LifeBooth:

A Provocation for Meaningful Decision Making

by

Monica Porteanu

mporteanu@ymail.com

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Abstract

We make 35,000± decisions a day, often experiencing decision fatigue, which leads us down avenues of least resistance, erodes decision quality and influences our future.

This inquiry seeks out avenues to study the connection between the emotional and logical side of decision-making. As we are increasingly able to quantify our emotions, understanding potential correlations between the two, might help us make more meaningful decisions.

Through design and foresight research methods, this study prototypes *LifeBooth*, a negative visualization technique that triggers reflective thinking toward improved decision making by facilitated exploration of our most mysterious and certain future: death. The study posits that by achieving greater comfort with this inevitable event, participants' big decisions will be shaped more by what is truly important to them and less by biases related to their backgrounds, preferences, or perceptions.

LifeBooth is described herein with its key elements, as well as a provocation for rumination and the quality check of participants' subsequent decision making.

Key words: decision-making, future, value, meaning, life, provocation for rumination, preventative medicine, Cassandra, end of time, negative visualization, choice, option

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To my grandmother, Ana, the gentle soul who introduced me to foresight, which she pioneered during World War II, encouraging people to see hope in the future by imagining a light at the end of that inferno.

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"Do I navigate my way through life with the help of my mind, or does my mind navigate its way through life by the help of me? I am not sure who's in charge."[1]

[1] Schelling, T. C. (1984). *Choice and Consequence - Perspectives of an errant economist.* Cambridge, Massachusetts and London, England: Harvard University Press. Chapter 15, The mind as a Consuming Organ, page 346

Preface

Cassandra's private collection of genes just nudged her to activate the strings that cut into her DNA and fix her body's recent imbalance. She overstepped her body limits again as she had an extra something that weakened her carefully programmed internal clock that keeps diseases at bay.

She refuses, though, to pay for her excesses. Cassandra is part of the datafication-native generation who has been living through the gene sequencing and scrambling evolution that the health care system has developed over the last 50 years. The system has made redundant any medical treatment as today, through molecular data monitoring, any sign of a potential disease can be nullified right away through prompt intervention. That is, if the earthling being notified accepts the activation of the personal revive-and-restore program that fixes the root cause of their molecular dysfunction.

And action Cassandra takes. As a result, the architecture of her genetic material is brought back to its optimal level, much like solving the puzzle of Cassandra's wellbeing. You see, in the first quarter of the 21st century, more than 50 years ago, when cancer was detected in her body, she was very lucky to be put in a wait-and-see mode, instead of intensive medical treatment that might have mutated her genome to a path of no return. In the meantime, *Singularity*, the profound point at which the civilization has been completely transformed from what we know today, reached its promise of uncovering the mysteries of the human DNA and created an entirely different health care discourse: de-sickening the sick and preventing any genomic malfunction.

So Cassandra's mutated genes were brought back to normal as she has become the decision-in-chief of her own health and life, for as long as she wants that to be.

The 2075 health system doesn't just make health care more effective, it also did away with the millennia-old fear of death and its crippling effect. Society just side-stepped this anxiety.

Going back in time to 2016, one could not stop but wonder: what can we each do to shift the health care paradigm from a state of treatment to one of prevention, so that there is no malfunction in the first place, unless we want to let it take place? How do we live when we fear death? How shall we bypass debilitating anxieties, such that the decisions we make today lead to a better us tomorrow?

Prologue

In 2016, Cassandra noticed a trend shaping up in medicine, as explained in The Atlantic's article "*When Should Cancer Treatment Wait?*" [2] by Charlotte Huff.

The trend was an outcome of technological advancements that allow professionals to identify medical anomalies in the early stages combined with a knowledge gap on how to address the anomalies in order to prevent them from developing into deeper health problems. Should they be left alone? Watched carefully? Or treated with the intensive methods developed for the serious stages of the disease? In 2016, most treatments addressed the advanced stages of a disease, while the early stages were mostly kept under surveillance, unless the doctor or patient decided to cut short the uncertainty of the situation and start an aggressive treatment. Other options for correction were hardly being considered by mainstream medical professionals, especially those opportunities related to lifestyle changes rather than medical treatments.

In this situation, Cassandra brought up the concern of the wait-and-see approach, especially in the context of a rapidly aging population which was most likely to see an increasing number of cases detected too early for treatments available in 2016, but which had the potential to put serious pressure on the society later on, once their diseases progressed due to the lack of any preventative measures right away. While she rang the bell on her concern, she also watched for potential paths to address it.

As it happens, in 2016 Cassandra was one of the cases that was put in a wait-and-see mode. Coincidentally, several months before Cassandra's health anomaly showed up, *LifeBooth's* coaching and provocation for rumination debuted as an intervention for meaningful decisions-making. Cassandra decided to test *LifeBooth* right away, and has repeated the experience every year thereafter. As a result, she changed the course of her decisions so that they increasingly led to key lifestyle improvements.

By 2020, Cassandra's disease disappeared. Her journey exemplifies a potential avenue for addressing a difficult challenge through a provocation that invites reflection and rumination when faced with a major decision.

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[2] Huff, C. (2016, August 2). *When Should Cancer Treatment Wait?* Retrieved from The Atlantic: www.theatlantic.com/health/archive/2016/08/when-should-cancer-treatment-wait/494060/
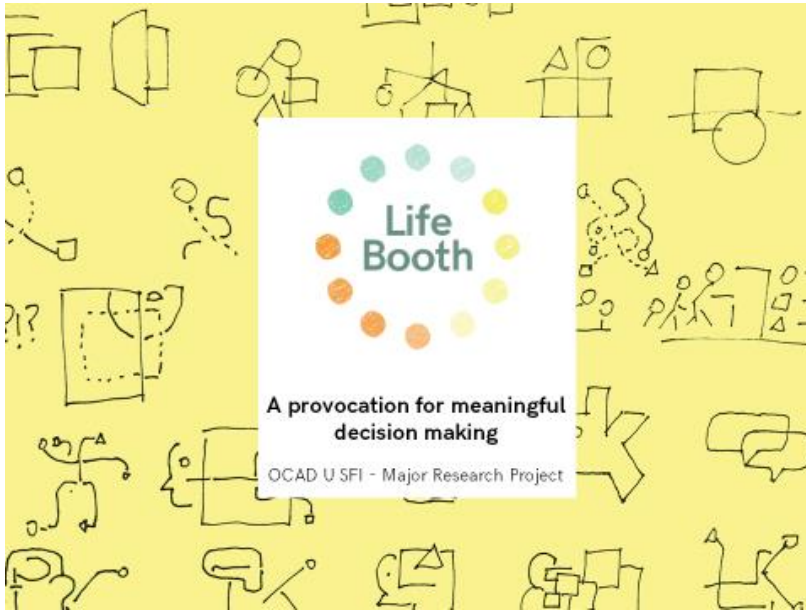
Image # 1

Author:
Monica Porteanu

Design:
Jose Ogpin

Logo:
Tina Matei

The *LifeBooth* concept design representing this MRP and used on lifebooth.net during the duration of this research

Introduction

Cassandra has introduced us to the life challenge she's facing today. Like many others taking advantage of the advances of medical technologies, she's been diagnosed with a disease that is in a very early phase. She was advised to stay under close surveillance but no treatment yet. While she's been testing the *LifeBooth* method as a way of dealing with the uncertainty of what could happen next, others have chosen traditional intensive treatments right away. However, many times, these unnecessary yet treatments have the opposite desired effect.

Cassandra's story is a major case of decision-making. Many more cases exist well beyond the medical field. Are we making the right decisions? Sound ones? If we could go back in time, would we make them again? What to do? What tools do we have to help us through this process?

Although decision-making has been researched in fields such as management science, psychology, and philosophy, only in more recent years have we learned more about the emotional and logical sides of the process, and the elusiveness of their interconnectivity. However, the topic is centuries-old, when considering ancient philosophers who developed various schools of thought around each side of the decision-making process.

As we are increasingly able to quantify and understand our emotions, understanding potential correlations between the two sides might help us make better decisions. What, when, and how to do that is still a fuzzy field.

Why should we care?

Technology innovations and the explosion of information compete for our attention. We cannot avoid it; they make an impact on our lifestyle, relationships, health, desires, wants, and needs in both positive and negative ways. Yet, our perception of time and the uncertainty of the future also influence our cognition in these same areas.

While navigating myriad factors and decisions, we tend to forget that a choice made today is a decision made for tomorrow. Keeping the future in mind with every decision can escalate our daily stress, discomfort and anxiety. What to do?

Might greater awareness of our time orientation and comfort with an ambiguous future facilitate better decision-making and reduce the stress, discomfort and anxiety endured while carrying the decision through?

Furthermore, while we may in general seek the comfort to enact tomorrow's decisions made today, most of us are highly uncomfortable dealing with the only future event that is a certainty: our passing.

As the project is building on the idea that our perceptions of death and life might be intertwined, it has been named *LifeBooth* and explores the hypothesis that confronting, visualizing, and acting out our death (i.e., experiencing a negative visualization) can enable us to make better decisions in the present for the future.

LifeBooth is a participatory foresight design project based on the observation that most people are uncomfortable with the only thing in our future about which none of us gets

to decide: mortality. The project aims to understand how we might research such an elusive topic. Are there parameters that could be studied to understand a possible correlation with decision-making? All parameters tested in this project are described in the Methodology section of this paper.

This research asks, **how might we ascertain if a greater degree of comfort with death facilitates decision-making?**

The project offers the opportunity for people to stop by its booth, a place where one can engage in one's death by traveling in the future through a negative visualization journey with a positive twist, based on the hypothesis that it might contribute to revitalizing life…hence the name *LifeBooth*.

Contribution

LifeBooth is a pilot project in its first iteration within the OCAD University community.

The goal of this Master Research Project (MRP) in the Strategic Foresight and Innovation program at OCAD University is to create an initial body of research that will represent the groundwork that will guide a further doctoral thesis.

This work focuses on primary research with a limited number of individuals (i.e., 6), while the doctoral thesis will extend the research to a larger group, such that the results may have greater statistical significance. Increasing the number of participants would help refining the intervening variables, while providing more qualitative data that could

open up the possibility of a statistical study that could be applied to designing an intervention for the general population.

The MRP prototypes the *LifeBooth* method for rediscovering and reflecting on personal values when faced with a major decision or life challenge. The method is centered on a workshop that, through a negative visualization technique, explores the connection between decision-making and the perception of death. The workshop engages its participants in imagining the last day of their life. Transporting people into their future is a technique often used in Foresight and Futures studies and is built on experiential design principles. The technique is called a *time machine*, a term coined by Suzanne Stein and Stuart Candy, Foresight professors at OCAD University.

Following the time machine, the research recommends a provocation for rumination that might influence meaningful decision-making. The provocation is based on three dimensions, probing our thinking on potential biases related to our:

- Time orientation

- Image of the future

- Comfort with mortality

As an example of an outcome of the *LifeBooth* method, the MRP includes a futures scenario as experienced by Cassandra, a character from the Greek mythology who was able to see the future, and embraced the *LifeBooth* method when faced with a life challenge. *LifeBooth* helped her make decisions related to key lifestyle changes.

Chapter breakdown

The first chapter sets the context by describing the literature reviewed and formation of the initial hypothesis.

The literature review starts with the influence of time and human judgment architecture on the ambiguity of the future involved in decision-making. It then narrows down the ambiguity factor to the event that eventually stops a person's future: death. Inherently, death means the loss of what we value most: life. Most of us have great difficulty with this loss, though we may be at ease losing other things of value for which we have expended great effort.

Central to this work is the observation surfaced when analyzing Stoic philosophers, explained by William Irvine, and related to the process of "*hedonic adaptation*"[3] and how we often find ourselves on a "*satisfaction treadmill*"[4]. For most of us it is hard to figure out when to stop the treadmill, or even that we are on such a treadmill, impacting the quality of our decision-making and the health of our mind and body.

To address this issue, Irvine points out the Stoics' recommendation to "*spend time imagining that we have lost the things we value*." The technique, called negative visualization, was considered by the Stoics to be "*a powerful antidote to hedonic adaptation. By consciously thinking about the loss of what we have, we can regain our*

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[3] Term introduced by psychologists Shane Frederick and George Lowenstein, explained by Irvine, W. (2008). *A Guide to the Good Life;* Negative visualization, chapter four, page 68
[4] Irvine, W. (2008). *A Guide to the Good Life: the Ancient Art of Stoic Joy.* Oxford University Press. Negative visualization, chapter four, page 68

appreciation of it, and with the regained appreciation we can revitalize our capacity for joy."

The chapter continues by looking into which factors might be considered when developing such a negative visualization journey, e.g., cultural backgrounds, the perception of time, socio-cultural class, and biases in human judgement.

At this point, inspired by the Stoics, the hypothesis of this work starts shaping up: imagining losing our life might be beneficial in the process of decision-making. Reflecting on what and who we are today, imagining that it might end, and thinking about our own death's meaning and implications might trigger a connection or synchronization between different cognitive processes to facilitate sound decision-making.

Chapter two proposes a negative visualization intervention that would provide a structure for individuals to imagine and reflect on what it would mean for them to face the last day of their life. Addressing the concerns related to negative visualization, the proposed technique looked at precedents of embracing this journey with some light-heartedness. The last section of the chapter two proposes a three-step mock death journey.

Next, chapter three describes in detail the methodology for each of the three-steps for the journey introduced earlier, together with data sets and the ethnographic techniques used for investigation (i.e., online surveys, one-on-one interviews, and time machine).

Chapter four describes the findings from experts in the field and those that emerged through the negative visualization intervention. The voices from the field provide views

related to concerns on negative visualizations, how avoiding thinking about death

causes an unplanned-for crisis, and examples of similar negative visualization journeys

that are already taking place.

The initial ethnographic findings from the negative visualization technique can be

summarized based on four dimensions:

1. Cautiousness required when conducting this type of time machine

2. Initial connections amongst people's backgrounds and the extent of their time travel

    to the last day of their life

3. Initial connections between the time machine and impact on decision-making, and

4. Time machine elements that, if tailored to individuals' background and profiles in

    the right mix, could enhance its success.

Chapter five describes two initial recommendations:

1. In the short-term, developing a provocation for rumination when faced with major

    decisions

2. In the long-term, through the doctoral work, developing a virtual reality game

    played in a group setting, offered as a service in a controlled environment that

    minimizes the possibility of harm to participants and enhances their experience.

The last chapter summarizes the conclusion of this work, explaining the issue explored,

followed by the proposed intervention to address it, and further steps to build a

prototype of the intervention that can be used for larger impact.

1.0   Context

While we make tens of thousands of decisions a day, there is no evidence, though, that making so many decisions necessarily leads to making increasingly better decisions. In most cases, we are so busy with a multitude of small tasks requiring micro-choices that we have little mental energy left to focus on big decisions. Western humanity's frenetic decision-making is rooted in beliefs about achievement and the fear of missing out.

How did we get here? Almost three decades ago, in *The Condition of Postmodernity*, David Harvey illustrated that the sense of time plays an important role in the decision-making process, noting that "*the time horizon implicated in a decision materially affects the kind of decision we make,*[5] based on the fact that "*space and time are basic categories of human existence".*[6]

He pointed out that "*modernization is very much about speed-up and acceleration in the pace of economic processes and, hence, in social life".*[7] In fact, the author coined the term time-space compression, noting that we must adapt to keep up with the pace of our evolving world, and the "*overwhelming sense of compression of our spatial and temporal worlds".* [8]

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[5] Harvey, D. (1990). *The Condition of Postmodernity.* Cambridge, Massachussets: Blackwell publishers, page 201

[6] Harvey, D. (1990). *The Condition of Postmodernity.* Cambridge, Massachussets: Blackwell publishers, page 201

[7] Harvey, D. (1990). *The Condition of Postmodernity.* Cambridge, Massachussets: Blackwell publishers, page 230

[8] Harvey, D. (1990). *The Condition of Postmodernity.* Cambridge, Massachussets: Blackwell publishers, page 240

Image # 2

Artist: Dali, Salvador (1904-1989)

Title: The Persistence of Memory, 1931

Location: New York Museum of Modern Art (MoMA)

Dali's famous melting clock as a symbol of a changing perception of time

The acceleration of our lives has been made possible by innovations that introduced convenience, standardization, and the elimination of daily tasks that we did not find intrinsically rewarding.

For example, we embraced fast food when the first McDonald restaurant opened in 1948 and liked the instant gratification introduced by the microwave.[9] By 2003, the majority of us replaced shopped-for presents with gift cards. By 2006, we registered a like or dislike of an idea or image in 1/20 of a second. In 2015, most singles meet new people instantaneously with just one swipe, compared to spending an entire evening to get to know a potential romantic suitor back in 1900.

However, as conveniences speed up mundane processes, we lose patience for anything slower than the current rate of speed. As a result, heightened expectations of speed and

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[9] Tchong, M. (2015, April 15). *Time Compression.* Retrieved from ubercool.com: http://ubercool.com/time-compression/

convenience have accelerated our perception of time and as a result, the quantity and speed of our decisions.

1.1. A state of time

Harvey aptly explains: "*the experience of time-space compression is challenging, exciting, stressful, and sometimes deeply troubling, capable of sparking, therefore, a diversity of social, cultural, and political responses."* [10]

Regardless of how many or how fast we make the decisions, they do impact our lifestyles, relationships, health, desires and skills. Examples of how we adapt to time compression are available on ubercool.com,[11] from how we are changing our language, to lifestyles, and mindsets: "*when asked how they were doing, people suddenly began answering 'busy' instead of the customary 'good.' This subtle shift in the social dialog underscored the sea-change shift that was taking place in the minds of people.*" The author continues: "*Since 1973 the median number of hours people say they work has risen from 41 a week to 49 [in 2005]. Leisure time, meanwhile, dropped from 26 to 19 hours a week over the same period.*"

Another key impact of the time-space compression trend identified by Harvey almost three decades ago is the phenomenon of instant living: "*One of the effects of time-space*

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[10] Harvey, D. (1990). *The Condition of Postmodernity.* Cambridge, Massachussets: Blackwell publishers, page 240
[11] Tchong, M. (2015, April 15). *Time Compression.* Retrieved from ubercool.com: http://ubercool.com/time-compression/

compression has been to emphasize the values and virtues of instantaneity and the

disposability… novelty, and the prospects of instant obsolescence." [12]

The expansion of the phenomenon of instant living can also be observed on

ubercool.com's timeline. Business models that capitalized on our increasing need for

time have thrived (e.g., FedEx, McDonald's, or the energy drinks industry). To further

support his argument, ubercool.com points to a May 2011 Nutraingredients.com[13]

article citing data provided by Leatherhead Food Research, and observes that given our

lack of sleep, it is "*no wonder energy drinks have become a $42 billion global business,*"

with US having a market share of 40 percent.

One could not stop and wonder: is our lack of sleep rooted in our desire to ignore the

need for it? Do we actually want to avoid this state of inactivity? And if that is true, is

this applicable to other states of inactivity, for example reflecting on our life and death,

noting that death is the ultimate state of human inactivity?

Our minds and bodies have responded such that by 1956, the word "stress" became

mainstream, people began consuming anti-anxiety drugs in 1981, when many were also

being diagnosed with attention deficit disorder. In 2001, a US adult's average night's

sleep was 6.8 hours, down two hours when compared to 1920. Two thirds of adults in

the UK had problems sleeping well by 2011. People contribute to the growth of the

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[12] Harvey, D. (1990). *The Condition of Postmodernity.* Cambridge, Massachussets: Blackwell publishers, page 286
[13] William Reed Business Media SAS. (2011, May 11). *Europe worth 15% of $42bn global energy-sports product market.* Retrieved from NUTRA ingredients: www.nutraingredients.com/Markets-and-Trends/Europe-worth-15-of-42bn-global-energy-sports-product-market

energy drinks industry by seeking a product that can counteract their reduced sleep, as laid out in the time compression timeline available on ubercool.com.

Technology and an explosion of information availability compete for our attention and time. These, amplified by our desire to be part of the moment and our fear of missing out, absorb and divide our attention, use up hours of our time daily, and result in the need to make a plethora of micro-decisions every day. In many situations, technology has also eliminated middlemen who filtered and controlled the dissemination of information. Choosing for ourselves, from a virtually unending flow, what information to take in and from which sources, accounts for many of those tiny, daily decisions.

One cannot help but ask: how expandable is our brain power, in order to accommodate the increasing number of decisions required of it on a daily basis? Studies to date indicate finite abilities to make decisions, and once those abilities are depleted, the fatigue leads us to simply make the easiest choice. An example of decision fatigue has been described by John Tierney and Roy Baumeister in "*Willpower: Rediscovering the Greatest Human Strength*" ,[14] noting that in parole hearings, judges' decision-making abilities decline as the day progresses, similar to mental processes involved in exercising willpower. When decision fatigue happens, we tend to travel the avenues of least resistance, such as: postponing or avoiding a decision, defaulting to one option, being impulsive, self-indulgent, uncompromising, and more open to irrational biases.

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[14] Tierney, J., & Baumeister, R. (2011). *Willpower: Rediscovering the Greatest Human Strength.* Penguin Press.

Decision fatigue seems to be another by-product of time-space compression, as eluded to by Harvey, "…*means more than just throwing away produced goods, but also being able to throw away values, stable relationships, and attachments to things, buildings, places, people, and received ways of doing and being."* [15]

The three key observations of the impact of time-space compression on our desire for instant living, explained by Harvey, and which seem to be important in decision-making, consist of:

1. **Individual time and space perspectives matter**: the diversity of the human existence manifests in its categories as well, including time and space. As a result, it is "*important to challenge the idea for a single and objective sense of time or space."* [16]

2. **Designing the future is challenging**, as "*the volatility makes it extremely difficult to engage in any long-term planning."*[17]

3. **The present is harder and harder to react to:** keeping up with the amount of novelty and instantaneity created by time-space compression puts pressure on how well we react to the present:

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[15] Harvey, D. (1990). *The Condition of Postmodernity.* Cambridge, Massachussets: Blackwell publishers, page 286

[16] Harvey, D. (1990). *The Condition of Postmodernity.* Cambridge, Massachussets: Blackwell publishers, page 203

[17] Harvey, D. (1990). *The Condition of Postmodernity.* Cambridge, Massachussets: Blackwell publishers, page 286

> *"Time-space compression always exacts its toll on our capacity to grapple with the realities unfolding around us. Under stress, for example, It becomes harder and harder to react accurately to events."*[18]

As all three key observations are related to an attribute related to time, the next sections of this paper will delve deeper into the connection between decision- making and the perception of time.

1.2. Decisions, decisions

Social scientist Herbert A. Simon applied an inter-disciplinary approach (e.g., cognitive science, economics, mathematics) to research decision-making, on the premise that human behaviour can be studied scientifically. He was awarded the Nobel Prize for his work on organizational decision-making. Through his work, *The New Science of Management Decisions,* we learn that "*decision-making comprises four principal phases:*

a. *finding occasions for making a decision (intelligence activity)*

b. *finding possible courses of action: inventing, developing, and analyzing (design activity)*

c. *choosing among courses of action (choice activity)*

d. *evaluating past choices (review activity)*"[19]

While navigating the multitude of judgements we employ daily in our decision-making process, we tend to forget that decision-making creates our future by selecting one

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[18] Harvey, D. (1990). *The Condition of Postmodernity.* Cambridge, Massachussets: Blackwell publishers, page 306
[19] Simon, H. A. (1977). *The New Science of Management Decisions.* Prentice Hall College Div., chapter 2, page 40

option over others, today. Since the future is unknown, we try to do two things when making a decision:

1. Decide a future action, at present, though it is uncertain how the future will unfold;
2. Be sufficiently comfortable with that decision so that we can enact and carry it through.

In recent years, through Daniel Kahneman's work in the field of psychology of decision-making, *Thinking Fast and Slow,*[20] we've learned that human judgement is based on two modes of thought: one that is fast, instinctive, and emotional (System 1), and a second one that is slower, more deliberative and logical (System 2). System 1 uses intuition to generate quick impressions, which, in most situations, are close to those formed by System 2 while thinking it over a longer period of time. Nonetheless, even though System 2 is rational, it is influenced by System 1. Kahneman explains that:

> *"The combination of a coherence-seeking System 1 with a lazy System 2 will endorse many intuitive beliefs, which closely reflect the impressions generated by System 1. Of course, System 2 also is capable of a more systematic and careful approach to evidence, and of following a list of boxes that must be checked before making a decision – think of buying a home, when you deliberately seek information that you don't have. However, System 1 is expected to influence even the more careful decisions. Its input never ceases."*[21]

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[20] Kahneman, D. (2011). *Thinking, Fast and Slow.* Toronto: Dooubleday Canada, a division of Random House of Canada Limited.

[21] Kahneman, D. (2011). *Thinking, Fast and Slow.* Toronto: Dooubleday Canada, a division of Random House of Canada Limited. page 86

Amongst the characteristics[22] of System 1, the author identifies that System 1:

- *"neglects ambiguity and suppresses doubt*

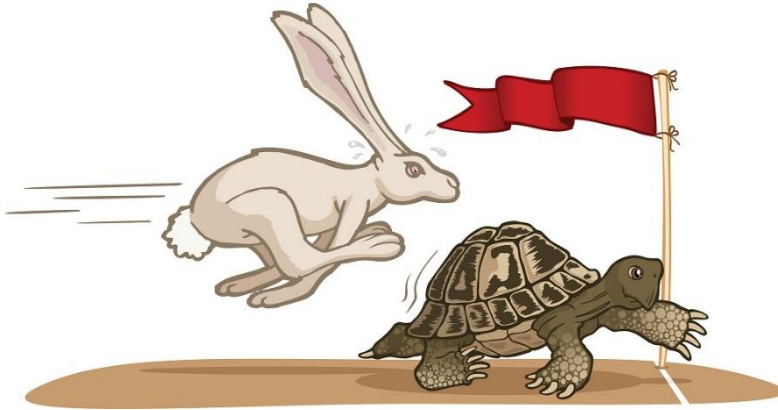- *focuses on existing evidence and ignores absent evidence"*

Image # 3

Title: The Tortoise and the Hare

Source: www.extramileja.com/ the-tortoise-and-the-hare-warnings-for-the-educated-and-indebted/

Like the hare, System 1 is fast. At times, however, it might take a nap and not notice what's going on around. System 2 is slow but methodical, similar to the tortoise's slow-but steady pace.

Dealing with an ambiguous future does not come easily, as we see Kahneman explain, above, and Simon mentions in the introduction of *The New Science of Management Decisions.* In Simon's view, individuals supplement the unknowns of ambiguity with their own beliefs and feelings, thus reducing the objectivity of what may lie beyond that which is familiar to them:

"For when man [sic] is faced with ambiguity, with complex shadows he only partly understands, he rejects that ambiguity and reads meanings into the shadows. And when he lacks the knowledge and technical means to find the real meanings of the shadows, he reads into them the meanings of his own heart and mind, uses them to give external shape to his private hopes and fears. So the

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[22] Kahneman, D. (2011). *Thinking, Fast and Slow.* Toronto: Dooubleday Canada, a division of Random House of Canada Limited. page 105

ambiguous stimulus becomes a mirror. When man describes it, he depicts not some external reality, but himself."[23]

Those who think about the future and its ambiguity may be able to envision tomorrow, the day after tomorrow, next month, and perhaps even five years from now. However even those who can imagine their life over a longer time horizon, have difficulty visualizing the most extreme, show-stopping event of their future: death.

Fred Polak, in *The Image of the Future*, notes that "*death itself, the one certainty, is the chief inciter of our thirst for knowledge of what is to come."*[24] He looks at orientations to the past and future and our sense of empowerment. Through mythological examples, he builds the argument that individuals can shape their tomorrow. While doing that, a positive or negative image of the future would influence that tomorrow, similarly to his point on how cultures rise or fall based on their image of the future[25].

If we can shape our future based on our beliefs today, while acknowledging that tomorrow is represented by ambiguous unknowns which we tend to replace with own thoughts and feelings, then it is important to the future that the information we are using to fill the voids today empowers us to create the future we envision. In other words, today's thoughts and feelings are important in shaping our future, until the ultimate one, our death.

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[23] Simon, H. A. (1977). *The New Science of Management Decisions.* Prentice Hall College Div., intro, page 2
[24] Polak, F. (1973). *The image of the future.* New York: Elsevier Sdentific Publishing Company. page 16
[25] Polak, F. (1973). *The image of the future.* New York: Elsevier Sdentific Publishing Company. page 31

The next section explores how thinking about death can influence how we shape our future.

1.3. That ambiguously certain future

Death is the ultimate and most extreme ambiguous future: inevitable yet unknown, and out of our control in most of its elements.

A few schools of thought indicate that there might be a correlation between perceptions of death and of life. A recent article by Julie Beck, *What Good is Thinking About Death*[26] published in The Atlantic, analyzed several schools of thought, from the terror management theory ("TMT"), to Buddhism, to the Stoic philosophy that encourages contemplation of death to enhance the meaning of life through awareness of its brevity. The article notes that, "*A couple of studies have shown that conscious thoughts of death do increase health intentions for exercise and medical screening.*" It cited philosopher William Irvine, whose thoughts in *The Stoic Formula for a Happy, Meaningful Life*[27] includes the statement that, "*The Stoics had the insight that the prospect of death can actually make our lives much happier than they would otherwise be.*"

The Stoic philosophers arrived to this conclusion after realizing that unhappy feelings and thoughts negatively impact our lives, and to address that, they sought out potential interventions to prevent their origination:

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[26] Beck, J. (2015, May 28). *The Atlantic - Health.* Retrieved from The Atlantic:
        www.theatlantic.com/health/archive/2015/05/what-good-is-thinking-about-death/394151/
[27] Irvine, W. (2008). *A guide to the good life: the ancient art of stoic joy.* Oxford University Press.

> "A *life plagued with negative emotions – including anger, anxiety, fear, grief and envy – will not be a good life…. They went on to develop techniques for preventing the onset of negative emotions and for extinguishing them when attempts at prevention failed."*[28]

Some of these interventions include visualizations of events or feelings that are considered negative, for example losing someone or something, with the expectation that the technique would lead to happier feelings and thoughts when realizing that the loss was imaginary. The Stoics' loss-imagining technique has been a matter of further discourse in various fields from economics to popular culture.

One common thread among the observations above made by Simon, Kahneman, Polak, and the Stoic philosophers (as explained by Irvine) emerges: the ambiguity of our own mortality is, for most of us, uncomfortable to deal with. At the same time, a lack of comfort with ambiguity could trick our brains into replacing the missing objective knowledge with subjective beliefs that could create negative thoughts and feelings. This gap between what *is* and what we imagine influences the tomorrow we create through today's choices. We've already seen this earlier through Cassandra's eyes.

1.4 What will I be? Will I be pretty? Will I be rich?[29]

Political economist and Nobel Prize winner Thomas Schelling is another notable contributor to the field of decision-making. He takes an inter-disciplinary approach

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[28] Irvine, W. (2008). *A guide to the good life: the ancient art of stoic joy.* Oxford University Press. Introduction, page 5
[29] Livingston, J., & Evans, R. (1964). Whatever Will Be, Will Be (Que Sera, Sera). (D. Day, Performer)

across cognitive science and economics. In his study on *Choice and Consequence*,[30]

Schelling discusses a flavour of the negative visualization technique:

> *"Deliberately cultivating latent disagreeable thoughts…. Some of the things*
>
> *we would like to believe and forget are beliefs and memories that directly*
>
> *affect our internal welfare, our state of hope and happiness, regret, anxiety,*
>
> *guilt, fear, compassion, or pride."*

His inquiry continues into what it would take to reverse negative thoughts and feelings:

> *"An unavoidable question is whether [a person] could be happier if only [they]*
>
> *could believe things more favorable, more complimentary, more in line with*
>
> *[their] hopes and wishes, than what [they] believe to be true."*

Schelling posits, *"That might be done by coming to believe things that are contrary*
to what [the person] knows."

When asking how one might reach greater welfare based on the evolution of personal

beliefs, he identifies four states these beliefs could shifts towards:

1. Improved by omitting the unfavourable ones and forgetting their root causes

2. A change in choice, if choices were available

3. Manipulated in order to reach the desired state. Examples could range from

    means that enchant the senses (e.g., music), to persuasive methods for framing

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[30] Schelling, T. C. (1984). *Choice and Consequence - Perspectives of an errant economist.* Cambridge, Massachusetts and London, England: Harvard University Press. Chapter 15, The mind as a Consuming -Organ, pages 334 - 340

or nudging a specific situation (e.g., Fitbit tracking to lower the health insurance premium)

4. Opposite to what they are today

Schelling offers an example of how the shift might happen: *"If we ever can select our favourite beliefs off some menu we shall have to be practical about it. I might want to forget I had cancer but not forget showing up for treatment."*

Shifting our attention now from Schelling to popular culture, an example of beliefs changed through a manipulative process can be seen in "*The Game*,"[31] a movie with Michael Douglas. His character, Nicholas Van Orton, who, although clearly states at the beginning of the movie, "*You know I hate surprises,"* signs up for a game marketed as "*consumer recreational services*" that provides "*whatever is lacking.*" In the process, he is faced with unexpected experiences, leading to a "*life changing experience,*" a 180° turn from a slick and confident, but lonely and arrogant investment banker to a vulnerable person shaken by fears, long-buried, traumatic childhood memories, and anxieties over the possibility of death. In the film, he becomes entangled in a game that makes it hard to predict what would come next. At one point, he asks, "*How do you know that's the way?*" The answer he received, "*I don't*," further heightens his uneasiness when approaching moments of truth on his journey, yet ultimately helps move Van Orton through personal transformation.

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[31] Fincher, D. (Director). (1997). *The Game* [Motion Picture]

Orton's journey towards death was wildly accelerated and exaggerated by *The Game*, leading him to become the opposite of who he was when we first met him.

The movie reflects Schelling's starting point that might help us make better choices: addressing phobias by visualizing a far-fetched instance of the dreadful situation. Schelling explains:

> *"A modest place to begin is phobias. Acquiring a phobia could be useful. Some therapies offered to people who smoke attempt to produce a mental association of cigarettes with dirty lungs, lip cancer, and foul breath. If the patient is unable to respond reasonably to the danger itself, through lack of control or absentmindedness, raising the fear an order of magnitude and putting the enhanced fear itself beyond reason permits the resulting fear to be both unreasonable and useful."[32]*

In fact, one of the journeys towards "the good life" is reminiscent of Seneca's point, which Irvine explains: "*Periodically contemplate the bad things that can happen.*" Why? The wisdom behind this reasoning points to two incentives: appreciating the good and lowering the impact of the bad in our lives. Irvine explains:

> *"The obvious reason for doing this is to prevent those things from happening…. But no matter how hard we try to prevent bad things, some will happen anyway. Seneca therefore points out a second reason for*

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[32] Schelling, T. C. (1984). *Choice and Consequence - Perspectives of an errant economist.* Cambridge, Massachusetts and London, England: Harvard University Press. Chapter 15, The mind as a Consuming -Organ, pages 334 - 340

contemplating the bad things that can happen to us. If we think about these things, we will lessen their impact on us when, despite our efforts at prevention, they happen." [33]

Along with Seneca's two reasons for contemplating potential bad events there is a third reason, pointed out by psychologists Shane Frederick and George Lowenstein. Frederick and Lowenstein note that it counter-balances a phenomenon that manifests shortly after we get what we've worked hard for, to which they refer as "*hedonic adaptation*." Irvine explains: "*Rather than feeling satisfied, we feel a bit bored, and in response to this boredom, we go on to form new, even greater desires,"* thus finding ourselves on a "*satisfaction treadmill*." As cited by Irvine, Frederick and Lowenstein propose that,

> "*One key to happiness, then, is to forestall the adaptation process. That means that besides finding a way to forestall the adaptation process, we need to find a way to reverse it. In other words, we need a technique for creating in ourselves a desire for the things we already have.*"

In response to this suggestion, "*The Stoics recommend that we spend time imagining that we have lost the things we value,"*[34] *as Irvine points out in A Guide to the Good Life*. This technique, referred to by Irvine as negative visualization, was employed by the Stoics as far back as Chrysippus in the 3rd century B.C. When employing the negative visualization technique, Irvine encourages readers to imagine how would we feel if we

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[33]Irvine, W. (2008). *A Guide to the Good Life: the Ancient Art of Stoic Joy.* Oxford University Press. Negative visualization, chapter four, page 67

[34] Irvine, W. (2008). *A Guide to the Good Life: the Ancient Art of Stoic Joy.* Oxford University Press. Negative visualization, chapter four, page 68

"*contemplate our death,*" or other tragic or unfortunate circumstances such as, *"the death of relatives, loss of friends, loss of possessions*, and even *our ability to speak, hear, walk, breathe, and swallow, or the loss of our freedom*." The Stoics proposed that,

> "*Negative visualization is a powerful antidote to hedonic adaptation. By consciously thinking about the loss of what we have, we can regain our appreciation of it, and with the regained appreciation we can revitalize our capacity for joy.*"[35]

With the Stoics' observations in mind, this project next explores how open and ready people are to embark on negative visualization journeys.

How often do ordinary people consider the *satisfaction treadmills*, the adaptation process, or negative visualizations in their daily judgements and decision-making processes? It depends on both the person and the circumstances, as the mind is influenced and often busy with biases, emotions, past experiences, and that array of imminent micro-decisions discussed above.

1.5 Blinded by the past?

Through Kahneman's work, *Thinking Fast and Slow,*[36] we learned that human judgement is influenced by cognitive biases through the System 1 thought process and the way it interacts with System 2.

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[35] Irvine, W. (2008). *A Guide to the Good Life: the Ancient Art of Stoic Joy.* Oxford University Press. Negative visualization, chapter four, page 74

[36] Kahneman, D. (2011). *Thinking, Fast and Slow.* Toronto: Dooubleday Canada, a division of Random House of Canada Limited.

While human brains are wired very efficiently and have developed various mental maps

and shortcuts to help us make decisions, Kahneman reminds us that they also have blind

spots, mostly rooted in our cognitive biases.

Kahneman describes how System 1 thinking associates new information with existing

patterns, rather than creating new patterns for each new experience. In other words,

we associate the future with past experiences, often missing new elements that we have

not previously encountered. We start mentally mapping experiences the moment we

are born; we continue expanding these maps through early childhood and through the

education, social and work systems we then experience. As Geert Hofstede notes in

Culture's Consequences,[37] these mental maps contain a component of national culture,

which he identifies as having five dimensions: power distance, uncertainty avoidance,

individualism, masculine or feminine characteristics, and long-term versus short-term

orientation. While all five dimensions are equally important, the first four are more well-

known and included in Hofstede's original work, while long-term versus short-term

orientation was added in more recent years.

When exploring the relationship between uncertainty avoidance and time orientation

(i.e., long-term versus short-term), at a national level[38], it seems that the two

dimensions are inversely correlated in most cases. Overall, Hofstede's work

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[37] Hofstede, G. (2001). *Cultures Consequences: Comparing Values, Behaviours, Institutions, and Organizations Across Nations.* Thousands Oaks, CA, USA | London, UK | Panchsheel Enclave, India: Sage Publications.
   Hofstede, G. (1984). Hofstede, G. (1984). The cultural relativity of the quality of life concept. *Academy of Management review, 9(3)*, 389-398.
[38] Hofstede, G. (2016, Feb 07). *Cultural dimensions*. Retrieved from The Hofstede Centre: http://geert-hofstede.com/united-states.html

demonstrates how some cultures are more comfortable than others when thinking about the future, a conclusion also reached by Polak in the *Image of the Future*.

At the individual level, the temporal dimension has been further discussed by Philip Zimbardo and John Boyd in *The Time Paradox.*[39] The authors explain that although the way people perceive time influences cognition, we are usually unaware of its influence. Zimbardo's and Boyd's work helps readers to recognize their own attitudes towards time. The authors identify six types of personal time perspectives: past negative, past positive, present fatalism, present hedonism, future and transcendental future. They added the transcendental future perspective more recently than the first five perspectives, and they measure its impact based on spiritual dimensions (e.g., personal view on death, life after death, beliefs in the evolution theory, religion affiliation).

Another point of view on time orientation was posited earlier by Alvin Toffler in *The Future as a Way of Life,*[40] wherein the author describes the findings of psychologist Lawrence Lishman, whose experiment studied the perception of time through the lenses of different socio-economic classes. Lishman observed that those on the highest economic rung identified with the past, describing that for them, *"to a degree, lives are lived to carry out sequences started by previous generations."* The present was favoured by people lower on the socio-economic ladder, who *"tended to look at time in terms of immediate action and immediate gratification,"* while the future was favoured by the

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[39] The Time Paradox: understanding and using the revolutionary new science of time, Philip Zimbardo & John Boyd, July 2009, published by Free Press
[40] Tofler, A. (1965). *The future as a way of life.*

middle-class who *"tended to think in terms of longer time sequences than the lower-class group."*[41]

While time orientations differ from person to person and socio-economic group to socio-economic group, "*They all assume either an unpredictable or an unchanging future.*" If it is unpredictable, then, *"At best, they attempt to plan by making straight-line projections of present-day life*," writes Toffler.[42] If the common mental model is that the future will be like the past and present, at a personal level the unexamined assumption is that our life will continue in perpetuity, discounting at some level the certainty of death.

Toffler anticipated decades ago that the intersection of (limited) human cognition with the rapid technological evolution could even shut us down from participating in the exchange itself and impact the quality of our decision-making:

> *"When we combine the effects of decisional stress with sensory and cognitive overload, we produce several common forms of individual maladaptions. For example, one widespread response to high-speed change is outright denial. The Denier's strategy is to 'block out' unwelcome reality. When the demand for decisions reaches crescendo, he flatly refuses to take in new information."*

Thinking about the intersection between reaching our limits when dealing with information overload and responding to the ambiguity of the future by replacing

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[41] Tofler, A. (1965). *The future as a way of life. page 457*
[42] Tofler, A. (1965). *The future as a way of life.*

missing information with today's beliefs, raises the question of the quality of the

future that we are creating.

1.6 Quality of the future

Similar to Toffler's "*cognitive overload observation*", Kahneman's System 1 and 2 theory

posits that sometimes System 1 does not seek more information, preferring to jump to

conclusions without a review of the information at hand. The author explains:

> "*On the basis of limited evidence* [that] *is so important to an understanding of*
>
> *intuitive thinking…* [based on]… *WYSIATI, which stands for what you see is all*
>
> *there is. System 1 is radically insensitive to both the quality and quantity of the*
>
> *information that gives rise to impressions and intuitions.*"[43]

Kahneman notes that while "*what you see is all there is (WYSIATI)*" helps us to

quickly deal with complex information, it can also make us insensitive to our own

biases. For example, overconfidence could block the prospect that facts that are

key to the decision, are not yet known. Another illustration of WYSIATI is

represented by the framing effect, based on the idea that the context in which an

idea in introduced could stir up different reactions. Kahneman provides an

example:

> "*The statement that 'the odds of survival one month after the surgery are*
>
> *90%' is more reassuring than the equivalent statement that 'mortality*

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[43] Kahneman, D. (2011). *Thinking, Fast and Slow.* Toronto: Dooubleday Canada, a division of Random House of Canada
 Limited. page 87

within one month of surgery is 10%.' The equivalence of the alternative formulations is transparent, but an individual normally sees only one formulation, and what she sees is all there is."[44]

We know that decisions made today will have consequences on the future and that the quality of today's decisions will impact the quality of the future. Therefore one might ask, how might we improve the quality of the decision-making process so we can experience a higher quality future?

The Kahneman, Lovato, and Sibony article, "The Big Idea: Before You Make That Big Decision",[45] published in the *Harvard Business Review*, proposes to the business world a checklist for the quality control of decision-making. The article, based on Kahneman's System 1 and System 2 modes of thinking, points out that "*System 2 is typically monitoring things*" and gets activated when serious risks are detected, while "*most of the time, System 1 determines our thoughts.*" However our mind is not equipped to signal when intuition makes an error, and as a result, makes it "*difficult for us to fix errors we can't see.*"

The article makes the case for "*neutralizing – or at least reducing*" biases at an organization level, leveraging the power of the collective mind, rather than of an

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[44] Kahneman, D. (2011). *Thinking, Fast and Slow.* Toronto: Dooubleday Canada, a division of Random House of Canada Limited. page 88

[45] Kahneman, D., Lovato, D., & Sibony, O. (2011, June). The Big Idea: Before You Make That Big Decision…. The Harvard Business Review.

individual by *"using System 2 thinking to spot System 1 errors in the recommendation given to us by others."*

While the checkpoints outlined on this article are applicable to teams, consultants or executives, most of these could be also adapted and useful in individual decision-making. A potential adaptation is proposed in *Appendix A*, however an additional method would be needed to realize a connection between System 1 and System 2 at personal level, in the absence of a collective mind. The proposed additional method, *LifeBooth* is tested later in the study, together with a variation of the checklist, as a provocation for rumination when faced with a major decision.

When taking into consideration the cognitive influence of our time perception and discomfort with the certainty of death, along with Kahneman's description of how System 1 thinking associates new information with existing patterns, there exists the opportunity for further investigation. This study explores how time orientation awareness and comfort with death might reduce blind spots, improve the decision-making process, and reduce the stress, discomfort and anxiety of decision-making, all for the aim of positively impact the quality of life.

1.7 How are we thinking about our ultimate future: mortality?

People often seek comfort in the decision-making process, because we tend to be uncomfortable when we have no say about an aspect of our future. When it comes to death – a certain element of everyone's future until proven otherwise—most people would rather avoid the feelings associated with it. In fact, *"People have invested a lot of*

personal effort into certain philosophies dealing with the issue of life and death. That's the major reason we have religions," Lev Grossman cited Raymond Kurzweil[46] as saying, in TIME Magazine. Kurzweil, a pioneer in artificial intelligence, futurist, and entrepreneur estimated that the rapid pace of technological advancements would lead to the moment when computers become more intelligent than humans. As a result, humanity would be transformed. Existing biological boundaries would be broken down, with most illnesses resolved and radical life extension possible.

Such advances could make us immortal in a not-so-distant future, just as Kurzweil described in his book, *The Singularity is Near,*[47] anticipating 2045 to be the year when the man becomes immortal. Cassandra's case introduced in the preface of this work, has joined Kurzweil on the path to reaching *Singularity.*

Image # 4

Author: Phillip Toledano for the Time. Prop styling by Donnie Myers

Title: 2045, The Year Man Become Immortal, Feb 21, 2011

Source:
http://content.time.com
/time/covers/
0,16641,20110221,00.html

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[46] Grossman, L. (2011, February 10). *2045: The Year the Man Becomes Immortal.* Retrieved from TIME Magazine: http://content.time.com/time/magazine/article/0,9171,2048299,00.html

[47] Kurzweil, R. (2005). *The Singularity is Near: when humans transcend biology.* London: Penguin Group.

For Kurzweil and those sharing similar beliefs, the main goal is to stay healthy and alive until that moment arrives. As Grossman described in TIME[48], "*in Kurzweil's future, biotechnology and nanotechnology give us the power to manipulate our bodies and the world around us at will. Indefinite life extension becomes a reality; people die only if they choose to. Death loses its sting once and for all.*"

Until that moment arrives, some people anticipate that progressively, artificial intelligence will allow us to transfer our minds and souls to a chip for disseminating our wisdom to future generations, providing them the comfort of our presence and supporting, guiding and loving them for years beyond our physical passing.

Some people believe that life and death are intertwined, and that they will reach Nirvana, a state in which the individual has broken the cycle of birth, life and death, being released from having a sense of self, suffering, and feeling desires and emotions. Others believe that they will be reincarnated, living in a "next" world or returning to this one in another body. On the other hand, some people believe that there is no future beyond physical death; that we each have an expiration date. Some people avoid pondering death altogether. Somewhere on this continuum of beliefs, our opening character, Cassandra, makes the case for preventative medicine, such that we become our own decision-maker-and-doctor-in-chief for as long as we wish that to be.

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[48] Grossman, L. (2011, February 10). *2045: The Year the Man Becomes Immortal.* Retrieved from TIME Magazine: http://content.time.com/time/magazine/article/0,9171,2048299,00.html

1.8 Conclusion

This section has set the foundational context upon which the research question rests. It started by observing that innovations have increased our expectations of speed and convenience, making us busy with a multitude of tasks competing for our attention and time, and as a result, requiring us to make tens of thousands of decisions every day.

While observing that decision-making is about creating the future today, we've explored two frameworks, each coming from a different domain related to decision-making:

1. Organizational decision-making: Simon's four phases/activities comprising the decision-making process (intelligence, design, choice and review).
2. Psychology of decision-making: Kahneman's two systems of thought: the fast, instinctive, and emotional System 1, and the deliberate and logical System 2

Both thinkers agree that dealing with the future's ambiguity does not come easily to most people, and that one's own thinking can get in the way, tampering with our judgement in making decisions.

Inspired by the two thinkers above, *LifeBooth*, the intervention introduced in next chapter (two) of this paper, tests Simon's design and choice activities in a technique attempting to synchronize Systems 1 and 2 such that the participant can make the best decision for their future.

Next, the current chapter turned to observations about ambiguity and investigated the only event in the future that is not ambiguous. In fact, it is certain that it will happen

sometime in each person's future: the end of life. Although many find the subject

difficult to deal with, Stoic philosophers "*had the insight that the prospect of death can*

actually make our lives much happier."

Citing Schelling's idea to "*deliberately cultivate latent disagreeable thoughts*" when

dealing with multiple choices, and Seneca's similar point, we learned that there may be

positive value to negative visualizations.

In the next chapter, we note that negative visualizations could help overcome the

adaptation process and cognitive biases introduced by various dimensions of our

cultural background and socio-economic group, including time orientation.

As Toffler pointed out decades ago, "*When we combine the effects of decisional stress*

with sensory and cognitive overload, we produce several common forms of individual

maladaptations." As a result, the quality of our future might come into question.

At this stage, the research has determined that there seems to be the opportunity to

develop an intervention that deals with both System 1 (fast and intuitive) and System 2

(slow and deliberative), for example a negative visualization experience tailored to an

individual's background and circumstance, combined with a provocation for rumination

when faced with a major decision.

The next section explores the parameters of such a potential intervention.

2.0   Intervention

"*Change making happens when people fall in love with a different version of the future.*"[49]

To build a future that inspires change based on decisions made today, *LifeBooth* proposes an intervention that allows for a quality check of one's choice. The process takes into consideration various circumstances, personal beliefs, preferences, time perspectives and cultural backgrounds that apply when a person makes a decision today that will affect the future.

In Kahneman's terms, the intervention is meant to activate System 2, in order to program System 1 such that it recognizes potential biases that might impede the quality of the decision. The goal could be attainable, because, as the author states, System 1 *"can be programmed by System 2 to mobilize attention when a particular pattern is detected[50].... when an active, coherence-seeking System 1 suggest solutions to an undemanding System 2[51]"*

LifeBooth proposes to activate System 2 through a negative visualization experiment combining ethnographic elements that could initially be seen as being in isolation from

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[49] The quote is attributed to Seth Godin but it is unclear which media is coming from
[50] Kahneman, D. (2011). *Thinking, Fast and Slow.* Toronto: Doubleday Canada, a division of Random House of Canada Limited. page 105
[51] Kahneman, D. (2011). *Thinking, Fast and Slow.* Toronto: Doubleday Canada, a division of Random House of Canada Limited. page 104

one another, but which, together, could trigger the necessary reflection leading to the participant making a different, potentially better, decision for an improved future.

Study participants would imagine their own death, which (depending on their philosophical or spiritual perspective) could mean the end/no future at all, thus creating a negative visualization. Even those believing that humans will become immortal in a few decades, are still faced today with the realities of our limitations and caught up between the two conflicting potential futures. They might even experience a more intense negative visualization. The experience, a personal time machine, would create a situation that might have the potential to program System 1 through an uncomfortable reflection on what the future could hold… or not. Through the process, participants' System 1 thinking is stirred to discover some of the barriers, or biases, it built into its decision-making process through a System 2 experience and reflection.

Observations and analysis of this research project are meant to generate input for transforming the checklist discussed above into a provocation for rumination that supports the quality control within the personal decision-making process and becomes a form of a *pre*-mortem that our decision would create.

2.1 How: a positive twist to a negative visualization

One of experts interviewed voiced concern that the experience, due to its negative connotation, might psychologically harm individuals.

As a result, additional options to lighten the experience have been investigated. A brief scan of precedents of light heartedness around the idea of death uncovered four different avenues for considering death with humor and good cheer:

1. Romanian merry cemetery

2. New Orleans jazz funeral

3. Comingled Mayano-Spanish traditions

4. Ghanaian fantasy coffins

All four examples challenge the traditional view of death as necessarily a solemn and gloomy event. They demonstrate how through story-telling, music, arts, and crafts, the darkness surrounding mortality can be lightened.

Learning from these examples, *LifeBooth* tests how the negative visualization technique can add some light-heartedness to increase people's comfort with the experience, and as a result, increase the effectiveness of the method.

2.1.1   Romanian merry cemetery

Image # 5

Author: Amanda

Title: Merry Cemetery: A Different Way To Look At Death, July 9, 2012

Source: www.dangerous-business.com/ 2012/07/merry-cemetery-a-different-way-to-look-at-death/

True, Romania is known as the backdrop of fictional vampire tales. The country, though, is also remarkable for its unique "merry cemetery," full of colourful memorials, each including lively, sometimes humorous, testimonials about the lives of the deceased.

Most testimonials include a painting that recalls a moment in the deceased's life, from a favourite activity or occupation, to how death happened, or even a vice they enjoyed such as drinking or sleeping around. They seem to represent an honest, truthful glimpse into the deceased life, as shown in the images that follow.

Image # 6

Title: Sitting

Source: ibid

Image # 7

Title: Farmer

Source: ibid

Image # 8

Title:
Musician

Source: ibid

Image # 9

Title:
Cooking

Source: ibid

Image # 10

Title:
Cleaning

Source: ibid

Image # 11

Title:
Pharmacist

Source: ibid

Image # 12

Title: Drunks

Source: ibid

Image # 13

Title: Family
Life

Source: ibid

Image # 14

Title:
Cheater

Source: ibid

Image # 15

Title:
Spirituality

Source: ibid

Image # 16

Title:
Imagining
Dying

Source ibid

Image # 17

Title:
Afterlife

Source: ibid

The Romanian Merry Cemetery, a place where the deceased are honoured with honesty and sometimes humour

2.1.2 New Orleans jazz funerals

Image # 18

Author: Derek Bridges

Title: New Orleans Jazz Funerals, October 11, 2013

Source: http://ideas.ted.com/11-fascinating-funeral-traditions-from-around-the-globe/

"A jazz funeral in New Orleans is held for legendary jazz musician Doc Paulin who led many funerals in New Orleans with his trumpet." as per Kate Torgovnick May's article "*Death is not the end: Fascinating funeral traditions from around the globe" published on ted.com.* [52]

New Orleans, the putative birthplace of jazz, long ago extended its musical traditions to include funerals. A brass band joins the bereavement procession accompanying the casket to the final resting place of the deceased. The band performs a dirge on the way there with upbeat flavours of music, from religious, to classical, and jazz. The tradition was begun with musicians' funerals, and today can be encountered at ceremonies for younger (and not only) deceased persons.

2.1.3 Comingled Mayano-Spanish traditions

The cemetery found in Xcaret (*ISH-ca-ret*), a village in Mexico's Yucatan Peninsula, reflects Mayan and Spanish influences by showcasing, in one place, symbols of pre-Christian beliefs related to the origin of life and communication with gods together with Catholic ones. The grave markers also include reminders of the deceased's life

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[52] May, K. T. (2013, October 11). *Death is not the end: Fascinating funeral traditions from around the globe.* Retrieved from TED: http://ideas.ted.com/11-fascinating-funeral-traditions-from-around-the-globe/

preferences. Each plot is a testimony of these comingled traditions, featuring items such as boats, bottles, pipes, horns, shrines, crucifixes, rosaries, sacred trees, water, and conch shells – each created by various local artists or craftsmen.

Image # 19

Source: xcaret.com

Image # 20

Source: ibid

Image # 21

Source: ibid

Image # 22

Source: ibid

Mayan and Spanish pre-Christian traditions can be viewed in this Mexican cemetery

2.1.4   Ghanaian fantasy coffins

"*Fascinating Funeral Traditions from Around the Globe*", published on ted.com also describes a tradition from Ghana, where "*fantasy*" coffins are crafted in shapes that represent the deceased's work or passion such as *"a Mercedes-Benz for a businessman to an oversized fish for a fisherman to a really big Bible for someone who loved going to church."*

Image # 23

Author: Jean-Michel Rousset

Title: Kane Kwei Carpentry workshop, a Ghanaian fantasy coffins manufacturer

Source: http://ideas.ted.com/11-fascinating-funeral-traditions-from-around-the-globe/

Kate Torgovnick May's article *"Death is not the end: Fascinating Funeral Traditions from Around the Globe"*, published on ted.com.[53]

The examples above show how some cultures honour the dead through art, creating a lighter touch to the difficult situation, the sad occasion, of losing someone close.

2.2 What: mock death through foresight design

Informed by such diverse, sometimes even contradictory information, *LifeBooth* brings a positive twist to its negative visualization technique by leveraging the story-telling, music, arts, and crafts elements from the above-mentioned traditions through its proposed activities: writing one's own epitaph, making a colourful and unconventional memorial tombstone, and listening to background music. Each element offers individuals a different mean for personal reflection on their own end.

The proposed intervention takes its participants through this three-step mock death journey:

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[53] May, K. T. (2013, October 11). *Death is not the end: Fascinating funeral traditions from around the globe.* Retrieved from TED: http://ideas.ted.com/11-fascinating-funeral-traditions-from-around-the-globe/

1. Pre-mock death discovery/survey and interview: the audience participates in a survey and an interview that helps them contextualize this experience based on their preferences, background, time perspective, life circumstances, the challenge or decision they are facing, and the options they are considering.

2. Mock death experience: participants are then placed into a metaphoric time machine by imagining their last day through:

   a. Writing a personal short story of how they would like to be remembered, being supplied supporting questions from Dying with Dignity Canada

   b. Designing and making their own memorial plaque and epitaph, and

   c. Sharing first impressions of their mock death experience.

3. Post-mock death reflection/follow-up survey and interview: participants share in a survey and interview what the time machine felt like, has it changed anything, did it mean anything for the challenge or decision they are faced with.

The impact of negatively visualizing one's own death is eased by a serene atmosphere and the opportunity to artfully design and make one's own memorial plaque. Ideally, the time machine experience would happen in nature, far from the distractions of technology and the mundane familiarity of one's school, office or home.

The key assertions at the foundation of this intervention are that:

- The future we are going to experience is based on today's paradigm that our bodies will eventually give out, and we will therefore experience death.

- Regardless of our beliefs about death, most of us seek some level of comfort in dealing with it.

- We accept that the idea of life and death being intertwined is not novel.

- The intervention might help individuals in ways similar to those noted by ancient philosophers (i.e., thinking about death might help live a richer, fuller, more meaningful life), and in similar ways as when it is used in other cultures (e.g., South Korea) to treat various conditions.
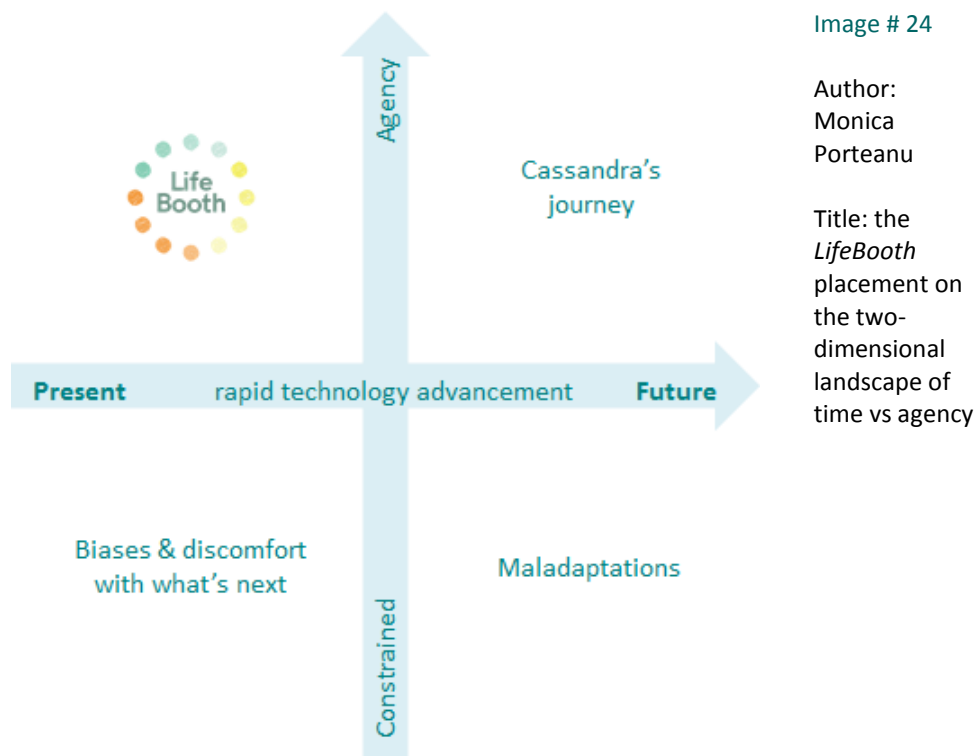
Image # 24

Author: Monica Porteanu

Title: the *LifeBooth* placement on the two-dimensional landscape of time vs agency

Inspiration from Fred Polak's Image of The Future (Optimism / Pessimism in the Future vs the agency to change it) and Toffler's discussion on maladaptations

3.0   Methodology

3.1   Overview

LifeBooth proposes a combination of empirical and foresight design techniques that could lead to different angles for studying decision-making.

Worth noting is the ambiguity of the method, however the combination of the techniques could potentially be very effective when the right elements are identified, and delivered at the right intensity.

The empirical/evidence-based techniques include the science of time orientation surveys developed by Paul Zimbardo and John Boyd that produce individuals' past/present/future perspective, which could uncover potential biases in decision-making.

The design research and foresight tools are meant to create an environment in which people feel safe and free. As a result, they should be able to unleash their imagination and thinking, which in turn would support the decisions in the making.

The design research consists of:

- Ethnographic methods utilized in observations, interviews, and surveys
- Imagining and reflective practice used in the first step of the time machine, when participants envision they live the last day of their life and reflect on what that means for them

- Story-telling employed in the process of describing how they would like to be remembered

- Maker tools represented by all the arts and crafts supplies provided for the memorial plaque

- Epitaph development

- Role-playing of being dead

- Body storming by imagining the final resting place

The foresight tools include:

- Experiential future/time machine through the experiential feel of death

- Scenario building by each person (e.g., telling their life story in the last day of their life), in addition to Cassandra's story

- Artifacts from the future brought to us today through the memorials participants create

Last but not least, *LifeBooth* also capitalizes on ambiguity as a generative tool in the creative process[54] by creating a safe and structured space in which people explore their thinking and feeling when thrown into the ambiguity of a future they might not be comfortable with.

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[54] Sanders, E. B., & Stappers, P. J. (2012). *Convivial Toolbox - Generative research for the front end of design.* Amsterdam: BIS Publishers., page 45

3.2   Context research

The research began with a literature review in the field of decision-making, time

perspective, and philosophy. In addition, the phenomenon of death influencing life was

studied in the following media resources, as present in the public discourse:

- Visualizing how death could reduce the suicide rate in Korea, the country with the

    second highest suicide rate in the world, as described in Kim Ki Ho's *Happy Dying*

    experience, available on YouTube[55]

- *The Game*, a movie that depicts a character who's changed his life after facing

    death[56], and two similar Christmas stories: *The Grinch*, a children's book,[57] and *A*

    Christmas Carol podcast, a reading from Dickens's own annotated version [58]

- Visualizing cremation through the use of virtual reality in China

- Public discussion on physician-assisted death in Canada

3.3   Primary research – what: expert interviews

Several interviews were conducted with experts dealing with grief and support during

various life challenges: psychologist, minister, traditional Chinese medicine practitioner,

and a prison nurse. Each expert was chosen as a sample of their field and the four

interviewees were:

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[55] Ho, K. K. (2015, August 21). Happy Dying - A good day to die. *Fake funerals in South Korea*. Seoul, South Korea: Vice
          International Japan / YouTube.

[56] Fincher, D. (Director). (1997). *The Game* [Motion Picture].

[57] Seuss, D. (1957). *How the Grinch stole Christmas.* United States: Random House.

[58] Dickens, C. (2014). A Christmas Carol: www.nypl.org/blog/2014/12/19/podcast-neil-gaiman-christmas [Recorded by N.
          Gaiman]. New York, NY, U.S.

- Dr. Kim Chiotti, registered psychotherapist and grief counsellor

- Dr. Martin Siu, Traditional Chinese medicine doctor

- Rev. Dr. Deborah Hart, founder of a grief group, and of end-of-life planning workshops

- Max H. Jacobs, experienced nurse caring for young, male inmates

The discussions with the first three experts were guided by five key questions:

- How does our notion and discomfort with grief affect us? Why do you feel this way?

- If we were more comfortable with the idea of death, would we be able to plan better for our future?

- How would a positive relationship with death might benefit society?

- How would confronting our own death benefit us?

- Do you think that accepting and being comfortable with death would help us with decision-making

The discussion guide for the fourth interviewee included the following topics:

- Is the notion of death present on prisoners' minds? Why? How? Is about themselves? Others?

- How does the notion of and discomfort with death affect them? Why do you feel that way?

- If they were more comfortable with the idea of death, would they be able to change their lives for the better?

- Would confronting their own death benefit them? Their decision-making process? Society?

- Might the inmates having a more positive relationship with death benefit society?

3.4   Primary research – what: workshop facilitation

The research then turned to observing six persons, each facing a life challenge or decision, go through a negative visualization exercise. The high diversity in individuals' backgrounds, and the open dialogue the researcher had with each, provided valuable input and a source of validation for the method.

The participants were observed though a time machine, i.e., a workshop facilitated such that they imagined they were living the last day of their lives. The *LifeBooth* time machine consisted of three key parts:

1. Pre-time machine survey and one-on-one interview

2. Time machine itself

3. Post-time machine survey and one-on-one interview

The time machine closely followed Simon's framework:[59]

a. *"identifying the decision or life challenge they were to address (intelligence activity)"*:

   o *LifeBooth* part 1, when participants identify the decision or life challenge they want to focus on. The decision should be one that could have serious

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[59] Simon, H. A. (1977). *The New Science of Management Decisions.* Prentice Hall College Div., chapter 2, page 40

implications later, for example, should one move to pursue a career

opportunity, as opposed to a prosaic one, e.g., should I wear black or brown

shoes today?

b. *"finding possible courses of action (design activity)"*

    o   *LifeBooth* part 1, when participants discuss what choices they might

        consider for the decision they are facing and why

c. *"choosing among courses of action (choice activity)"*

    o   *LifeBooth* part 1, when participants indicate their preferred choice at that

        moment

d. *"evaluating past choices (review activity)"*

    o   *LifeBooth* part 2, when participants reflect on what is important to them and

        apply that to filter the choices they consider

    o   *LifeBooth* part 3, when participants reflect on any changes to their

        perspective, the choices considered, and the preferred one

    o   Decision review using the *LifeBooth* provocation for rumination

3.4.1 Pre-time machine survey and one-on-one interview

Image # 25

Concept: Monica Porteanu

Graphics: Jose Ogpin

Logo: Tina Matei

Source: lifebooth.net

LifeBooth's pre-time machine survey

The online survey collected several types of information about the participants, including their quantitative time orientation score, which have been used as input into the qualitative analysis during this work. In the future, these insights could be expanded through a doctoral thesis, with a larger number of individuals, leading to the potential of uncovering valuable correlations between demographic data, personal preferences, beliefs, backgrounds, the time machine experience, and decision-making.

The data points collected from the survey are:

- Profile information (see details in *Appendix B*)

- Decision/life challenge faced, options considered, option inclined to pursue and why

- Time perspective: Zimbardo time perspective inventory[60] (e.g., past negative, past positive, present fatalism, present hedonism, future, transcendental future), and the transcendental-future time perspective inventory[61]

- Image of the future:[62] the future they are going to experience (e.g., optimistic, pessimistic), extent to which they think they can affect/influence the future (e.g., optimistic, pessimistic)

- Beliefs about death and how they make them feel

The one-on-one interview (discussion guide available in *Appendix C*) started with the information pulled from the survey to get more insights about each person and was focused on:

- Better understanding participant perspectives and beliefs, such that the time machine can be tailored to participating individuals so that it creates an atmosphere that is familiar to them

- Describing what will happen in the time machine so that individuals are not shocked by what is asked of them during the time machine. At the same time, they have the chance to reflect in case they want to prepare in advance

- Watching for any potential vulnerabilities and risks in order to anticipate whether any individual is at risk of being harmed during the time machine

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[60] Zimbardo, P. (2012, October 9). *Zimbardo Time Perspective Inventory.* Retrieved from The Time Paradox Surveys ZTPI: www.thetimeparadox.com/zimbardo-time-perspective-inventory/

[61] Zimbardo, P., & Boyd, J. (2014). *Transcendental-future Time Perspective Inventory.* Retrieved from The Time Perspective Surveys: www.thetimeparadox.com/transcendental-future-time-perspective-inventory/

[62] Polak, F. (1973). *The image of the future.* New York: Elsevier Sdentific Publishing Company.

3.4.2   The time machine

The participants were asked to imagine that they were living the last day of their lives

and in that context, to:

- Write how their would like to be remembered – using a basic template retrieved

  from Dying with Dignity Canada[63] (see details in *Appendix D*), and create their

  tombstone

- Experience their mock death (as explained in the "Primary research – How: POEMS

  section below; see planning details in *Appendix E*)

- Reflect on the experience, e.g., what emotions have they encountered, how did they

  feel

3.4.3   Post-time machine survey and one-on-one interview

Image # 26

Concept: Monica
Porteanu

Graphics:
Jose Ogpin

Logo:
Tina Matei

Source:
lifebooth.net

LifeBooth's post-time machine survey

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[63] *Advance Care Planning Kit.* (2016, 02 21). Retrieved from Dying with Dignity Canada:
        https://d3n8a8pro7vhmx.cloudfront.net/dwdcanada/pages/56/attachments/original/1434387102/20150402_
        ACP_Ontario.pdf?1434387102

The second/follow-up survey consisted of:

- An inquiry in whether any of the two time-related parameters have been influenced

  by the mock death experience and if yes, question why and potential impact on

  decision-making. Participants were asked again about their:

    o Time perspective 2: Zimbardo time perspective inventory[64] (e.g., past negative,

      past positive, present fatalism, present hedonism, future, transcendental

      future), and the transcendental-future time perspective inventory[65]

    o Image of the future:[66] the future they are going to experience (e.g., optimistic,

      pessimistic), extent to which they think they can affect/ influence the future

      (e.g., optimistic, pessimistic)

- Thoughts and feelings about the time machine

- Thoughts about the decision/life challenge faced

- Have options considered/preferred changed?

- Are there any regrets that come to mind - that the participant has experienced or

  would prefer not to experience in the future - and that might influence their

  reflection on their last day and the decision/challenge they are facing? (Note: this

  question was added as suggested by participants during the post-time machine

  feedback period)

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[64] Zimbardo, P. (2012, October 9). *Zimbardo Time Perspective Inventory.* Retrieved from The Time Paradox Surveys ZTPI:
        www.thetimeparadox.com/zimbardo-time-perspective-inventory/
[65] Zimbardo, P., & Boyd, J. (2014). *Transcendental-future Time Perspective Inventory.* Retrieved from The Time Perspective
        Surveys: www.thetimeparadox.com/transcendental-future-time-perspective-inventory/
[66] Polak, F. (1973). *The image of the future.* New York: Elsevier Sdentific Publishing Company.

3.5   Primary research – how: time machine POEMS

In the film industry, creating a plot or narrative is often referred to as diegesis, as described by Stein and Candy in their Foresight Strategy class in the Strategic Foresight and Innovation program at OCAD University. Futurists Stuart Candy and Jake Dunagan have expanded the use of the term to documenting time machines in experiential futures. "*The deliberate use of diegetic prototypes* [is] *to suspend disbelief about change.*"[67]

As *LifeBooth* researched the changing process of decision-making, the time machine asked each participant to create their own diegesis by telling their individual story within the bigger arc of the research question. They became the narrator of their future self's life through to the very end.

To support participants in bringing to life their ultimate future, and to observe how that telling unfolds, the POEMS[68] ethnographic observation tool has been used. POEMS helps design and assess the experience based on five dimensions: people, objects, environments, messages and services. Each of these dimensions is detailed in *Appendix E.*

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[67] Candy, S., & Dunagan, J. (2016, August 2). Retrieved from Designing An Experiential Scenario: The People Who Vanished: http://dx.doi.org/10.1016/j.futures.2016.05.006

[68] Kumar, V., & Whitney, P. (Spring 2003). Faster, Cheaper, Deeper User Research. *Design Management Journal, Design Management Institute*, 50-57.

3.5.1   People

The phase of *LifeBooth*'s research encompassed within this MRP aimed at enlisting six

individuals. The aggregate participant data showed a diverse combination across their

preferences, backgrounds, time orientation, view of the future (see details in *Appendix*

B), including varying views on death: possibly peaceful in its freedom; no specific belief

and not worried about it; a finite event they do not look forward; not knowing what is

going to happen when they die, but believing that people should focus on doing good in

the here and now and finding out what actually happens when they die when they

actually die; agreeing that it is inevitable but not thinking of it that way in their day-to-

day lives; reflecting on the risks that might lead to death every day but feeling at peace

with having made a difference in others in the past year; asking that, if they were to die

tomorrow, their funeral be a celebration rather than an opportunity for mourning.

The only data point that represented only one dimension was the political environment

participants grew up in: all were raised in a peaceful democracy. Future iterations of

LifeBooth should seek people who experienced different political environments.

Other data points that could benefit from a more varied representation were related to

growing up in the mountains/lower lands, island/inland, and the image of the future as

in the current study, only one response represented one of the two dimensions

(pessimistic), all others were related to the second one (optimistic).

The reason the researcher collected such a varied set of data points was to identify

patterns across disparate aspects of, and potentially overlooked links in, participants'

lives, and to help shed light into how they use Systems 1 and 2 thinking to make decisions. For example:

- Is there any data point that could enable an enhanced mental map for decision-making?

- Would a certain mix of these characteristics enable such a mental map?

Each participant was also asked to describe the decision or life challenge they are facing, along with the options they are considering. The decisions ranged from very specific and imminent decisions (e.g., decide child custody, choose job), to longer-term (e.g., finance retirement, reach financial stability, abandon the pursuit of money) and aspirational ones (e.g., develop 5-year life plan). Each of these situations had related challenges:

- The custody battle involved navigating through a stressful and expensive court system, making life unstable

- Job selection related not only to different geographical locations (one requiring moving away from family and friends), but also looked at alignment with personal and professional goals, and between levels of innovation and progressiveness

- Financing retirement involved dealing with close business relationships

- Financial stability focused on how to maintain current job in order to pay off student debt, while envisioning the aspirations beyond that, such as freelancing, bicycle courier services, move out of the city/country, or any financially stable endeavour, even considering going off the grid

- Further continuing or abandoning the pursuit of money was considered in the context of raising a young family, overcoming some health challenges, while uncovering own value system

- The life plan was in the process of discovering what might be meaningful in terms of work and own practice, with thoughtful consideration of personal life and the importance of intimate close relationships

My analysis of the observations of the participants focused on their:

- **Thinking**: how do people frame and evaluate their experience? What do they expect?

- **Feeling**: what emotions do participants have during the journey? What are the highs? What are the lows?

In addition to the six participants, the other two people present in the time machines were the facilitator/researcher and the video producer.

3.5.2   Objects/artifacts

Not only did the participants imagine their future, but also created a part of it: two artifacts that traveled back from the future to be shared with the researcher in current time.

Participants brought to life their own thinking, feelings and emotions through their skills in writing, painting, drawing, fabrication, assembling, and more, all while building two artifacts:

1. A personal story; and

2. Their memorial plaque, including the epitaph. This part of the process encouraged a more artistic expression of their thoughts and feelings and as such, supplies were provided, e.g., various colours of cardboard, Bristol boards, tape, rope, crayons, charcoal, beads, glue, sea shells, wool, playdough, markers, post-it notes, paper, acrylic and oil paints, brushes, sponges, and rulers.

The outcomes are shown in the pictures below.

Image # 27

Author: *LifeBooth* Participant 1

Title: Legend for my life map - the people and places important to me expressed through my passion for geography and maps

Source: *LifeBooth* time machine
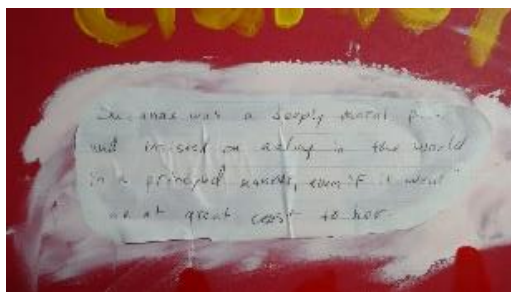
Image # 28

Author: *LifeBooth* Participant 2

Title: Love and personal values - the people I loved most and were most important to me, and the values I lived my life by

Source: ibid

Image # 29

Author: *LifeBooth* Participant 3

Title: Life summary - life lived with dedication and appreciation

Source: ibid
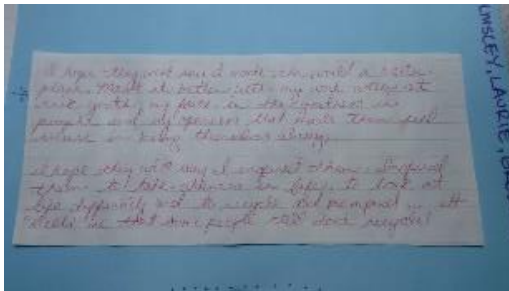
Image # 30

Author: *LifeBooth* Participant 4

Title: Hopes - recognizing people in my life was very important to me

Source: ibid

Image # 31

Author: *LifeBooth* Participant 5

Title: Journey to infinity - who and what made me who I was

Source: ibid

Image # 32

Author: *LifeBooth* Participant 6

Title: Whispers - letter to my family, friends, and my ancestry

Source: ibid

Images represent the memorial plaques designed by the *LifeBooth* participants

3.5.3   Environment/atmosphere

The best suited narrative space for this time machine that fakes a death experience

would be a quiet, outdoor space accessed either in nature or through a virtual reality

environment. In the next iterations of this research, potentially under a doctoral thesis,

LifeBooth aims to add a virtual reality component; this first stage of the project was

focused on understanding the combination of elements, along with the levels of

intensity required to hold the scenario together.

As a result, the time machine was conducted in two separate rooms of the Super

Ordinary Laboratory at OCAD University in Toronto. The first room was designated for

artifact creation, while the second one was used for the reflective state required during

the mock death experience.

Both rooms were darkened, though the artifact studio had six electric candles turned on

(one per participant). The rooms were pleasant, with climate-controlled environments.

An aromatherapy diffuser was placed in a corner of the artifact studio, generating

citrusy scents that are said to enhance focus and concentration.

During the artifact creation phase, music was introduced as an extra-diegetic element

that accompanied the diegetic silence of the reflective and creative process. The music

represented a mix of:

- Darker/sombre tones such as:
    - Baroque music performed by Yo-Yo Ma (e.g., J.S. Bach)

- o   Music for yoga and meditation performed by Jai Uttal and Ben Leinbach

- o   Impressionistic music composed by C. Debussy

- o   Ballads by Leonard Cohen

- Lighter tones via:

- o   Blues with Louis Armstrong

- o   Easy jazz with Henri Allen

The artifact studio was arranged with six desks in a circle. Participants sat inside the circle, facing away from all five others. With this seating arrangement, the researcher aimed to encourage self-reflection, introspection, and reliance on self. I did not want participants distracted by the expected friendliness and positive enforcements when people sitting in a circle face each other. The researcher did not want participants engaged in sharing stories or easing nervousness. To accentuate the individualistic nature of this phase, participants were walked directly to their desks, without introductions to, or conversation with, the others.

The second room had no electric candles to dispel the darkness. It was prepared simply, with six yoga mats serving as the resting places after participants' mock passing, and no music or added scents.

3.5.4   Messages/activities

In the artifact studio, participants were first asked to write their personal story of how they would like to be remembered. As they reflected on their lives and how they would like to be remembered, participants were provided, for consideration, questions

prompting reflection on one's personal values, retrieved from the *"Advanced Care Planning Kit for Ontario"*[69]*,* provided by Dying with Dignity Canada (see *Appendix D*). As a result of this activity, **each participant developed their own message to leave behind after their passing**.

Next, the participants were asked to design and make their own memorial plaque, including a representation of their carefully developed end-of-life stories. Each participant was very pensive, playful, and particular about the materials they chose to work with. For example, one of the participants felt that a golden memorial plaque is too much to represent them, so they chose a silver one. Some chose a traditional way, while others designed something unique to them. Through this making activity, the **participants created another message on what is important to them: relationships, values, milestones or places in their lives, filtered through their personal backgrounds and preferences.**

Once their plaques were completed, participants were told that death was around the corner and they would now move to their resting places. During this transition, they were asked if they wanted to share any part of their personal story. Next, as they laid down as if they had died, they were guided to reflect on their lives, now that they were dead, and what meanings arose.

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[69] *Advance Care Planning Kit.* (2016, 02 21). Retrieved from Dying with Dignity Canada:
        https://d3n8a8pro7vhmx.cloudfront.net/dwdcanada/pages/56/attachments/original/1434387102/20150402_
        ACP_Ontario.pdf?1434387102

During this phase, the room was in complete silence and dark. After about 15 quiet minutes, the participants were told that they were returning to this world. As they were slowly coming back, they were encouraged to reflect on the life in front of them and the things that they might want to change.

As they recollected their thoughts, the participants were invited to sit in a circle, now facing one another. They were encouraged to share their experience and feedback in terms of:

- What they thought of and felt while writing their epitaph?

    o   Did they have any particular thoughts about the challenges/decisions they are facing and have they reflected on that at all?

- Same questions for the memorial plaque design and make phase.

The first round of sharing was quite short. In the next round, participants began to open up and tell the stories of their memorial plaques and epitaphs. Some also offered a few insights into the life challenge they are facing. Finally, they were asked to introduce themselves and invited to share some food and final impressions.

3.5.5   Services

The researcher/facilitator steered participants through the mock final day of their lives. In a way, this resembled a ritual service, albeit a short one, so that most of the time was devoted to participants' cycles of thinking, doing and feeling.

The time machine started with the researcher briefly introducing the topic by sharing

the various levels of how people think about death and examples of similar, mock-death

experiences and their benefits (as described earlier in this MRP).

Afterwards, the researcher/facilitator gave participants creative opportunities to

become immersed in their reflective and imagination processes, guiding them to

generate artifacts about their future, and move forward with the decisions they are

facing today.

3.6   So what?

LifeBooth provides a safe space to empathize with our future self, when we will be faced

with our last life moments. Its structure is meant to support participants in defining,

ideating, prototyping and testing out how life between now and that future might

unfold.

LifeBooth amplifies how the quality of a person's decision-making process draws from

both the thinking of System 2 and the feeling of System 1, their opposing speeds of

action, and even the in-between state that is present when people jump into

conclusions.

Through the doing, thinking, and feeling that participants are encouraged to explore,

LifeBooth aims to create an arc that engages and facilitates individual participation. It

sets up a tension to stimulate System 2 to deliberate more quickly and come closer to

System 1's snap decision-making. *LifeBooth* also aims to program System 2 thinking to

become aware of biases that otherwise could betray a person into making poor decisions.

Reflecting on what and who we are today, imagining that it might end, thinking about death's meaning and implications, and what it could mean tomorrow: *LifeBooth* is based on the premise that engaging in these mental activities will trigger the connection between System 1 and System 2 thinking, closing sound decision-making. As an intervention, *LifeBooth* attempts to help participants make sound and coherent decisions, and to feel good about making them, especially when faced with challenging or life altering situations, testing the theory that this combination of creative and reflective experiences with a safe, comforting setting, will impact their personal decision-making such that they improve the quality of their own lives.

On a cultural level, the negative visualization technique runs counter to the positive psychology practiced in North America. However, the art and design component should soften the experience for those unfamiliar with approaches that rely on negative visualization.

3.7   Reflection on the *LifeBooth* method

3.7.1   The time machine for negative visualization: how it felt

As a research method, each step ran smoothly. All the participants were fully engaged, and none were, or felt, harmed in the process.

Although most of the steps of the time machine were explained to the participants, three elements were purposely not shared with them in advance:

1. Who the other participants were

2. The fact that in the beginning, the participants would be guided to sit facing away from all the others who were present. This unusual setup came as a surprise to some, though no one objected. (Dying being an individual experience, this arrangement guarded against premature sharing.)

3. That they would each be asked to share their personal story before experiencing the mock death. (Most participants did not, at that point, feel open to reading excerpts from their writing.)

The time machine sought out a balance between negative and positive spins to the negative visualization. For example, the time machine started with an emphasis on negative, with participants having their backs at each other (as opposed to facing a circle of trust), and somber music. As the experience unfold, the tone slightly shifted to more playful activities that engaged the visual and tactile senses, in forms of generative design.

Several opportunities for improvement were observed by either the facilitator or the participants, such as:

1. A sharp starting time is critical to the flow of the time machine
   ➔ With no exceptions, participants who are late should not be allowed to join after the start time.

2. Participants reached out to their phones for several reasons, such as:

   a. To search for inspiration (e.g., extract quotes) when writing their story or
      epitaph. While this might be okay for the exercise, considering that it is
      meant to imitate the last day of their lives, the scenario might consider that
      they don't even have access to a smart phone or care about it.

   b. They finished before others and had time to check their work or other
      emails or social media, thus pulling them out of the time machine.

   ➔ The time machine should include a "no electronic devices" policy.

3. When transitioning from designing the memorial plaque to experiencing their mock
   death, the facilitator had trouble telling participants that they will be (pretend)
   dying soon. This discomfort distracted the facilitator, who had difficulty paying
   enough attention to participants who already finished. One participant shared this
   wish: "*I would like to see more time being spent to put me in a state where I feel it is
   my last day.*"

   ➔ Either the facilitator must practice this step until comfortable, or hire an
      actor or experienced minister to perform the ritual.

   ➔ Increase the allotted transition time and provide a story to support that.

4. The transition to the mock final resting place seemed rushed. Some participants
   were very eager to lay down. When asked to share their personal story, only one
   person offered to read it. However, one of the participants who did not read their
   story, reflected, "*Sharing of the stories would have helped.*"

   ➔ The post-time machine survey could ask whether they read their story, and
      why, in addition to how listening to others' story could be helpful.

5. While laying down, and asked to take off their shoes, some were quite particular about how to arrange their shoes.

   → The post-time machine interview could probe to see what, if anything, this step meant for the participants.

6. Lying down was short. Some fell asleep, some were not able to relax. Some had a hard time imagining they were dead – especially those who broke into present time by taking a "bio break" or keeping their phones close by. "*It was hard not falling asleep,*" commented one participant. "*Followed the flow but hard not to think of mundane stuff.*"

   → The transition to the mock final resting place must be more specifically choreographed. Probably, tailoring it to individual preferences might speak more to the participants.

7. Based on the short time for setting up the time machine, the coordination with participants' calendars, and the weather unpredictability of that time of the year, the space for the time machine was chosen to be indoors. However, an outdoor setup might have a greater impact, making the experience even more meaningful a taste of the event, as most final resting places are outside, in nature. Alternatively, visual effects of a natural environment, projected indoors, might also enhance the experience.

Image # 33

Source: photo of the Heidi village, Switzerland

Image of nature as an example of a location where the time machine might be more effective

8. Lastly, the opening of the *LifeBooth* experience could set a more inspirational tone through a story telling example such as Cassandra's scenario developed into a short cartoon.

3.7.2   Impact on decision-making

As we may recall, this research asks, **how might we ascertain if a greater degree of comfort with death facilitates decision-making,** by imagining living the last day of our lives while designing and making the artifacts that we want to be remembered by, and then examining how thinking about our decision has (or not) changed in any way, and why.

As a result, the participants were selected based on the occasion they found for making a decision, which is the first phase, or the "*intelligence activity*" described in Simon's decision-making model[70].

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[70] Simon, H. A. (1977). *The New Science of Management Decisions.* Prentice Hall College Div., chapter 2, page 40

Participants' decisions were related to child custody, selecting a job, financing retirement, reaching financial stability, abandoning the pursuit of money, and building a 5-year life plan. Each of these decisions had a set of options attached to them:

- The custody battler considered whether to give away custody and access

- The job selector had to consider two geographies

- The retirement financer considered either selling the business or being bought out by the other partners

- The finance stabilizer was looking for a balance between paying off the debt now and envisioning a freer life later

- The money pursuer had to decide between either making more or abandoning it altogether

- The life planner was on a discovery journey of personal and professional values

LifeBooth is focused on the next three phases involved in the decision-making process, "*design, choice, and review activities*", as defined by Simon.[71]

In particular, the "*design*" and "*choice*" activities were brought to life through the negative visualization technique, which, when linked to Kahneman's System 1 and System 2 thinking process, it aims at:

- Slowing down System 1 such that System 2 catches up with the speed of System 1's intuitive thinking, thus…

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[71] Simon, H. A. (1977). *The New Science of Management Decisions.* Prentice Hall College Div., chapter 2, page 40

- Enabling System 2 to detect what matters most to us in the decision we are faced with

- Mobilizing System 1's attention to suggest solutions to System 2

- Giving System 2 the time to make the decision that seems right for the circumstance

All participants were fully immersed in the experience and fully aware of the decision or challenge they selected for this exercise, which ended up being very diverse, and as a result, less prone to comparison of impact on the two cognitive systems.

In future *LifeBooth* episodes, if might be helpful to group together participants with the same type of decision or challenge (e.g., imminent, long-term planning, aspirational) such that the experience is further tailored to that specific group. For example, in the last section of the time machine, participants could participate in a game that activates specific levers that help their situation.

4.0   Findings

4.1   Voices from the field

Building on the idea that there is an indication that if we were more comfortable with death we might be able to plan and live our lives with more ease, the project sought insights from experts specialized in different aspects related to confronting death and its impact on decision-making, such as the sense of invincibility among young delinquents.

Two experts offered insights in areas such grief counselling and life reviews in anticipation of death. The third one provided a bird's eye view of differences between Eastern and Western spirituality.

The fourth interviewee was a nurse dealing with young, male inmates. He was selected for insights on an environment that inherently deals with the result of bad decisions that led to incarceration, but with inmates young enough that might have hope for improving their decisions and their future lives.

4.1.1   Through a psychologist's eyes

Dr. Kim Chiotti is a registered psychotherapist who provides counselling in bereavement and grief. She has spent over two decades counseling individuals in her private practice and as a Program Leader at Wellspring, a cancer-support organization. Through her work, Dr. Chiotti has gained insights in the complications of dealing with death. After her clients lose someone suddenly, or have a loved one with a poor prognosis, some struggle with the reality of their situation, while others, though in deep emotional pain,

are willing to work toward self-understanding and healthier living. Her professional toolkit includes psychotherapeutic approaches such as cognitive-behavioral, rational-emotive, relational, and grief therapy models to help her clients cope with an unwanted reality.

In our discussion, Dr. Chiotti related the line of this project's inquiry to existentialism, a philosophy that dates back to the late 19th, early 20th centuries and was represented in the works of thinkers such as Jean-Paul Sartre, Friedrich Nietzsche, Fyodor Dostoyevsky, and Martin Heidegger.

Dr. Chiotti suggested further inquiries into Irving Yalom's work about overcoming the fear of death, *Staring at the Sun.* The book builds on the existentialism philosophy, noting that "*we can live intensely only if we stare death in the face every moment of our lives."* The author observes that the anxiety of thinking about death "*can prompt an awakening to life and help us realize our connections to others and our influence on those around us. Through such experiences we can transcend our sense of finiteness and transiency and live in the here and now."*

Dr. Chiotti also pointed out that there might be organizations that could provide further resources and support (e.g., funeral homes) in understanding the impacts of a greater comfort with death on decision-making.

Dr. Chiotti provides a safe and compassionate environment for her clients; she asserted the absolute necessity for this study to ensure the wellbeing of its participants and

provide strong mechanisms to avoid any potential harm, a fact that was also thoroughly discussed and planned with OCAD University's Research Ethics Board.

Dr. Chiotti observed that often people tend to seek out guidance or advice when we are not feeling competent about unknown things. In these situations we seek answers from *outside*. However, when confronted with death, our answer seeking shifts to an *inward* focus. She observed that individuals usually seek her counsel when their world has changed profoundly after they faced the death of someone close.

As previously discussed, there seems to be an opportunity to obviate or reduce the fearfulness of such situations, a way for people to reduce the anxiety and other pre-emptive emotions regarding the truth that they and their loved ones are all going to die. Perhaps engagement with existentialism and philosophies such as those of the Stoics and Irving Yalom can help people to feel freer, authentic and true to themselves; perhaps it can break down some delusions and hypersensitivity to self, engendering revisions to our mental maps in order for us to become more comfortable with death and other ambiguous future events, enabling our rational self to recognize any such mental blocks early enough to contribute to decision-making clearer of biases.

4.1.2   A healer's perspective

In speaking with Dr. Martin Siu, who practices Traditional Chinese medicine, the key take away that emerged was that desires and emotions can cloud the decision-making process.

In Buddhist beliefs, every being comes from the same energy. Siu explained that the birth -> ageing -> sickness -> death cycle, and its attachment to illusions of the mind such as emotions and desires, lead to continual reincarnation until such time as that attachment to illusions is broken. Then, the person is released from having a sense of self, thus becoming free of suffering and other human emotions or feelings, and reaches nirvana. With each iteration of the attachment cycle, each being flows into a new one; as a result, understanding life also means accepting death.

Believing that this is not one's only life seems to make accepting death lighter, and therefore, making reflections about death and one's inner exploration easier to practice. As a result, believers could be more open to making decisions and taking actions now for a better tomorrow.

As a follow up to this discussion, Dr. Siu recommended further researching *Tao Te Ching*[72] by Lao Tzu*,* an ancient work that teaches its disciples to free themselves from attachments to emotions and desires that cloud the mind and cause suffering.

Some of emotions discussed in *Tao Te Ching* relate to ambition, attachment, control, expectations, failure, fear, fear of death, greed, hope, immodesty, impatience, Inflexibility, loss, need for action, and prejudice. *Tao Te Ching* links the intensity of many of these emotions to ego, discussing the implications of these emotions on the choices people have (or not) to act on them, and as a result, impacting the extent of their suffering.

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[72] Tzu, L. (n.d.). *Tao Te Ching (The Book of the Way).*

Through metaphors, *Tao Te Ching* filters decision-making through Taoist philosophical

lenses, drawing on the principle of cause and effect of our own actions.

4.1.3   A reverend's touch

Continuing the discovery journey regarding grief, the researcher interviewed Rev. Dr.

Deborah Hart, Minister at the Deer Park United Church, about her body-mind-spirit

approach to supporting the needs of her congregation.

Through her work as a reverend, Dr. Hart understands that when dealing with the loss of

a loved one, individuals and their families are looking for a place to talk about their

grieving process. Often they seek someone to provide **structure** around the loss; to help

them find meaning. As the question emerged in her church of how best to address grief,

Dr. Hart became the founder of a faith-based grief group that encourages participants to

explore the impact of grief on their emotions, behaviours, bodies, minds and spirits, and

invites them to find meaningful ways to refocus their lives. The materials developed for

this group were based on Dr. Bill Webster's "Center for the Grief Journey", which offers

a grief program through funeral homes.[73]

Dr. Hart points out that the grief group helps people who had a loss to discover that

they have a choice of where to invest their energy as they grieve. She coaches them to

think that, *"They cannot change that someone died, but they can change their life."*

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[73] Webster, D. B. (2003 - 2015). Retrieved from The Centre for the Grief Journey UK: http://griefjourney.co.uk

In our discussion, Dr. Hart identified that in grieving, there are two types of losses: the primary one represented by the person lost, and the secondary loss covering all the things that fall away as a result. The secondary one depends on what role the person played, e.g., communicator, peacemaker in the family, caretaker, confidante. She points out that more of what we call grief is about reacting to the secondary losses than most of us understand or acknowledge.

Dr. Hart notes that some people never face their own deaths and never talk to their families about it; as a result, death becomes an unplanned-for crisis for loved ones. Those at the other end of the spectrum resolve unfinished business so that loved ones face as few burdens as possible. This may include reconciling broken relationships, making sure children and loved ones are well, and arranging their finances and paperwork so that the executor can easily access them. Often, the response to inevitable death mirrors how the person has lived life.

Bases on this observation, Dr. Hart wanted to help individuals be prepared when death arrives; she is now offering *end of life planning* workshops*.* The workshops are held in an open atmosphere. She encourages participants to "*plan for the dash*," reminding them how our life is represented on our tombstones, with a simply dash between the birth and death dates, as described by Linda Ellis's poem, *The Dash.*

The end of life planning workshops are usually attended by people over 47. The few younger participants tend to feel lonely, having no one in their age group with whom to talk about this.

Lastly, Dr. Hart offered insights about the *life reviews* she has helped people do when close to death. In those moments, people want to know that their life had meaning and value, often questions such as: Why was I here? Did I make a difference? She noted that one's beliefs of what happens after death make a difference in these life reviews, from Hindus or Buddhists believing in reincarnation, to Christians believing in life in the next world, or coming back to this one, and Jewish believing, and often not believing, in an after-life or reincarnation.

Dr. Hart suggested that by refocusing the approach from mortality to life, people may be more open up to reflecting on their future, its end, and what they could change today for a better tomorrow. She bases this thought on Thomas Ryan's work, *Remember to Live.*[74]

4.1.4   In others' shoes

Although dying is not the topic of this paper per se, the subject has come up in discussions with the experts, who were selected with intent to discuss this topic. For example, Dr. Hart observed that when people are conducting their life review, *"It gets personal. People want to know that their life had meaning and value, and most importantly, it is not death they fear, but moving through the suffering and dying process."* This, according to Dr. Hart is what creates uneasiness.

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[74] Ryan, T. (2012, January). *Remember to Live! Embracing the Second Part of Life*. Retrieved from Spirituality and Practice Book Reviews: www.spiritualityandpractice.com/book-reviews/view/22551/remember-to-live

Similar remarks came up in a conversation on the future of physician-assisted death in Canada,[75] noting that <u>the question is not about living or dying, but rather about suffering, honouring humanity, life, and living, and the healing and dying processes</u>.

As a learning from these experiences, the intervention proposed by this paper (as described in in the Methodology section above), could bring reflective elements on whether life has had meaning and value into a person's life earlier than without the intervention.

4.1.5   Lessons from the trenches

The intervention crafted in response to the research question, "**How might we ascertain if a greater degree of comfort with death facilitates decision-making**" could build upon successful elements of what has already been done, such as life planning in spiritual communities, examples from other parts of the world, heroic narratives of those who conquered difficult situations, or relevant images present in the popular culture.

For example, we learned in section *4.1.3 A reverend's touch* that some churches or funeral homes have seen the need to offer end of life planning, encouraging people to rephrase the experience from facing mortality to *Remember to Live!*[76], or encourage people to complete a life review. Each of these exercises surfaces awareness of mortality, together with the realities preceding it (e.g., aging, illness, loss), which, in

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[75] Various. (2016, April 27). A Conversation on The Future of Physician-Assisted Death in Canada. (O. I. Design, Interviewer)

[76] Ryan, T. (2012, January). *Remember to Live! Embracing the Second Part of Life*. Retrieved from Spirituality and Practice Book Reviews: www.spiritualityandpractice.com/book-reviews/view/22551/remember-to-live

most cases represent the cause of the deepest fears related to death. Engaging with the idea of these future realities switches the tone of the conversation from fear to a desire to learn more and, as a result, make better- informed decisions for the future.

Dr. Hart notes that a mental turn towards mortality is a very personal experience that usually starts in the second part of our lives, usually after people turn 47. Because fewer young people engage in it, those who are faced with death early in life often feel lonely in their experience. Mortality is not a subject likely addressed in discussions among their peers.

The second learning could continue through the eyes of Dr. Kim Ki Ho, Head of Happy Dying, a business in South Korea that invites individuals to reflect on their life while placing them inside a coffin to experience a fake death.

Dr. Kim Ki Ho is featured in the "*Fake Funeral in South Korea*"[77] documentary presented by VICE International Japan, a service that is very relevant as a way to deal with increased pressures to succeed in a rapidly growing economic environment in South Korea. Unfortunately, such pressures have significantly raised depression cases, with the nation having the highest suicide rate in OECD, and being the second unhappiest developed country in the world. The Fake Funeral experience is a way of reflecting on what is important to them, focusing on how to make that happen, and deflecting negative thoughts.

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[77] Ho, K. K. (2015, August 21). Happy Dying - A good day to die. *Fake funerals in South Korea*. Seoul, South Korea: Vice International Japan / YouTube.

Dr. Ho has delivered the Fake Funeral experience over ten years to approximately 50,000 people. Dr. Ho explains that they often comment, *"Oh, this is dying? I am very comfortable."* Dr. Ho further remarks that "*Their anxiety is gone! They let everything go."*

Going through their own fake funeral, the reporter describes that it is not the *Fake Funeral* per se that mattered, but the **structured** atmosphere to contemplate how a participant's last day might feel like. The reporter explains:

> *"I wouldn't say that I've been born again but once I did it, I realized something. The dying, the funeral, and the reincarnation aren't actually all that important. People these days are so busy and there's always something going on, so we don't have time to look inside ourselves like people did in the past. That causes some of us to feel lost or become depressed. But telling you that this is your final day and making you focus on nothing but yourself, then making you enter a private space, the casket, this session creates an ideal opportunity for contemplation."*

She concludes that the key take away for her was to be given the chance to discover inner answers:

> *"By being told that this is the last day of your life, you feel like you are finally given the opportunity to look into yourself. You realize that the answers you were seeking exist inside of you. That's the real purpose of this near-death experience."*

We can learn from a similar endeavour available in Shanghai[78], this one focused on one's cremation, as experienced through virtual reality. Reporter Jolene Creighton describes the experience on futurism.com and cites the views of Lu Siwei, a participant, who eludes to similar feelings coming out of the *Fake Funeral* experience: rediscover what is important and focus on how to make that happen. The participant explains:

> "*This is a really interesting feeling. It at least gives you the chance to calm down, and brings you back to earth about some of life's problems…. When you walk through that door, you will experience some changes in your mentality, and it will be different from what it was before you entered…. I think this is really great, and very worthwhile.*"

Next, we can learn from *the Stockdale paradox* explained by Jim Collins in *Good to Great*[79] as being a stepping stone in the journey to turning a good life into a great one. Stockdale, a U.S. general who became a prisoner in the Vietnam war, survived by managing to imagine the light at the end of the tunnel, while being practical in dealing with day-to-day "*brutal*"[80] realities. The author explains: [81]

> "*Every one of our great leaders* [examined in Good to Great] *were incredibly comfortable with picking up the rock and looking at the ugly stuff underneath and say what those facts are, because if we don't confront the brutal facts, <u>they*</u>

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[78] Creighton, J. (2016, April 3). *Ever wanted to experience death? Now you can - in virtual reality*. Retrieved from Futurism.com AR/VR: http://futurism.com/ever-wanted-experience-death-now-can-virtual-reality/
[79] Collins, J. C. (2001). *Good to Great.* U.S.: Random House, page 16
[80] Collins, J. (n.d.). *Good to Great: Confront the Brutal Facts (Stockdale paradox)*. Retrieved from Jim Collins media: www.jimcollins.com/media_topics/media.html
[81] Collins, J. C. (2001). *Good to Great.* U.S.: Random House, page 13

will confront us. The greatest mistake in public leadership, as Winston Churchill put it, is to hold out false hopes that will soon be dashed by events."

Collins considers "*confronting the brutal facts*" a stepping stone in the journey to turning a good life into a great one. Stockdale survived by practicing Stoic principles. The *Stockdale paradox* is also explained through the Stoic philosophy principles by Irving in his *Guide to the Good Life*[82]:

> "*A navy pilot, Stockdale was shot down over Vietnam in 1965 and held prisoner of war until 1973. During that time, he experienced poor health, primitive living conditions, and the brutality of jailers. And yet he not only survived but emerged an unbroken man. How did he manage it? In large part, he says, by practicing Stoicism*."

Switching from the above example of great leadership in the public arena to popular culture, movies and books have presented exemplars of how life might change for characters faced with brutal facts. For example, "*The Game*"[83], described earlier, depicts a character who has changed his life after facing death[84], a situation similar with two other stories: *The Grinch*, a children's book,[85] and *A Christmas Carol* podcast, a reading from Dickens's own annotated version.[86]

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[82] Irvine, W. (2008). *A guide to the good life: the ancient art of stoic joy.* Oxford University Press. Introduction, page 73
[83] Fincher, D. (Director). (1997). *The Game* [Motion Picture]
[84] Fincher, D. (Director). (1997). *The Game* [Motion Picture].
[85] Seuss, D. (1957). *How the Grinch stole Christmas.* United States: Random House.
[86] Dickens, C. (2014). A Christmas Carol: www.nypl.org/blog/2014/12/19/podcast-neil-gaiman-christmas [Recorded by N. Gaiman]. New York, NY, U.S.

Lastly, in *Choice and Consequence*, Schelling summarizes another observation of doing something today to influence the possibility for a better tomorrow when presented with brutal facts:

> "*There is evidence that people who believe themselves to be exceptionally at risk – people who after a severe cardiac episode are flatly told by their physician that continued smoking will likely kill them – not only have a higher success rate in quitting smoking than people who are merely advised to cut down or quit, but also suffer less in quitting than the people who succeed on the more ambivalent advice (I believe the difference is between the mental activity of the person who believes himself <u>to have quit</u> and that of the person who thinks of himself as <u>trying to quit.</u> For the latter there is suspense and the need to decide over and over on the occasion that invite one to smoke.*)*"*[87]

As described in earlier sections, Schelling points out that brutal facts can be presented in various way, but the essence is to make individuals uncomfortable of what might lie ahead should they not take action today to correct that.

4.1.6   Who could the audience be?

As we recall, this research, *LifeBooth*, is asking: **How might we ascertain if a greater degree of comfort with death facilitates decision-making?**

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[87] Schelling, T. C. (1984). *Choice and Consequence - Perspectives of an errant economist.* Cambridge, Massachusetts and London, England: Harvard University Press. Chapter 15, The mind as a Consuming Organ, page 340

A subsequent question is, for whom should we design an answer?

From the examples in the previous section, it seems reasonable to understand that immediate candidates are people who have experienced life challenges such as mental or other health issues, leaders facing big decisions, and people in the second half of their lives who have begun planning the remainder of their days. We also learned that someone who is simply bored could turn their life around when faced with death.

An extreme example has been offered by Max H. Jacobs, an experienced nurse caring for young, male inmates, mostly African American, in a US state medium-security prison, where the main concerns are physical altercations that often result in lasting disabilities or facial scars. Mr. Jacobs notes the youthful sense of invincibility and how being in prison amplifies it:

> *"If they feel vulnerable, they can't show it. Unless they get severely beaten, their outward demeanor is acting as if is not a big deal. Inmates must maintain a certain invincible demeanor if they are to survive. I see them cut and bruised, and when asked 'were are you hurt' as part of the exam, it is not uncommon to get the response, 'just a little cut, give me a Band Aid and I'll be good to go'."*

While they project invincibility, in most cases, when the inmates think about their future, they see dim prospects. Even if they aspire to straighten out, with limited coping tools, their prospects do not appear bright to them.

Extrapolating from here, feeling invincible, especially in a society that discusses the potential for humans to become immortal in a few decades, while neglecting potential

biases and jumping to quick decisions, could alter the quality of the future – for any

human being, regardless of age, background, or circumstance.

4.2   Cautiousness

The grief counsellor expressed concerns with participants' well-being should they be

exposed to negative visualizations and experiences. By contrast, the reverend, the

Chinese doctor, and other examples described in this research (i.e., *Remember to Live!*,

Fake Funerals, *Stockdale paradox*, *The Game,* works described earlier from the fields of

philosophy, economy, and futurism*)* showed, that this could be a valid instrument for

addressing health, societal and other issues with positive outcomes.

Before involving any participant, this research proposal was discussed with staff at

OCAD University's Health and Wellness Centre and two psychologists experienced in

grief counselling. They raised concerns about potential implications on the mental well-

being of the participants, and some even advised to not continue the study.

However, the literature and media research uncovered that the practice of thinking

about death at various life intervals, or stages, might be beneficial by helping people to

recalibrate their lives to what they truly value, aims that easily get lost in the busyness

of the present. We learned that there are pockets of interest around the world in death

visualization practices. Participants, according to these reports, find the practice helpful

in feeling revitalized (e.g., fake funerals in South Korea) or for more deliberative life

planning (e.g., life reviews conducted in churches or funeral homes in US or Canada). We

found no reports that the participants of these practices noted any mental or physical

discomfort or damage. Some participants even returned to the death visualization

practice from time to time, for further benefit.

In this research, none of the participants was harmed. Feedback that participants

submitted via their second online survey and interview included descriptions of the

experience that ranged between positive and neutral; none were negative. Comments

included: "*It was a very moving day, very emotionally demanding and very meditative;*"

"*It was a very interesting experience. Feelings are neutral, neither good nor bad,*" and

"*The day was cathartic*." One participant wrote: "*I think about such topics all the time.*"

Another continued "*thinking about how the experience relates to friends*". Others wrote

that "*the exercise was very peaceful,*" and that they have not *"thought much about it*

after the time machine."

While the North American culture generally promotes positive thinking, and might view

a death visualization askance, practicing negative visualization more often might support

North Americans who face some overwhelming issues present today, such as ageing in

an era of drawn-out, expensive, and painful medical treatment.

4.3   What happened in *LifeBooth*

4.3.1   Voyaging through time...
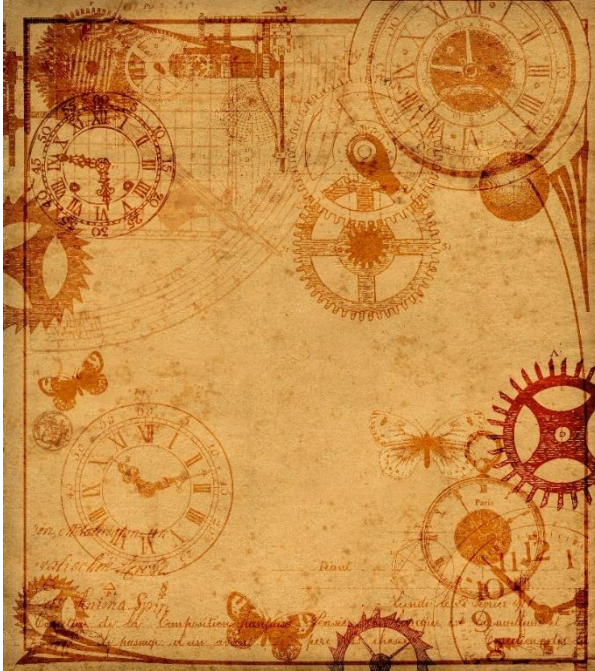
Image # 34

Author: lynea

Title: La machine à remonter le temps

Source: Adobe Stock

Numerous artists, scientists, and many more have competed in representing a slice of travelling in time.

While all participants were fully immersed in the experience, they each experienced imagining the last day of their lives differently than the others did.

4.3.1.1   *... and what future we think we are going to experience*

As you may recall, the time machine started by asking the participants to imagine that they were living the last day of their lives. When travelling mentally to that day, one participant noted that writing the story was very difficult "*because when you start writing, you are almost committing to it. So I couldn't figure out the answer for a long time*." When the time came to lie down and reflect on their life as they were dead,

another participant noted that it felt "*too much in my face. I couldn't pretend I was dead. It was very difficult.*" (Both these participants mentioned above thought that they were going to experience an optimistic future.)

One participant, who thought they (plural pronoun used to preserve anonymity) were going to experience a pessimistic future, felt "*relaxed, wanting to be more in a fetal position, and with many photographic images coming to mind.*" Another, similar-minded participant "*went into a bit of napping.*"

When writing about their lives during their last day, all participants discussed what happened up to the present day, not what might happen between now and their actual last day, aligned with Simon's observation that when faced with ambiguity, individuals fill the unknowns with thoughts and feelings from today.

4.3.1.2 … between past and future

A past-oriented participant said, "*The idea that today was the last day actually changed what I wrote. Writing how I wanted to be remembered, as it was my last day – that was an interesting question for me. It is clearer when it is the last day, what it is that I am writing. It was interesting being present to the circumstances.*"

One future-oriented participant wanted a comparison between the value felt on the last day and that which is experienced today: "*It is an interesting exercise to see if what matters to me on the last day is the same that matters to the person I am today.*" Another wanted "*more specificity on the impact you want to have in the world. More*

specific prompts. How you want to be remembered, versus what impact you want to have in the world."

Present-oriented participants did not comment.

Participants' time perspectives were tested before and after the time machine. It is note-worthy that the past- and future-oriented maintained their orientation (even one felt results changed when, in fact, didn't), while all the originally present-oriented participants experienced a change in their time orientation. One of the participants commented that the time machine "*may have impacted the way* [they] *look at the future*," while their time orientation changed from present hedonism to past negative.

Also worth noting is that the past- and future-oriented individuals made a concrete decision, while the present-oriented ones got more clarity around their aspirations.

Being conscientious about one's time perspective and what that means might be an element worthy considering when facing an important decision.

4.3.2   Decision-making

After the time machine, the perspectives the participants had on their decision/ challenge/goal ranged from softer outcomes to a hard decision being made:

- Feeling clearer about the goal, with more confidence and optimism;

- Thinking about the decisions that could shape the future, and becoming more focused on the smaller details that will help propel the participant forward;

- Understanding themselves and the process of breaking down information so that, regardless of the outcome, the participant feels confident that they can come to an internal consensus and learn to live with it;

- Feeling forced to come to terms with their feelings regarding people close to them, and to communicate with those people in a final way, even if it was hypothetical;

- Making a seemingly huge decision.

Although more data would be required to determine the correlation between the time machine and the decisions that were made, after *LifeBooth*, three clear and immediate choices were made:

1. The custody battler opted for shared custody

2. The job selector signed up for the opportunity closer to home

3. The money pursuer elected to continue making money

Most participants expressed that "*I was happy to hear some similar veins of thinking to mine within the group*."

The negative visualization technique seemed to have advanced the thinking centered on the decision or challenge the participants were facing. However the discussion did not bring into question the quality of the thinking and alternatives that could be considered. A way to address this situation could be to conduct a pre-mortem of our decision-making process by using a provocation for rumination, inspired by the checklist developed for business executives by Kahneman, Lovato, and Sibony.

4.3.3   Emerging theme

Throughout the *LifeBooth* experience, the researcher engaged in close conversations with the participants, watching for potential effects and emerging themes. A bird's view into the words being said reveals that the:

- Most spoken word was **Life**

- Next one most said was **Think**

- Third most popular words were **People** and **Time**

Image # 35

Author: Monica Porteanu

Title: LifeBooth discussions represented by wordle.net

Source: Participants input into the *LifeBooth* experience

The researcher has synthesized all discussions with the participants and used wordle.net as a tool for analyzing unstructured data

It turns out that the negative visualization technique shifted participants' focus from death to **life**, **people** and **things** that matter to them, and getting more clarity on their **values**. In fact, one of the participants thought it might be helpful for them "*to place things that matter in a hierarchy, so they can see **what they value** in order*". Another one was keen on surfacing their "*values as if it were their last day*".

Secondly, it seems that the *LifeBooth* method has triggered individuals' System 2 as they talked very often about **thinking** and their **thoughts**. Although the interviews probed the feelings experienced, all participants preferred to talk more about the thinking side, not rushing, somehow **giving System 1 a break while enabling System 2 to delve deeper** inside in search of what matters most. Up to this point, it seems that the first two objectives of *LifeBooth*, as described in section *3.7.2 Impact on decision-making* have advanced (i.e., Slowing down System 1 such that System 2 catches up with the speed of System 1's intuitive thinking, thus… Enabling System 2 to detect what matters most to us in the decision we are faced with).

The third and fourth objectives (i.e., Mobilizing System 1's attention to suggest solutions to System 2, Giving System 2 the time to make the decision that seems right for the circumstance) could be achieved through the provocation for rumination, inspired by the checklist developed for business executives by Kahneman, Lovato, and Sibony.
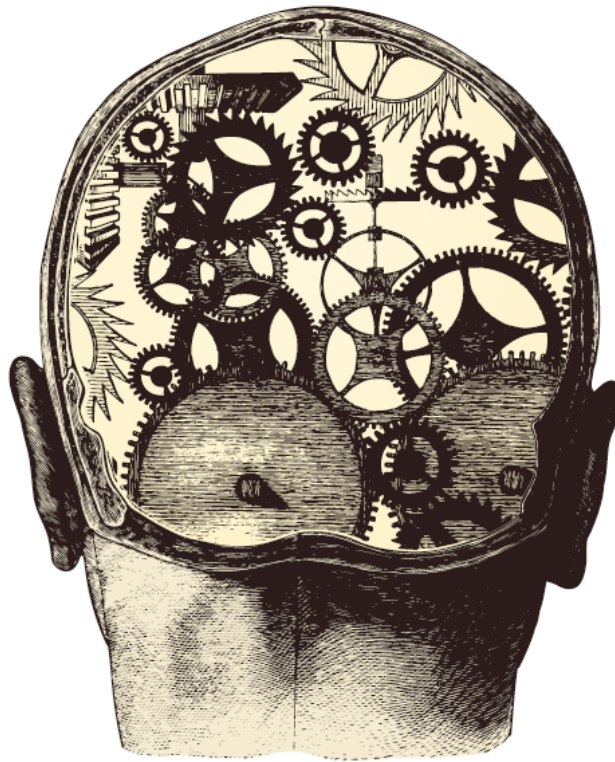
Image # 36

Author: lynea

Title: The mechanical brain

Source: Adobe Stock

LifeBooth and thinking, hopefully not mechanically

The adjustments that could enhance the *LifeBooth* method and prepare it for the next iteration are next described, together with the recommendation of how the provocation for rumination might look like.

4.4   The mixing desk of POEMS

For such a deeply emotional and personal experience, the **structured**, carefully choreographed atmosphere was of key importance, striking just the right balance—in terms of which parameters to include and the level of intensity—between the negative visualization and the positive twist. Parameters that seemed to effect the success of experiences such as Life Booth include:

- Location: outdoor (see the South Korean fake funeral) or indoor (this time machine)

- Time of the day

- Lighting: dark, dimmed candles

- Visual effects such projecting visual images on the walls that reinforce the desired atmosphere (e.g., a natural setting)

- Music: could be too dark for the pessimists, or too peaceful for the rest

- Prompts for last day contemplation: from open-ended to very specific, with a ranking of **values**

- Encouraging more exploration on what might happen between now and the day of actual death. In this regard, a repeat of the time machine should have specific prompts on this point. It will be interesting to observe any situations of denial, as noted by Toffler on cognitive overload.

- Parallel between present and last day for values and regrets: an understanding of current values could be discussed in the first survey and one-on-one interview, while the time machine could focus on participants imagining the last day of their life. The second survey and one-on-one interview could invite participants to reflect on any differences between today's and imagined future values

- Blocking disruptions (e.g. from electronics or social niceties)

- Length of time

- Transition to the resting place

- Props, such as coffins

- Rituals, such as enforcing modesty, wearing dark or light colours, covering the body, tying parts of the body, or sharing a drink at the end

- Artifacts that could range from producing one's own obituary, will, farewell letter, memorial plaque, epitaph, death certificate, eulogy, or social media announcement

When looking at the end-to-end *LifeBooth* experience and the criticality of decisions / challenges the participants were facing, there might be the opportunity to split the study between those with a major choice ahead of them, and the rest. The "major" group might also be planned over a longer period of time and assessed if such cases are outliers.

Finding the right mix of the POEMS variables based on participants' own preferences, backgrounds, and cultures becomes an art, and will vary with each instance of the time machine. Tailoring the variables to individual preferences would resonate deeper with each participant, helping them connect with the experience, get fully engaged and reflective, and ultimately supporting their goal they wanted to address when signing up for *LifeBooth*.

4.5   Conclusion

This project looked into what elements could we study to understand whether there is a correlation between decision-making and a greater degree of comfort with death. The study was valuable in that it led to:

1. Understanding that the time perspective is a key ingredient in decision-making. The elements of the time perspective considered relate to our perception of the future and the agency to change it, combined with the orientation for past, present, or

future, as well as its positive, hedonic, or negative associations, and connected to our backgrounds and preferences.

2. Testing a structured negative visualization technique as a filter for decision-making, and learning which parameters matter for such an experience. The technique brought together design and foresight methods.

3. Building an initial provocation for rumination for the quality control of personal decision-making and bias reduction, using the time perspective, its relation to our backgrounds, and image of the future, filtered through our comfort with mortality via the negative visualization technique

Given what this limited study has found, there may be some degree of direct correlation between decision quality and having a guided negative visualization experience such as *LifeBooth*. Such a technique seems to support both the emotional and logical sides of sound decision-making. As we are increasingly able to quantify and understand emotions and thoughts related to the future, extending this research to a larger scale could more soundly describe and possibly even quantify the correlations among the elements discussed above. The researcher plans to continue this research during upcoming doctoral studies.

5.0   Recommendations

In today's world, there might be the inclination to say, "*Let's build an app or game for that*." However, launching a death visualization app or game for everyone to use, without careful considerations for each user's specific circumstances, might cause unintended harm. Technology, though, can certainly play a supporting role for a guided process, as has already been attempted in China, with the virtual reality experience centered on cremation, noting that it is done in a group setting, not individually, at each player's choice of location. The South Korean experiment and the Western life review, conducted without high technology and in settings closer to nature, have shown very encouraging results.

Asking the technology/no technology question, a two-step roadmap for continuing the *LifeBooth* experience could be considered.

5.1   Short-term

In the short-term or stage one, continue to deliver time machines with the method described herein, to build up more data that could lead to insights of patterns amongst individuals' profiles: how they think about their decisions, and finding the right mix and intensity of the elements to deliver in the time machine. Selecting participants who face real-life decisions is critical to growing understanding of the time machine's impact.

The method should be amended to include a personal decision provocation for rumination that would have the potential to decrease biases and increase the quality of

the decision. Worth noting is that the provocation should be considered when facing a **major decision** (e.g., should I get married) rather than mundane ones (e.g., should I get a coffee from Starbucks or Tim Hortons).

As a starting point, the list could include elements similar to the ones recommended by Kahneman, Lovato, and Sibony, cross-referenced with the feedback received from the participants in this study and learnings from the time machine.

Such a provocation would pressure both System 1 and System 2 thinking to match up better with each other so that decision-making is a rational process (as guided by System 2) that is informed by System 1's intuition.

The provocation for rumination could include three sections based on:

I.   Time orientation: **Could the decision be anchored in your time orientation and be missing the perspective of the future?** (watch for Kahneman's anchoring bias)

- For example, if you are past-oriented, could the decision be influenced by an analogy with, attachment to, or extrapolation from your past that is not necessarily applicable in the current situation?

II. Image of the future: **could it be that the decision mimics your inclination to think about the future (i.e., optimistic or pessimistic) and the agency you think you have to influence the future (i.e., optimistic or pessimistic)?** Sample prompts:

- What could happen to you between now and then? (watch for Simon's point on filling in missing information with history)

- Could you encounter negative situations in the future? (watch for

    Toffler's point on Denier's strategy)

- How would you prevent what might turn out to be a negative situation?

    (watch for Schelling's point on how beliefs could shift)

- Have you considered the other side of the image of the future and what

    might happen in the situation, i.e., if you have an optimistic view, have

    you thought what might go wrong? Or if you have a pessimistic view,

    have you thought what might work out well?

III.   Comfort with mortality: if today was the last day of your life and you looked back to

the decision you are making (in the real present):

1. **Would you make the same decision?** (watch for other biases described by

    Kahneman, see *Appendix A*)

2. **Would you have any regrets for making it?** (as recommended by one of the

    participants)

3. **Is the decision aligned with your life goals and values?**

4. **Is the decision aligned with how you would like to be remembered?**

5. **Has it harmed the future that you, or someone important to you, is going

    to experience?**

The questions above could be included in the second survey of the method and adjusted

as the research progresses. Ideally, with time, they should be shorter and simpler.

5.2   Long-term

Using all the insights gathered by running numerous time machines and learning how to adjust their parameters and the provocation questions based on participants' profiles (so they are relevant to each individual), a virtual reality game could be developed. The game should be played in a group setting, offered as a service, in a controlled environment that ensures no harm to the participants.

The doctoral research following this work will aim to build a prototype of the experience that can be used on a larger scale (e.g., transposing the time machine into a virtual reality experience that can be used in preventive medicine) and tailored to individual profiles.

6.0   Conclusion

The research was initiated based on the observation that technology innovations and the explosion of information are competing for our attention and time, leading to a substantial increase in the number of decisions we make each day.

Why should we care? As Alvin Toffler pointed out over two decades ago, "*When we combine the effects of decisional stress with sensory and cognitive overload, we produce several common forms of individual maladaptations.*"[88]

The research aims to prototype an intervention that provokes meaningful decision-making and might prevent such *maladaptations*.

The work has started at the OCAD University in Toronto, with an initial body of study which will be significantly expanded during the doctoral thesis at IIT Institute of Design.

The project is named *LifeBooth* and its progress is being tracked on www.lifebooth.net. The overall context of the project is focused on how might greater awareness of our time orientation and comfort with an ambiguous future facilitate better decision-making.

This work has focused on: **How might we ascertain if a greater degree of comfort with death facilitates decision-making?**

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[88] Irvine, W. (2008). *A Guide to the Good Life: the Ancient Art of Stoic Joy.* Oxford University Press. Negative visualization, chapter four, page 68f

When thinking about decision-making, based on observations connecting the works of Alvin Toffler, Daniel Kahneman, Fred Polak, Geert Hofstede, Herbert A. Simon, Philip Zimbardo and John Boyd, Thomas Schelling, and William Irvine, these themes emerge:

- When making decisions, while our brains are wired very efficiently and have developed various mental maps and shortcuts to help us, they also have blind spots, rooted in our cognitive biases
- These mental maps contain a component of culture and influence our comfort with the future
- Although the way we perceive time influences our cognition, we are usually unaware of this influence

This research connects the above themes, and observes the influence on decision-making of time perception and human judgment on the ambiguity of the future. It then narrows down the ambiguity factor to the event that eventually stops our future: death. Inherently, death means the loss of what we value most: life. Most of us have difficulties with this type of loss, though we may be at ease losing other things which we value and for which we have expended effort. This is due the process of "*hedonic adaptation*" that often takes us to a "*satisfaction treadmill*", impacting the quality of our decision-making.

Central to this work is the Stoics philosophers' recommendation to experience negative visualizations of losing what we most value in order to "*regain our appreciation of it, and with the regained appreciation, we can revitalize our capacity for joy.*" [89]

As a result of the literature research and expert interviews, this work proposes a structured technique for individuals to imagine and reflect on what it would mean for them to face the last day of their life, studying how reflecting on death might influence the process of decision-making.

The hypothesis behind this intervention is that by reflecting on who we are today, imaging that our lives are ending imminently, and thinking about our own death's meaning and implications, we can trigger a helpful connection between System 1 and System 2 and close the circle of sound decision-making.

The ethnographic research was conducted with six participants and the observations point to a few connections amongst participants' backgrounds and the extent of their time travel to the last day of their life, as well as between the time machine and impact on their decision-making.

Based on these observations and participants' feedback on the *LifeBooth* negative visualization journey, in the short-term, the research proposes developing a provocation for rumination that would encourage the quality control of a **major decision**. The provocation includes three dimensions, and asks:

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[89] Irvine, W. (2008). *A Guide to the Good Life: the Ancient Art of Stoic Joy.* Oxford University Press. Negative visualization, chapter four

I.   Time orientation: **Could the decision be anchored in your time orientation and be missing the perspective of the future?** (watch for Kahneman's anchoring bias)

  a. For example, if you are past-oriented, could the decision be influenced by an analogy with, attachment to, or extrapolation from your past that is not necessarily applicable in the current situation?

II.   Image of the future: **Could it be that the decision mimics your inclination to think about the future (i.e., optimistic or pessimistic) and the agency you think you have to influence the future (i.e., optimistic or pessimistic)?** Sample prompts:

  a. What could happen to you between now and then? (watch for Simon's point on filling in missing information with history)

  b. Could you encounter negative situations in the future? (watch for Toffler's point on Denier's strategy)

  c. How would you prevent what might turn out to be a negative situation? (watch for Schelling's point on how beliefs could shift)

  d. Have you considered the other side of the image of the future and what might happen in the situation, i.e., if you have an optimistic view, have you thought what might go wrong? Or if you have a pessimistic view, have you thought what might work out well?

III. Comfort with mortality: if today was the last day of your life and you looked back to the decision you are making (in the real present):

  1. **Would you make the same decision?** (watch for other biases described by Kahneman, see *Appendix A*)

2. **Would you have any regrets for making it?** (as recommended by one of the

   participants)

3. **Is the decision aligned with your life goals and values?**

4. **Is the decision aligned with how you would like to be remembered?**

5. **Has it harmed the future you, or someone important to you, is going to**

   experience?

In the long-term, through upcoming doctoral research, the project researcher envisions

developing a virtual reality game played in a group setting, offered as a service in a

controlled environment that ensures no harm will come to the participants.

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8.0   Appendices

Appendix A: Potential adaptation of a business tool to personal decision-making

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Check for*:

I.   *Self-interest: is there any reason to believe that … the* [decision] *… is motivated by self-interest?*
II.   *The affect heuristic: have [you] fallen in love with the decision?*
III.   *Groupthink: solicit dissenting views*
IV.   *Saliency bias: could the* [decision] *be overly influenced by an analogy to a memorable success?*
V.   *Confirmation bias:* [have] *credible alternatives* [been considered]*?*
VI.   *Availability bias: if you had to make this decision again in a year's time, what information would you want, and can you get more of it now?*
VII.   *Anchoring bias: could there be… an extrapolation from history?... a motivation to use a certain anchor?*
VIII. *Halo effect:* [are you] *assuming that* [something] *that is successful in one area will be just as successful in another?*
IX.   *Sunk-cost fallacy, endowment effect:* [are you] *overly attached to a history of past decisions?*
X.   *Over-confidence, planning fallacy, optimistic biases: is the base case overly optimistic? Build a case taking an outside view; use war games*
XI.   *Disaster neglect: is the worst case bad enough? Conduct a pre-mortem: imagine the worst has happened, and develop a story about the causes*
XII.   *Loss aversion:* [are you] *overly cautious?*

*Source: Kahneman, D., Lovato, D., & Sibony, O. (2011, June). The Big Idea: Before You Make That Big Decision…. The Harvard Business Review – with slight adaptations for personal decision making

Appendix B: Pre-time machine survey profile information collected

Data points

- Area they live in: non-urban, sub-urban, urban
- Are of residence is: densely populated, moderately populated, remote
- First language is: Anglo-Saxon (e.g., English, German), Arabic, Cantonese, Hebrew, Hindi, Latin-based (e.g., Spanish, Italian, French, Portuguese, Romanian), Mandarin, Native American, Slavic (e.g., Russian, Serbian), other
- Place of birth: on an island, inland, on the continent, by the ocean or sea
- Grew up: in the mountains, on lower lands
- Climate of region of birth: continental with warm summers and cold winters, dry and arid, polar, subarctic with cool summers, sub-tropical mild marine and humid (e.g., Mediterranean), tropical wet (e.g., rain forest) or wet and dry (e.g., savanna)
- *Cultural background is: African, Asian, East-European, Middle-Eastern, Native American, Western, other
- Spirituality: Agnostic, Buddhist, Catholic, Hindu, Jewish, Muslim, Native American, Protestant, other
- Ethnicity: white, Asian, Black, Hispanic, Native American, other
- Occupation: academia, business, public sector non-academia, other
- Political environment grew up in: democracy / non-democracy
- Grew up in an area of: conflict (e.g., wars), peace
- Experienced any major change(s) in their life?
- Age group: 18-27, 28-37, 38-47, 48-57, 58-67
- Education: Arts, Business, Design, Natural sciences (e.g., physical science, life science), Formal sciences (e.g., mathematics, logics, decision), Social sciences (e.g., psychology, sociology), Applied sciences (e.g., healthcare, technology), other
- Familial/marital status
- Identify with a gender
- Have kids

Data collected

- 1 living in a suburban/5 living in urban areas
- 2 living in moderately/4 living in densely populated areas
- 1 having Hindi/1 Tagalog/4 Anglo-Saxon as first language
- 1 born on an island/5 inland
- 1 grew up in the mountains/5 on lower lands
- 0.5 having an Eastern European/1 Asian, Indian/1 European/1.5 Western/2 Asian cultural backgrounds
- 0.5 with Jewish/1 Catholic/1 Protestant/3.5 Agnostic spirituality
- 1 having Asian, Mixed/2 Asian/3 White ethnicity
- 1 with design/1 business/1 natural sciences/1 social sciences/2 applied sciences educational background
- 1 working in the academia/1 in media/1 in design/3 in business
- 6 grew up in a democratic and peaceful political environment
- 1 in the 18 – 27/2 in the 28 – 37/2 in the 38 – 47/1 in the 58 – 67 age group
- 1 being divorced/2 married/3 single
- 2 having kid(s)/4 having no children
- 1 identified as male, heteroflexible/2 male/3 female
- Each participant faced major life changes: being married twice; leaving the corporate world for academia; immigrating or moving from one country or city to another; starting a business late in their career; experiencing a car crash, fortunately with no fatalities; death of loved ones; broken family; life-threatening illness; job loss; and physical and emotional abuse.
- 1 being pessimistic/5 optimistic when imagining the type of future they are going to experience
- 1 having a pessimistic/5 optimistic view of the extent to which they think they can affect the future
- 1 having a past negative/1 past positive/2 present hedonistic/2 future time orientation
- Transcendental future-time perspective ranging from 2.2 to 2.4/2.7/3.0/3.2/3.5

Appendix C: Pre-time machine one-on-one interview

Talking about the survey

A. How long did it take you to complete the survey?
B. How did you feel while completing the survey?
C. What emotions did you encounter?
D. Would you like to talk more about the challenge / decision you are facing?

About the upcoming time machine / experience discussion

Appendix D: Prop for developing personal story during the time machine

You are developing your personal short story on how you would like to be remembered.

1. As you reflect on your life and how you would like to be remembered, you could consider some of your personal values such as:
2. What do you feel gives your life its purpose and meaning?
3. What do you particularly value about your life?
4. If you could plan it today, what would the last day of your life be like? Where would you be?
    - What would you be doing? Who would be with you?
    - What would you eat, if you were able to eat?
    - Would you want the comfort of spiritual support, such as a member of the clergy or someone who shares your religious beliefs?
5. How do you want to be remembered? If you were to write your own obituary or epitaph, what would it say?
6. Are there other personal values you want others to be aware of?
7. Are there people to whom you would want to write a letter, or tape a message, perhaps marked for opening at a future time? If yes, what would you write?

Source: Dying with Dignity Canada

Appendix E: POEMS planning details

People / Actors

- Participants: 6
- Observers: primary advisor
- Facilitator: 1
- Camera person: 1
- Indirect observations of the participants:
  - Thinking: how do people frame and evaluate their experience? What do they expect?
  - Feeling: what emotions do participants have during the journey? What are the highs? What are the lows?
  - Debrief with the group: how engaged did they feel? What were their thoughts?

Objects / Artifacts

- Funeral plaque
  Supplies: various colours of cardboard, Bristol boards, tape, rope, crayons, charcoal, beads, glue, sea shells, wool, playdough, markers, post-it notes, paper, acrylic and oil paints, brushes, sponges, and rulers.

Environment / Atmosphere

Space

- Visual cue: no day light
- Room 1 – Game: Play Lab – preparation room with 6 individual tables, each set up with:
  - an electric candle
  - board to write on
  - cardboard and paint supplies
- Room 2 – Super Ordinary Laboratory - place of mock death with yoga mats on the floor
- Music: A mix of serene sounds, Bach, yoga music
- Temperature: cool

Messages / Activities

- Video recording: discretely from one corner

- Facilitator
  - Intro
  - Describe process
  - Introduce guide for thinking this through (from Dying with Dignity)
  - Show examples of outcomes (e.g., Merry Cemetery)
  - Transition to place of mock death
- Participants: created own messages to leave behind after their passing
- Timing

> 11:45 – 11:55 – arrival; **no** introductions
> 12:00 sharp – start
> 12:00 – 12:15 – facilitator presentation
> 12:15 – 12:45 – writing
> 12:45 – 1:15 – painting
> 1:15 – 1:20 – preparing to die
> 1:20 – 1:40 – mock death
> 1:40 – 1:45 – coming back
> 1:45 – 2:00 – reflection: debrief; introductions; feedback

Services: the end-to-end mock death experience

Appendix F: Creative Common license legal terms

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Appendix G: Research Ethics Board

The research described within complies with the Tri-Council Policy Statement version 2 (2014). REB approval number: 2016-35. Associated documentation is on file in the Office of Research at OCAD University.