break		To let the collaborators rest their brains.
10 mins	15:25	Write a story of a death from beginning to end (I'm interested to see where you place the beginning and the end) incorporating environmentally conscious ideas from the ideation. Run an example around the room. Each person adds a line to the story.	As a whole group	
15 mins	15:35	Write a story of a death from beginning to end (I'm interested to see where you place the beginning and the end) incorporating environmentally conscious ideas	Individual work	

5 mins	15:40	Would anyone like to share?	As a whole group	
10 mins	15:50	What, if anything will you take with you from this workshop?	As a whole group	
5 mins	15:55	<p>Closing the workshop</p> <ul style="list-style-type: none"> - Follow-up comments, please stay on the call and we can arrange a time or please email me and we can arrange a time for a conversation - thank yous for your insight, hard work!, and for volunteering your time. - goodbyes 	As a whole group	

Appendix F. Interviewees' visions for the future (sample transcript)

The interviewees were well placed to share their visions for the future of the sector.

Kalma shares her vision for the future.

Kalma: I think we should have more cemeteries with forests and trees and maybe seas. I think it will be lakes. I think it will be very very nice to build some kind of grave spot that also can work as a cemetery and as a grave year. I think it's good for the people to talk more about death in our country, to appreciate the life more. and some people say, if I die, and I say, no, when you die. They think they are going to be eternal in some way.

Ereshikigal also shares her vision.

Ereshikigal: I think companies are working with environmentalism at funerals and also a lot with how they, the graveyards and they are working with not pesticides and so on. So there are issues on it but you wouldn't say that it is very much environmental and the way, most environmental thoughts, like today he wanted this wooden urn or you want to be buried in a memorial gardens, like in Stockholm with the wood lands, you do have those kind of areas in other places and that thought of environmental, that people like the woods, want to be outdoors and the outdoor life and also sometimes in flower arrangements and so, you can see and the people are coming to church maybe with flowers from their own garden but I think that is maybe not so much environmental but its maybe it is more personal.

Appendix G. Participatory scenario planning participants' visions for the future (sample transcript)

Lay collaborators were very keen to share their ideas for a pro-environmental future.

Participatory scenario planning

Despite being 2.5 hours into the session, collaborators were very keen to share their stories.

- Preparation

S: "Importance of having an idea of post-death wishes"

F: "...aware of death practices in conversation about death..."

- How to dispose of the body

S: "The best sustainable practice at the time, I guess something where my body is put to use,"

C: "...the body was buried in the most eco-friendly way which has been well researched at this time."

W: "...most minimalistic and zero waste methods. Which is to liquify my body and then spread the nutrients as fertilizer in localized organic farming practices."

F: "... I feel that is it not that easy to find a really sustainable solution. There are so many different contexts and, um yes, I am curious as to what the future brings in terms of more sustainable alternatives."

C: "...body will be buried in the most eco-friendly way which has been researched by scientists."

J: "...freeze dried or aquamated and my remains are used to grow a tree or other plants."

Al: "...turning the ashes into something useful..."

A: "...conventional cremation practices prove too inaccessible / expensive for most people."

F: "There should be enough space to bury a person and use that ground to grow plants and with more buried people, a forest. There would be no need for coffins. The person can also be buried (in a energy-efficient) crematorium and the ashes can be put on a flower field or in the sea."

- Simplicity

S: "... just keep it simple."

- Talking about death

A: "...Death cleaning... Seems very practical and a way of integrating thoughts about death into daily life."

S: "talking about death can be a bit of a taboo topic or maybe not taboo, its maybe that people are not so comfortable talking about it I don't know, its important, it can be like empowering."

Am: "... many were more comfortable to talk about death these days since policy makers brought talking about death and grief into schools."

- Attendance

C: "...they decide to do this via virtual reality..."

A: "Some travelling hundreds of miles by horse and by bike to pay their final tributes..."

Am: "...concerts in the evening..."

- Memory

F: "... people may gather every year to remember that person."

C: "...memory badge for her in a place she loved..."

S: "...US & Sweden... two memorial places."

J: "A tree would be a nice place to visit and remember."

Al: "...a small artifact...placed at a particular location...impromptu memorial location."

F: "The place where the person finds its last 'rest' is not as important - rather the memory of that person. People can still gather to celebrate and remember the lost person."

- Governance

C: "...Sweden's degrowth economy...won't contribute to anything like gross domestic product."

Al: "Government programs and subsidies help pay for the departed funeral."

F: "...some (institutional) process in place for people who do not have relatives."

- Other pro-environmental elements

Al: "During the cremation process, the energy produced is used to heat water in radiators."

A: "...local forest where the soil would not leak to any water supply..."

A: "The walnut tree planted at her mound will eventually provide the wood for another monument..."

Am: "The building...built to withstand the wild storms...with a window along the south wall and insulation in the north."

Am: "...bountiful compost provided by human bodies."

Am: "...excellent transport links to the rest of society..."

- Other cultural elements

W: "... active euthanasia because of an illness so she was able to plan her own funeral."

C: "...decided to use active euthanasia to end her life in an autonomous way."

S: "Instead of importance being placed on traditions rituals, to establish activities / places... thinking of the deceased..."

J: "...don't want to be part of an industry making money on death..."