Die Gesellschaft unter Mackie Messers Klinge

An investigation on why do we keep on living towards collapse

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Homo sapiens — the 'wise ones'

Summary

Mackie Messers Messer sieht man nicht. Today, we are confronted with the same knife that slowly but surely comes to our throats. The knife has several names: population growth, global warming, pesticides poisoning our world's environments. This thesis studies why do people keep on living in a way that we rationally understand, it only brings us closer towards collapse. The aim of the study is to try to shed light on this, to say the least, senseless behaviour. I use the methods of Qualitative Research with a survey consisting of seven open questions regarding this collapse and study the answers of the interviewees looking for the psychological mechanisms and patterns that support this unbalanced behaviour. My sample consists of 27 people from around the world.

My findings seem to indicate that the reactions of people towards a civilizational collapse are strikingly similar to those related to environmental degradation and the same mechanisms of defense are at play.

Samenvatting

Mackie Messers Messer sieht man nicht. Vandaag de dag worden we geconfronteerd met een zelfde soort mes dat langzaam onze hals nadert. Dit mes heeft verschillende namen; bevolkingsgroei, global warming, pesticides die de wereld vergiftigen. Deze thesis onderzoekt waarom we doorgaan met onze levenswijze terwijl we weten dat dit tot onze ondergang zal leiden. Het doel van dit onderzoek is inzicht te krijgen in dit, op zijn minst, zinloze gedrag. Ik gebruik hiervoor kwalitatieve onderzoeks methodes met een vragenlijst bestaande uit zeven open vragen met betrekking tot een mogelijke instorting van de samenleving. Bij het bestuderen van de antwoorden kijk ik naar de psychologische mechanismen en patronen die dit onevenwichtige gedrag ondersteunen. De steekproef hiervoor bestaat uit 27 mensen van over heel de wereld.

Mijn bevindingen lijken te wijzen op een overeenkomst tussen reacties op ineenstorting van de samenleving en reacties op vernietiging van de natuur. Dezelfde ontwijking mechanismen spelen hierbij een rol.

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Chapter 1 Introduction

The end of the world as we knew it was in 2008 (Laeven & Valencia, 2008; Reinhart & Rogoff, 2009; Heinberg, 2011; Klare, 2012/2013; Ahmed, 2013; Goldenberg, 2013; Gosden, 2014; Harvey, 2014; Rickards, 2014). The question is, then, why do we keep living as we used to do? Why do we bother to write bachelor theses? Why do we like to believe that tomorrow is going to be any better?

This thesis is exactly about two things. First, it is an exploration on the psychological mechanisms that keeps us living the way we do, and do not allow us to realise the fundamental changes to the structure of society that the situations asks for. Our hope is that by understanding how people conceptualize the future collapse of humanity, we can help to avoid it. Second, what I have tried to do in this thesis is to not only to be aware of the collapse but study how to develop scientific methodologies that help us to cope with it. Even if this bachelor thesis provides a rather limited analytical framework, we need to start changing the world somewhere: right here, right now.

Despite the overwhelming evidence of impending global ecological disaster and the meltdown of the international banking system, we keep on thinking that business as usual is the answer. The vast majority of researchers agree that economic growth and environmental degradation go hand by hand (EEA, 2002; Lasn et al., 2012; EEA, 2013; Aşıcı, 2013; Jorgenson, 2014; IPPC, 2014). Where does this cognitive dissonance[1] come from? Are we not yet ready to accept that our life needs to completely change if we want to survive?

On the one hand we say we want to save the environment (ecosystems, world, planet), while on the other we want to consume as much as possible, for as cheap as possible in every imaginable field (overly cheap food, flat screens, vehicles). It is one or the other (Harvey, 2012).

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[1] "In psychology, *cognitive dissonance* is the excessive mental stress and discomfort (Festinger, 1957) experienced by an individual who holds two or more contradictory beliefs, ideas, or values at the same time. This stress and discomfort may also arise within an individual who holds a belief and performs a contradictory action or reaction (Festinger, 1962)." (Cognitive dissonance, n.d.)

I believe that people is aware of this. The contradiction between what we explicitly want and the ways we developed as society to obtain them, is a central part of a person's worldview. If you push them to make explicit the way they live in their worlds this contradiction appears as a central unresolved *knot* in their existence, as something that does not make sense. Try to unveil this knot is the motor force behind this bachelor thesis.

Reviewing earlier studies about environmental degradation, it struck me that most warnings and advice how to prevent it, refer to collective behaviour. Group behaviour of nations or the global population is thereby generalized to offer, in the first instance, a basis for politicians and economics for large scale decision-making. It seems reasonable that the cooperation on a policy level may cause crucial global changes. But there are a few scientists that base their hopes on bottom-up pressure of civil society. Ehrlich and Ehrlich (2012) believe that every ordinary person must contribute to reform their societies, to not let it dwindle into a collapse. However, it still requires knowledge to understand the contradictory behaviour of the individual. Ehrlich and Ehrlich (2013) therefore urge a closer collaboration of natural scientists with social scientists. With this study I try to react on that demand and put the emphasis explicitly on the examination of the voice of the individual.

Since the 1960s the field of environmental psychology studies the complex interactions between humans and the environment. The exploration of the psychological roots of environmental degradation and the connections between environmental attitudes and pro-environmental[2] behaviors of individuals is part of environmental psychology (Kollmuss & Agyeman, 2002). Studies such as that of Kollmuss and Agyeman (2002) already provide a deep insight in the contradictions of the individual with respect to sustainable thinking and sustainable acting. Instead of exploring solely individual's views about environmental degradation, this study focus on individual's views of a possible collapse of our entire civilization.

Detached from any theoretical background, this study endeavours a more holistic and informal approach of the generic views of individuals to further deepen insights on the main research

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[2] *"By 'pro-environmental behaviour' we simply mean behaviour that consciously seeks to minimize the negative impact of one's actions on the natural and built world (e.g. minimize resource and energy consumption, use of non-toxic substances, reduce waste production)."* (Kollmuss & Agyeman, 2002)

question. A good answer to the question, why we continue the way we do, would imply that we know how to change people's life and avoid a collapse. How to find that answer, if we follow Ehrlich and Ehrlich (2013), is perhaps *the* foremost challenge confronting humanity.

Chapter 2 Aims of the study

The aim of this study is to address the qualitative research question: 'Why we as humans keep on living the way we do, while heading towards a civilizational collapse?' In order to simplify the complicated nature of this question I subdivided it into the following three specific topics questions:

1. How do individuals emotionally react upon a predicted collapse of our global civilization?
2. How do individuals perceive the role of humans in relation with nature?
3. To what extent do we observe contradictions in the answer of one respondent?

Considering the very limited timeframe of this bachelor research, exploring a profound answer of the main research question seems impossible. Since 30 years psychologists and sociologists realised hundreds of studies to explore equal phenomenon and developed numerous theoretical frameworks, but yet no definitive answer has been found (Kollmuss & Agyeman, 2002). On that account this thesis primarily focuses on responding to the sub questions. With the self-designed survey, the gathered answers and qualitative research findings of this study, I wish to provide new aspects and inspiration for further approaches to this problem.

The fundament of this research is based on a qualitative research design, often employed to answer the *whys* and *hows* of human behaviour (Guest et al., 2013), and to capture individuals' thoughts, feelings, or interpretations of meaning and process (Given, ed. 2008). The combination of this qualitative characteristics and its typical use to explore new phenomena, made it suitable for this study, to the best of my knowledge this is the only investigation explicitly concern with the topic regarding individual's conceptualization of a collapse. Large sampling in qualitative research is very labour intensive and often simply impractical (Mason, 2010). When the collection of new data does not shed any further light on the research question, we speak about saturation (Glaser & Strauss, 1967) and further questioning can be stopped (Mason, 2010).

Chapter 3 Methodology

The third chapter of this research paper is divided in two sub-sections. The first section serves as brief introduction to psychological analyses. Section 3.2 and its three subsections will finally illustrate in detail the actual survey used and its methodology.

3.1 Introduction to psychological analysis

Let us make a short review of the background of my bachelor thesis. The early stages of philosophy laid the foundations for a path to define generally valid concepts of truth. This path is based on mutual discussion and impartial questioning. Therefore, they remain as the cornerstone of scientific integrity.

However, teachings at universities in the following middle ages came under the rule of the church and knowledge was only passed through, instead of sceptically reasoned. It was none other than Galileo Galilei, father of science (Weidhorn, 2005), who took off the veil and proved that the hitherto worldview, dominated by the church, was simply wrong. In the 1600s he introduced one of humanity's most valuable revolutions by which reason became the way to understand reality (González, 2013). Furthermore, the foundation of the University of Berlin build in 1810, initiated the avant-garde relationship model of student as researcher and teacher as guide. Based on that model the search for knowledge came to being a guided process of discovery. Students thereby "take account of fundamental laws of all their thinking", theoretical background in which every scientist works. Yet at the beginning of our 21st century, the debilitating effects of economical influences on science make a model worth striving for begin to totter (González, 2013).

After the establishment of science, it took a while before Psychology as an independent discipline of the social sciences gathered acceptance. Social sciences as such which tries to explain human events (Dooley, 2001), due to the high support of behaviourism[3], it gathered

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[3] "**behaviourism,** a highly influential academic school of psychology that dominated psychological theory between the two world wars. Classical behaviourism, prevalent in the first third of the 20th century, was concerned exclusively with measurable and observable data and excluded ideas, emotions, and the consideration of inner mental experience and activity in general." (The editors of Encyclopaedia Britannica, 2012)

information based on observation. With the observable behaviour of people and animals one tried to explain its inner processing and complexity of brain functioning, instead of considering possible findings out of unobservable events. The concept of operationalization, first presented by physicist Campbell (1920), lays thereby the foundation of processing abstract concepts (e.g. emotions) into observable quantities (Dooley, 2001). The setup of first laboratory experimenting through Wilhelm Wundt (Butler-Bowdon, 2007) and the development of an IQ test for proper soldier recruiting in WW1 eventually helped psychology to become a respected field (Kennedy & Zillmer, 2006).

Among scientist and involved parties the importance of introspection in order to understand the whole perception of a human created a discord among society (Costall, 2006). At first neglected and even fought (Schultz & Schultz, 2011), Sigmund Freud was one of its first who brought the unobservable and unconscious behaviour into public discussion (Mannoni & Bruce, 1971).

Eventually, the suppressive impact of behaviourism on new psychological perspectives started to weaken. The view to understand the human as a whole by only observing its outer layer was no longer viable (Miller, 2003). New perspectives on the field of psychology were accepted, sub-disciplines were developed and refined, and psychology became a vital part of science (Cacioppo, 2007). Nowadays the explanation of human events is an open discussion regardless of which psychological perspective one refers to.

By looking at the history of Psychology, and more generally, the history of science, one understands that business as usual is not always the best answer. Once a method of research is developed, it can bring plenty of discoveries, but eventually it reaches its limit. Quantum mechanics cannot be explained with classical physics (Buchanan, 2014). What I have tried to do with this study is to do research taking this into account. Rather than only focusing at the scientific *form,* I attempt to focus on the scientific *spirit.* This is why I chose the subject of this research and why the methodology is the way it is.

3.2 Methodology of the Survey

In this section we attempt to provide the methods used, which would allow the reader and fellow researcher to replicate this inquiry. By working from coarse to fine, subsection 3.2.1 describes roughly the size and type of the sample examined, then section 3.2.2 introduces the way data was collected. Finally section 3.2.3 addresses the details of the data analysis.

3.2.1 Sample

Among qualitative research seems to be no general agreement about sample size. Literature describes single-person study (Given, ed. 2008). Other commentators suggest sample sizes ranging from 5 to 30 (Bhandari, 2013). Determining adequate sample size in qualitative research is ultimately a matter of judgment and experience in evaluating the quality of the information collected against the uses to which it will be put (Sandelowski, 1995). Respecting the balance between research scope with time and resources (Guest, 2013), it was felt that a minimum of 20 respondents should be able to supply varied and detailed accounts for the purposes of this study.

To prevent a possible lack of respondents, 42 international individuals were invited to take part in the study. I looked for international respondents with the aim of broadening the cultural component of the answers. This was done to achieve a more holistic perspective, than say, the one obtained by only choosing people from one nation. The sample was a convenience[4] one. The majority of the respondents were asked beforehand if they were interested to participate in the study. A minority of 6 individuals were addressed by the snowball approach to sampling (Given, ed. 2008). People, whom agreed to the study, or heard about it via my social environment, autonomously recommended new participants, whom on their eyes could contribute interesting answers. In the end, 27 individuals returned the completed questionnaire.

The sample was quite heterogeneous, from 13 different countries of origin (but more than half living in Holland). The average age was 42 ± 14, of which 17 were male and 10 were female.

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[4] Convenience sampling is a non-probability sampling technique where subjects are selected because of their convenient accessibility and proximity to the researcher (Given, ed. 2008).

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Their professional background ranged from people working as researchers at the University of Twente, to a doctor in Japan, to artists, teachers in Asia as well as Europe, young unemployed from southern Europe and young northern European farmers, from both biological and conventional agriculture, and others.

3.2.2 Data collection method

All participants who orally or in writing agreed to the survey, received shortly afterwards a mail including instructions and digital interview survey (see appendix), which they needed to reply if completed. Once informed about research background and warranty of anonymity, the participant was asked to fill in seven open questions, whereof two subquestions. After subquestion 2b, a summarizing article, about a NASA funded study which predicts the downfall of our global civilization (Motesharrei et al., 2014), was to be read. Every participant was allowed to write as much as he or she considered necessary. In case of insufficient or ambivalent answering further explanation would be asked by me. The entire survey was written in English. Participants were allowed to write their answers in English, Dutch and German. Additionally, the participants were invited to send feedback referring the subject or the process of the study.

The completed survey answers were analysed without a particular theoretical framework (Given, ed. 2008).

It must be noted that since most of the people that completed the survey were somehow related to my social environment, an evident lack of transferability (or external validity) exists (Given, ed. 2008). Eight people were contacted through my work at the organic market, so one could expect a bias due to shared interest amongst those. Furthermore, since the survey was internet-based and in English, the demographics correspond to what one could call "developed" world, a reason for sampling bias. Thus, the findings of this study are difficult to be generalized beyond the original sample (Given, ed. 2008).

The verbal data analysed within this study are open ended questionnaires. At the beginning of the analysis, there was no predefined structure or guiding concept. The analysis is fully based on a trial and error approach. Decisive requirements as well as analytical tools in that process have been: transparent self-reflection, a high level of personal involvement[5], mutual (interdisciplinary) discussions, and impartial questioning.

During my first reading, I started to highlight different subjects; listed them in a table; include personal descriptions, and tried to unveil the emotions within each answer. The broad research question in combination with the detailed narratives from the answers, made me soon emotionally distracted. It became unclear what to actually look for. What is the core question which to answer? What message do I (as researcher) want to interpret from the written answers? How to interpret the unwritten, the unsaid and the personal background influences on the given answer?

While starting to write the methodology of this study it became evident that mutual discussion should be the first step to make. My friend and fellow scientist, Dr. Sebastián González[6] and I started to reflect on our worldviews referring to the research subject and on the importance of what to explore. Playing the devil's advocate against each other, constantly accompanied the process of critical questioning how to look at the data and interpret it. Defining the fundamental concerns of the analysis became crucial, to avoid earlier experienced obscurities. What findings could be useful to society? Do we want a summary of the subjects mentioned by the respondents, or explore obvious or unwritten knots of contradiction? And why do we want to unveil the knot? *"Because what one understands, you can accept and support![7] "*.

Mutual discussion, about my previous findings and the comparison of survey answers, has led to the clarification of the research questions. Consequently, I re-read all interviews, wrote down my

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[5] The scientific exploration has to be driven by eagerness to understand the yet unknown and unsolved, instead of to be seen as academic obligation. A pleasure driven science which enriches one's time instead of stealing it (Brown, 2012).

[6] Phd graduated physicist but also well versed in philosophy and social criticism (Gonzalez, 2014)

[7] Quote of interviewee 39. Translated by the author

thoughts, and added highlighted excerpts relating to the newly defined research questions. A distanced mindset towards the literary form and content of the answers, thereby widened my interpretation space over unwritten thoughts of the respondent. My notes have been basis of each mutual discussion and were thoroughly elaborated in collaboration with independent researcher Dr. González. Resulting findings were checked by my two supervisors Dr. Erik Jan van Rossum[8] and Dr. Johnny Hartz Søraker[9]. Finally notes and original excerpts of all respondents were, first, examined to discover their common properties and, second, to melt these properties into concepts and generalizations answering the research questions.

The process of qualitative data analysis can be seen as compromising "dance" between a narrowing focus on the literary content and form, or reflexively question and discuss what influences remain unwritten (Miller & Crabtree, ed. 1999). Identifying above mentioned properties and forging concepts and generalizations from them is at the creative heart of discovery research (Given et al., 2008). To reproduce this research, close bonds with your collaborative researchers are an indispensable ingredient to enable open discussions about each aspect and reflections on each 'imaginable' way of interpretation. The close relation to your analysis partner will define the fundamentals, keeping limitation of time, effort and efficiency. That will not neglect a productive and target followed approach, but instead keep discussion as important part of research as the references that will fundament your claims.

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[8] *Inter alia* expert in qualitative research design (Van Rossum et al., 2012)
[9] *Inter alia* expert in philosophy, ethics and history of psychology (Søraker et al., 2012)

Chapter 4 Findings

Once you would ask me to take a knife and commit suicide, more than likely my nature and willingness to live would do all possible to avoid that scenario. People seem able to picture an 'understandable' concept of our so called threatening "business as usual approach" towards the global ecosystems we depend on (Kollmuss & Agyeman, 2002; Motesharrei et al., 2014). So why do I, with my actual actions, keep on sharpening my knife and put my head towards suicide (Gosden, 2014)? What is the mostly incomprehensible drive of our mind to support the degradation of our daily environment while hoping and praying for sustainable harmony of it all?

In this chapter I will respond to all four research questions and ultimately look what insights this study may contribute to understand this contradiction. Primarily efforts are done to present the findings on their own and limit supporting discussion and interpretation to a minimum (Burnard, 2004). The original survey file, including questions and article used, can be found in the appendix.

4.1 Emotions

A summarizing article of the scientific investigation of Motesharrei (2014), placed before question three, did confront the respondents of this study with an undeniable possibility of a civilizational collapse. The variety of the given answers in its length and clarity makes it thereby a difficult task to proper summarize and interpret the range of emotions occurred. Due to the open questioning, emotional conceptualisations concerning a collapse can be found within the entire questionnaire.

Short excerpts on the answers of question three[10] already indicate a diverse scale of emotional responses:

- *"I feel guilty and shameful. This is really frightening. I didn't know that our situation is this much severe. We are already late, we should have started doing activities to prevent this, long time go." (Interviewee 36, male)*
- *"There was a certain fear and a lack of realism. My mind did not want to understand that what I read was real and I there were several moments I thought that this article was an*

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[10] *3. What did you feel while reading the text?*

imaginative text. However, my head lead my emotions to the point where I realized that the text needs to be real and I immediately tried to cling to the fact that our world can be rescued, that a collapse is "not inevitable"." (Interviewee 41, female)

- *"I became more quiet. This information is known to me in a broad sense. Still it always has an impact on me when I am confronted with it." (Interviewee 22, female)*
- *"I experienced this as a threat, a sword hanging above our heads. When I read that total destruction is indeed preventable.. I still believe that the earth will not be destroyed and also not us people." (Interviewee 42, female)*
- *"The text is kind of sad. I mean, we already know the situation, we are aware of the situation and the only thing we can do is to "predict what will happen to the industrialised world". I'm conscious about the imminent collapse but I think we are able to diminish its impact acting as a teamwork in civilization." (Interviewee 10, female)*

While the respondents above allow us deep insights, others just name their emotions *"wonder and hope[11]"* or answer with a short phrase *"Predictable expected. Nothing special or new."*. Reactions like, *"Uncertainty about the future of humanity."* or fundamental elements of life *"What's the point of having kids?"* illustrate the broad level of interpretation possible. Doubtless is the amount of heart-touching involvement of the majority of all respondents.

Responding to sub question one[12], it is hope, which appears to be the by far most evident emotion regardless of the various approaches to this problem. Furthermore, but to a lesser degree, diverse forms of fear and a strong feeling of being powerless appear.

4.2 Relation to nature

What is the concept of nature we have today? In older time's knowledge about nature, like the direction of the wind or star constellations in the sky, served as orientation and were a matter of survival. Nowadays, that knowledge, e.g. due to technological prosperity, becomes more and more lost (Sturt, 1963). I can take my car, travel thousands of kilometres, and the screen on my navigation system will guide me, without knowing any city or street, until my final destination. Nor I need to crank down my window and ask people for the way.

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[11] translated by the author

[12] 1. How do individuals emotionally react upon a predicted collapse of our global civilization?

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The following quotes are representative excerpts from the respondent's answers concerning sub-question two: *How do individuals perceive the role of humans in relation with nature?*

A) *"I feel we as humans are going away from nature. A group of young children in my clay workshop were reluctant to touch clay. They were looking at clay as dirt or filth." "We are exploiting nature as if we are the last dwellers on earth." (Interviewee 15, male)*

B) *"I feel that we sometimes forget that we are also nature." "My consciousness me, lets me know that I am part of nature (at least I feel it that way). Once my atoms were part of something else before me and therefore, I try to remind myself the importance of maintain my personal relationship with nature." (Interviewee 10, female)*

C) *"We are now completely dissociated regarding our relationship with nature,... We do need references of nature in our daily lives, but we can only integrate them artificially, (perhaps because we don't know better). We buy pets to make us company in our small apartments. We plant bonsais in pots so they will always look miniaturized or put fish in aquariums as symbols of wellness and relaxation. On a larger scale we find parks, zoos etc, which in the same way place nature in the service of man. I believe that as long as we fail to commune with nature on an equal level (without trying to turn it into a projection and extension of ourselves), we will be walking in circles trying unsuccessfully to find a bound with it." (Interviewee 12, female)*

D) *"There is no relationship between human beings and nature. Humans still have an image that they are the center of life." (Interviewee 3, female)*

4.3 Try to unveil the knot

What do I mean by "the knot"? The knot is the contradiction between people's thinking (A) and their actions (B). Imagine a hose with a knot on it. The water cannot flow in the direction it wants and it floods. We want to drive our lives towards sustainability, we point in one direction, but there is a knot that does not let us go, and we sink in a muddy puddle surrounding the pipe. This puddle is one of contradictions and incoherent actions which creates the poisonous environment in which we live.

Due to space limitations, I will only give two examples of contradictions in the responses to the survey, addressing sub-question three: *To what extent do we observe contradictions in the answer of one respondent?*

Take survey 21: First she confesses to consume irresponsibly (flying several times a year). Then, she tries to justify it saying that this is the problem of *"the rich western*"*. Later, she explains that for *us* it is very difficult to give up consumption, to lastly assert that to *"watch out*" my* consumption is the *only* thing to do, even though it will not change the world. However, she declares to be optimistic and to have faith in that technology will save us.

Where is the puddle of contradictions and incoherent actions here? Sowing 'bio-grass' to cover the puddle (*"only good meat, no plastic packaging... and so on*"*), while continuing on flying several times a year, and nevertheless pretending to inspire other people towards sustainability.

Take survey 13: Concerning his preparation for a collapse to come, he answers with woodworking, directly admitting that it is not "nearly enough". Then, he states that an individual being able to bring any change *"is an essential part of the problem."* Even more, *"The idea of the individual is an essential part of the problem."*. He continues: "*The only possible change I see to prevent the collapse of civilisation is a political one."* Whereof the contradictory statements follows *"Since I sincerely think that this change will not come from the political, I try doing my part by learning woodworking"*. As earlier mentioned: he do not think that that would be nearly enough, bringing any change. While ending with *"I have more faith in woodworking* [than in science]*"*.

Where is the puddle of contradictions and incoherent actions here? By pointing out a political change to be the only change possible, he may imply his inability to make that change occur. The inability to unknot the pipe, to prevent a collapse. Willing to participate with constructivity *"what are you doing Sebastian to prepare yourself for when the collapse comes?"*. In his case his 'wood chips' and hopeless faith in woodworking seems his only way out to cover the puddle, while knowing that it alone will not change what needs to be solved.

4.4 Why keep on living the way we do

In this section the research question 'Why we as humans keep on living the way we do, while heading towards a civilizational collapse?' is addressed. One generalised answer, due to the most diverse personalities of my respondents, is rather impossible. I will combine insights of the earlier elaborated sub questions and base the following interpretations as far as possible on direct quotations of the respondents. From A) to G) are what we could qualify as recurrent patterns, while from H) to M) are responses that stood out on one or two respondent only.

A) *"A behavioral change would only do any good if at least 50% does it.(S20)*[13]*"* The problem of a collapse is with the collective civilization, a holistic problem, not with personal consumption. Several people cannot think this, and reduce the problem to one of personal choice *"Improve the world begins with yourself.(S26)"*. On the other hand, a few understand this and speak from the we perspective *"I am the society!(S38)"*. *"With 'society' I mean the whole world: plants, animals, and we humans(S24)"*.

B) We do not know *how* to change the world or *where* to start. *"There is no recipe for overnight change of the behavior and I don't believe in the short term solutions to questions as heavily loaded and thickened as such(S8)"* The entangled aspects underlying a collective strive towards a collapse seem unreadable, too complex to picture a possible way out. This ignorance submerges you in inaction. People get stuck in a paralyzed state trying to cope with it: *"I am willing and I am searching ways to do it but I have to be careful not to struggle in searching or being lost while searching. Therefore, what 'holds me back' (and I believe the most of the people) is actually that my mind is full of waste. Therefore I am incapable of seeing actually what the implications of my (or of my surroundings) actions/behaviour are, and do something for it,(S18)"* while others try to escape from it by focusing on pleasure - enjoy then at least *"eating because I want to or because it's nice when you are together with friends and going shopping sometimes just because it feels good(S41)"*.

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[13] On what follows, an "S" followed by a number, in parentheses, indicates the survey from which the quote has been taken. If the original quote was not on English, the author has provided a translation.

C) A strong feeling of powerlessness makes the individual surrender. "*I do not believe that I can do anything in a practical sense that would change anything. I know and care about these problems but I do not or barely use my time to do anything to try and change it(S27)*". I cannot change the world, and instead use the subject of a collapse as intellectual entertainment *"Its good stuff for a conversation though!(S27)"* or simply accept and focus on personal joy "*I am just a small part of the bigger whole, and the only thing I can do is living as aware as possible and also have fun by doing so(S21)*". In other cases it's the destructive interplay of the community or authorities *"We have no control once the plastic and paper waste leaves our campus. Its mixed again and burnt down.(S15)"* which converts positive intentions *"Reducing our efforts to nil.(S15)"* into powerlessness.

D) All kinds of *"Ego(S21)"* prevent sustained behavior. While the biodynamic-farmer explains his *"laziness(S33)"* and *"vanity(S33)"* with *"environmental awareness takes more time and effort(S33)"* and *"ecological clothing is just pricey and not always pretty(S33)"* the mid twenty student says *"I often don't care about how and where things are produced but it is the price or the brand that matters most.(S41)"* The list of ego based barricades towards a better world remain endless *"greed. Society now benefits those who have the highest greed.(S9)"* and extend to all levels of civilization *"the people that make the laws are almost always very satisfied with how things are(S9)"*. While city life creates a *"less and less direct dependency on nature(S27)"* its artificial independency makes *"city dwellers do not experience the damage being done(S27)"* and results in unaware ignorance. Others overtly succumb to the *"comfort and convenience(S21)"* of their western wealth *"We are so used to a good life, and though we know(the thoughtful?) that we actually need to take a step back so the whole world can live a good life and the earth does not get warmer, it proves to be difficult to us.(S21)"*.

E) Blame the others: *"Society is the biggest factor that holds me back to change how society is(S9)"* because I do already what I can *"The only thing what I myself can do about it: continue to pay attention to my own consumption. And I do that already:...(S21)"*. Its 'their' behavior: *"I would like to change the others(S21)"* and 'their' way of thinking *"I want to change people's thinking.(S6)"*. Once you ask me, I present my *"brave well-behaved citizen solutions(S24)"* and

justify my imperfections. But what holds one back[14]? *"The collective immaturity of our society.(S3)"* and if you would be almighty, what would you like to change *"I would like the people to learn from their mistakes they have made, that they teach their children love and appreciation for nature and understand that they have to organize their lives in a different way(S21)"*.

F) A collapse seems to abstract to realise by the ones who did not experience any degradation. *"I don't expect a change in the conception of nature as a resource before physical conditions force it,(S9)"* *"Certain areas might be fine while others areas deal with these problems.(S27)"* While the Indian respondent seems to be aware of the urgency *"I agree with the article. Have seen rich people becoming richer and poor becoming poorer. The seasons are changing. We experinced hell strom recently which runined the crops of millions of rupees. Winters are colder, summers are hoter and rains are heavy and prolonged.(S15)"* the Greek respondent remains unaffected and accepts a further warning *"Predictable expected. Nothing special or new.(S19)"*.

G) Act after the fact. *"Even thought it is predicted there might be a flood one day we will first "need" a flood to happen before building that dam that would have prevented a flood from happening in the first place. This tendency is really bad when something happens that can not be turned around. When we really do catch away all remaining tuna there will never be tuna again.(S27)"*. *"History has already shown many times, that only after a collapse again it's space for anything else. Sometimes first something 'bad' has to happen before consciousness increases.(S22)"*

H) Wilful blindness. *"I do not immediately see a doomsday scenario for me, as an optimist,...(S21)"* Not wanting to admit that our current degradation could lead us to a downfall. *"...(or I do not want to see it),(S21)"*

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[14] Survey question **4. B)** *What are factors that hold you back?* as additional question to **4. A)** *Are there possible changes in your behaviour which could contribute to the prevention of the collapse described above?*
14

14

I) Shifting the guilt and responsibility to solve the current problems to following generations.*"to reach this target you should first teach the first generation with these arguments and hope that in their turn they can pass the education to the next generation. Hoping that by the third generation we will leverage this scourge.(S29)"*

J) Mankind is not capable of change *"I think, human cannot stop destroy natute(S6)"* that is why it is up to nature to reprove us. *"I think there is not much change possible in society. As I said earlier, humans are focused on growth and progress, and that's really not going to change because a few people try to quit that. I think that nature itself must indicate its boundaries and make humans feel the consequences of their actions.(S20)"*

K) The current degradation is part of the circle of life and a collapse of the civilization is meant to be. *"I think it is good that mankind again extinct, like the dinosaurs and other species and varieties that have ever existed on earth. It also then does not really make much difference if mankind extinct due to self-infliction or mechanisms from the outside.(S20)"*. *"One could then see the collapse of a culture or society as a natural condition(S38)"* *"it could be quite relaxing for the rest of nature, and who says that then all is lost. Maybe then also starts a new level of consciousness.(S38)"*

L)*"Only the connection to one's inner world bears the potential for a change(S23)"* A lack of self- awareness as source for sustainable inaction. *"Relationship with one's inner nature is the foundation of all outer bonds. Up till now, such a foundation has been non-existent.(S23)"*

M) Shifting the guilt and responsibility to solve the current problems to following generations.*"to reach this target you should first teach the first generation with these arguments and hope that in their turn they can pass the education to the next generation. Hoping that by the third generation we will leverage this scourge.(S29)"*

Chapter 5 Discussion

It is true that, "Arguably, it is impossible to generalise from qualitative data (because of the sampling methods, the ways of collecting data and the methods of analysis) – and most would say that it is not the point of doing qualitative research to generalise in this way (Burnard, 2004)." Nevertheless I think that the data of this study, regardless to which nation the respondent belonged, highlight something very human; the hope of a better world, the fear of a collapse, and the doubts that we all share.

Since the absence of previous research concerning a civilization collapse, I will use research related to environmental degradation (Kollmuss & Agyeman, 2002). Despite the difference between civilization collapse and environmental degradation, certain similarities became immediately recognizable. I will link the following discussion with Kollmuss and Agyeman's (2002) findings about the attitude-action gap of individuals referring pro-environmental behavior.

Though most people, accordingly to Kollmuss & Agyeman, do not know enough about environmental issues to act in an environmentally responsible way, in this study, only a minority of the respondents seem surprised by the facts they faced during the survey (2002). Festinger's theory of dissonance (1957), mentioned in the introduction, and its implication, seem thereby more corresponding with respondent's conceptualization of a collapse. Festinger's theory implies that we tend to avoid information about environmental problems because they contradict or threaten some of our basic assumption of quality of life, economic prosperity, and material needs (Kollmuss & Agyeman, 2002). Most environmental degradation (e.g. nuclear radiation or the ozone hole), as well as a collapse, is not immediately tangible (Preuss, 1991). For that reason, warnings and information about such abstract issues, will often further our intellectually understanding without making a link to our emotional involvement (Preuss, 1991), as can be seen in the answer of interviewee 27 "*Its good stuff for a conversation though!*". The tendency to avoid threatening information as well, as the lack of emotional involvement, are discernible reaction patterns among the respondents and provide an explanation for possible non-involvement.

The four emotional reactions; *fear, sadness/pain, anger* and *guilt*, all present in this study, seem common to occur while faced with the effects and long-term implications of environmental degradation (Kollmuss & Agyeman, 2002). Even if emotional reactions to environmental degradation do not entail pro-environmental actions (Kollmuss & Agyeman, 2002), their defense mechanisms, aimed at relieving us from these negative feelings, describe the majority reaction patterns within this study. *Denial*, as the refusal to accept reality, reinterpret and ignore research findings to maintain ones 'bright dream' (Mindell, 1988). *Rational distancing* as self-protection from painful emotions. Perfectly aware of the problem of a collapse but stopped to feel any emotions about it, common among scientists who are frequently exposed to 'bad news'. *Apathy* and resignation, as result of feeling pain, sadness, anger, and helplessness at the same time. A strong feeling of being unable to change the situation, makes one retreat into apathy, resignation, and sarcasm. And finally, *delegation* as a means of removing one's own feeling of guilt and responsibility by blaming others for environmental destruction.

Considering the wide aspects of possible research approaches to this subject, I would only like to discuss briefly on how to improve this study. If I were to repeat this qualitative research survey with the knowledge I have now, I would keep the news article concerning the future collapse of civilization. Maybe I would rephrase the questions, but keep the open structure. In particular, the word "almighty" in question 2B created unnecessary noise on the answers. Finally, I would stress more the importance of interdisciplinary discussion, and would invite researchers from other disciplines to interpret the data.

5.1 Eagerness for a change

Even though the research question focuses on finding why do we keep heading towards collapse, I want to discuss in this section possible ways out that emerged from the respondents.

Almost every respondent suggested possible ways to avoid collapse, ranging from an increase of self-awareness, a decrease of the global population, better consumer practices, adaption of education, change of energy resources and so on.

However, the scientific answer (Ehrlich et al., 2012) is that we need to expand equity and to rescale civilization if we want to avoid a collapse. This means a complete transformation of the world. It means that, e.g., our Dutch respondent (interviewee 21) will not be able to keep on eating the "*only good*" fish and be flying several times a year; a global redistribution of resources is urgently needed and this necessarily implies a reduction of consumption on the developed world.

On this light, I think that the answers of interviewee 18 deserve special attention. He says that we need *"to have the eagerness to accept this redistribution of the recourses, power, etc."*, to later add that a coercive action will not change anything. By that, it includes the core aspects of earlier mentioned changes from his fellow respondents but in an emotionally much more fruitful way.

Of course interviewee 21 needs to change her way of living, as well as the whole of the developed world needs to degrow. But this cannot be done by force, otherwise what would be the point of living in a sustainable world, if people is obliged to that. In fact, we already know how a forced sustainable world looks like: enough to look back to the middle ages in Europe.

I think that the difficult thing that interviewee 18 points to, is that we need to imagine not only a different world, but a better one, a world people is eager to live in, and even more importantly, eager to live for.

Chapter 6 Conclusions

I would like to start the conclusion of my research with a quotation of Kant's "An answer to the question what is Enlightenment?":

> Enlightenment is man's emergence from his self-imposed immaturity. Immaturity is the inability to use one's understanding without guidance from another. This immaturity is self-imposed when its cause lies not in lack of understanding, but in lack of resolve and courage to use it without guidance from another. *Sapere aude!*[15] Have courage to make use of your *own* understanding! is thus the motto of enlightenment.
>
> Laziness and cowardice are the reasons why so great a proportion of men, long after nature has released them from alien guidance (natura-liter maiorennes), nonetheless gladly remain in lifelong immaturity, and why it is so easy for others to establish themselves as their guardians. It is so easy to be immature. If I have a book to serve as my understanding, a pastor to serve as my conscience, a physician to determine my diet for me, and so on, I need not exert myself at all. I need not think, if only I can pay: others will readily undertake the irksome work for me (Kant, 1784).

Respondent's verbatim statements regarding collective immaturity, laziness, self-imposed immaturity, lack of courage and thoughtlessness, together with the answers that rather inconspicuously indicate, Kant is more actual than ever.

So then again "Why do we bother to write bachelor theses?". Because the beginning of each change, however big it may appear, lays on one's own actions. It is me (the researcher and human) willing to understand, alive, who instead of waiting a change to happen, converts my hope into action. This thesis is my spark to hopefully arouse enthusiasm for a collective pursuit towards a better world. The information about this research subject may serve as certain kind of enlightenment for those who still do not know about a collapse, and support for those who already do participate in in a more sustainable way of living.

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[15] "Dare to know"

For about a century, we accumulate warnings referring hazardous technologies, in combination with human ignorance regarding the global consequences of its actions and its irreparable harm to our global ecosystems (Ehrlich & Ehrlich 2013 and references therein). Since the fact that we harm ourselves with the workings of our society seems indisputable, individual emotional reactions and different points of view concerning a total collapse, became naturally the focus of my research.

Certain limitations I encountered during this research process are lack of transferability of the findings beyond the original sample, English language bias for non-native speakers, disabilities of the respondents (dyslexia), and aversion to fill in the survey.

Concerning the application for further research, this work showed that an exploration of a collapse did not differ noticeable to individual's perception of environmental degradation (maybe because one implies the other). It would be interesting to further elaborate how both subjects are related and learn how cultural backgrounds play a role in people's conceptualization. As this research has shown, respondents from Asia have experienced the effects of degradation already, which definitely changed the tone of their responses.

Furthermore, at the methodological level, the interdisciplinary collaboration of scientists of diverse fields enriched the spectrum of perception and fostered impartial questioning. As previously thought, a collaboration of all sciences is needed to cope with a complex problem such as a collapse. Apart from the interdisciplinary collaboration, my attempt to develop new scientific methodologies finally resulted in approaches similar to those of exploratory data analysis (grounded theory) and constructivist grounded theory (Given, ed. 2008).

Summarizing, this research, by the findings of section 4.5 and the discussion, merely presents a glimpse into the question, w*hy do individuals keep living as they are used to do?* An ultimate answer, considering the complexity of such a problem, seemed improbable from the beginning. Respondent's description, of an unbalanced and dissociated relation to nature, and their observed emotional defense mechanisms against threatening scenarios of a collapse, could nevertheless form decisive roles.

Since I am the main research tool, in the first instant I tried to keep any expectations away and stay as neutral as possible while analysing the data. In the process of writing down the actual methodological analysis used, it became evident that patterns gathered seem similar to earlier research about environmental degradation. More unexpected but not surprising was the fact that respondents from Asia who reported personal experience of degradational outcomes seemed more concerned about a change to happen than others. In particular, respondent 20 brought interesting insights. She reported contradictions as the majority but explained her efforts for a better world, saying that a chance of collective change is actually non-existent, and it is a riddle for herself why she keeps on contributing, as much as possible, towards a sustainable lifestyle, while her direct surroundings keep on going on the opposite direction. That was the only respondent who stated inner contradiction in a positive way. Everything will extinct but I keep on supporting the good.

Finally, I consider the last question, "why we like to believe that tomorrow is going to be any better?". Even though respondents vary in their prospects for humanity, hope, is one common factor in all of them. I believe this to be a result of the inherent emotions humans feel for the planet. Interviewee 36 even says that "Earth is our home", and that we need to work for its welfare. By doing that, we may avoid the collapse, and will behave as mature people taking care of our home.

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Appendix

8.1 Interview survey

Thank you for participating in this interview. The interview is part of my social research project at the University of Twente. I examine people's reactions and opinions about our way of life and related consequences.

There are no right or wrong answers. It is important that you write down ALL your personal thoughts and emotions while being as honest as possible. You are free to answer in English, Dutch or German. (Please use as much space to write down your answers as you need.)

Gender: male/female   Age: …….   Nationality: ……

Profession: ……..

Questions:

1. *How do you perceive the current relationship between humankind and nature? (Please describe)*

2. A) *Which future scenario is most likely to result from the relationship described above?*

B) *If you would be almighty, what would you like to change in that scenario?*

Please read the following newspapers article appeared on 16 march 2014.

NASA-funded study warns of 'collapse of civilisation' in coming decades
'Business as usual' approach of economic elite will lead society to disaster, scientists warn

Modern civilisation is heading for collapse within a matter of decades because of growing economic instability and pressure on the planet's resources, according to a scientific study funded by Nasa.

Using theoretical models to predict what will happen to the industrialised world over the course of the next century or so, mathematicians found that even with conservative estimates things started to go very badly, very quickly.

Referring to the past collapses of often very sophisticated civilisations – the Roman, Han and Gupta Empires for example – the study noted that the elite of society have often pushed for a "business as usual" approach to warnings of disaster until it is too late.

In the report based on his "Human And Nature Dynamical" (Handy) model, the applied mathematician Safa Motesharri wrote: "the process of rise-and-collapse is actually a recurrent cycle found throughout history".

His research, carried out with the help of a team of natural and social scientists and with funding from Nasa's Goddard Space Flight Center.

Motesharri explored the factors which could lead to the collapse of civilisation, from population growth to climate change, and found that when these converge they can cause society to break down because of the "stretching of resources" and "the economic stratification of society into 'Elites' and 'Masses'".

Using his Handy model to assess a scenario closely resembling the current state of the world, Motesharri found that civilisation "appears to be on a sustainable path for quite a long time, but even using an optimal depletion rate and starting with a very small number of Elites, the Elites eventually consume too much, resulting in a famine among the Masses that eventually causes the collapse of society".

The report stressed, however, that the worst-case scenario of collapse is not inevitable, and called on action now from the so-called real world "Elites" to restore economic balance.

"Collapse can be avoided and population can reach equilibrium if the per capita rate of depletion of nature is reduced to a sustainable level, and if resources are distributed in a reasonably equitable fashion," the scientists said.

Questions:
3. *What did you feel while reading the text?*

4. A) *Are there possible changes in your behaviour which could contribute to the prevention of the collapse described above?*

B) *What are factors that hold you back?*

5. *Which societal changes would you suggest that could support you acting towards a better world?*